

€uro Crash

The Implications of
Monetary Failure in Europe

Brendan Brown



Euro Crash

Also by Brendan Brown

BUBBLES IN CREDIT AND CURRENCY

WHAT DRIVES GLOBAL CAPITAL FLOWS?

EURO ON TRIAL

THE YO-YO YEN

THE FLIGHT OF INTERNATIONAL CAPITAL

MONETARY CHAOS IN EUROPE

Euro Crash

The Implications of Monetary Failure in Europe

Brendan Brown

palgrave
macmillan



© Brendan Brown 2010

All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

No portion of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency, Saffron House, 6–10 Kirby Street, London EC1N 8TS.

Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

The author has asserted his right to be identified as the author of this work in accordance with the Copyright, Designs and Patents Act 1988.

First published 2010 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

Palgrave® and Macmillan® are registered trademarks in the United States, the United Kingdom, Europe and other countries.

ISBN 978-0-230-22910-5 hardback

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

A catalog record for this book is available from the Library of Congress.

10 9 8 7 6 5 4 3 2 1
19 18 17 16 15 14 13 12 11 10

Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham and Eastbourne

To the memory of Irene Brown

This page intentionally left blank

Contents

<i>Acknowledgements</i>	viii
1 Euro Indictment	1
2 Origins of the Euro-Bubble	48
3 The Bursting of the Bubble	82
4 The Trial	121
5 What Remedies?	161
<i>Bibliography</i>	203
<i>Index</i>	206

Acknowledgements

Elizabeth V. Smith, a graduate from University College London, provided invaluable help in research, in toiling through the manuscript at its various stages of preparation and in checking the proofs.

1

Euro Indictment

The global credit bubble and its bursting during the first decade of the twenty-first century set off a search for the culprits. The investigation is fundamentally historical rather than criminal. The actions and flaws of institutions and individuals are coming under scrutiny. The investigators are also turning to wider social and economic forces which in combination might have been responsible for the disaster.

A search for the causes of economic and financial breakdown has some similarity with the pursuit of blame for the eruption of war. The analogy is only partial because investigations into the breakdown of peace can lead to indictments of war guilt. The identified person or organization could be due for punishment (sometimes posthumously in a purely hypothetical court process) for crimes against humanity or lesser charges. Crime and punishment is not at issue in the investigation of economic debacle.

In general, blundering central bankers and finance ministers did not deliberately or knowingly stoke up the possibility of economic calamity in a wager from which there could have been handsome national (and personal) gains. Perhaps some of the economic policymakers at a rare moment during the phase of stimulus might have had a fleeting insight as to how things might all go very wrong. Maybe they should have acted on those insights by the exercise of greater caution. Even so there was no target for their recklessness – no designated victim to pay for the potential gains, no enemy to be vanquished.

The main purpose of the investigation into economic calamity – and this is also an important purpose in war investigations – is the exposure of frailties and fault lines which allowed the catastrophe to occur. The hope of many investigators is that a better understanding of what went

wrong can lead on to a set of remedies which will prevent anything similar happening in the future.

Historical investigations are decentralized. There is no chief prosecuting counsel. Rather, experts, politicians and commentators, undertake their own research and analysis, sometimes alone, sometimes in organized groups. In the example of such investigations into the global credit bubble and bust of 2003–09, the areas of suspicion have included half-baked or downright false monetary doctrines, regulatory regimes with no safeguards against the regulators falling asleep and which inadvertently overrode and distorted potential disciplinary mechanisms operating in the marketplace, financial intermediation based on systemic underestimation of risk and perverse standards of remuneration, severe inefficiencies in capital market pricing – embracing the crucial topic of how to value bank equities, Confucian tradition in East Asia and many others.

In reflective moods, investigators have raised important doubts about inherent flaws in the functioning of Adam Smith's 'invisible hands' – in particular those guiding the production and dissemination of reliable and insightful financial information, whether by stock market analysts or investigative business journalists.

Many of the eventually identified culprits and their defenders have responded by attempting to demonstrate that others were to blame.

A sampling of the literature and media on the subject of blame would reveal that 'indictments' handed out so far by the decentralized investigation are far-reaching. In some 'trials' or pre-trials, the targets (of the indictment process) have been prominent central bank officials, all the way down from Alan Greenspan and Ben Bernanke (where the charge list starts with inducing severe monetary disequilibrium).

In other trial processes, it is collective entities or groups which stand accused – the government of China (for its exchange rate policy), East Asian households and businesses for saving too much, regulators – including prominently the SEC, BIS and central banks in Europe and the US – for being blithely unaware of what was occurring in the areas they were regulating, innovators for producing flawed financial products, business managers or clients who failed to spot the problems, analysts or journalists who failed to discover or uncover what was really going on (especially in terms of leverage and broader risk-taking) within the financial sector, investors who were blind to or in a state of delusion concerning the risks of leverage and who put an extraordinarily high probability on one particularly favourable scenario (without rationally making appropriately high estimates of probability weights for less favourable scenarios, or even thinking about these clearly).

A big omission in the list of potential suspect areas has been the new monetary regime in Europe which replaced at the end of 1998 the previous regime headed by the Deutsche mark and the Deutsche Bundesbank. Correspondingly there has been no indictment either against European Monetary Union (EMU) or against the European Central Bank (ECB), or any leading euro officials.

The central theme of this book is that the launch of the euro unleashed forces which played a critical, albeit not exclusive, role in generating the global credit bubble and in making the post-bubble period unnecessarily painful and wasteful, most of all in Europe. A succession of bad policy choices by the ECB is an integral part of that case.

As we shall discover in the course of the narrative, structural flaws in the new monetary union – some of which might have been reduced in size if the founders of the union had not handed responsibility for designing the framework of monetary policy to the just-created ECB (within which the secret committee in charge of the design project was headed by Professor Otmar Issing, newly appointed Board Member and Chief Economist, was given only a few weeks to complete the task) – and policy mistakes by its operatives (including crucially those at the ECB) combined to make the outcome so much worse. (The distinction between structural flaw and operating error cannot be hard and fast in that there are grey areas where the two are inseparable.)

In this first chapter a set of accusations is levelled at EMU and specifically its institutions as the prime culprits. This forms the indictment. In the rest of the book the evidence to support the indictment is presented in full and so are the claims in defence of the accused (much of which takes the form of diverting blame to other targets). A balancing of accusation and counter-claims leads to a hypothetical judgement as to the best way forward for monetary union in Europe. This judgement includes an outline of remedies to contain the dangers posed by EMU both during the painful aftermath of the great bubble and the bust of 2003–9 and well beyond.

Let us start with the summary indictment.

Summary indictment

The launch of European Monetary Union (in 1998) set off a *sequence of monetary and capital market developments* in Europe which seriously contributed to the global credit bubble and subsequent burst through its first decade (and beyond) with particularly damaging implications for the European economies.

Though the European Central Bank (ECB) undoubtedly faced big challenges and was handicapped by essential flaws in the architecture of monetary union, its poor design of monetary framework (even recognizing constraints due to public scepticism regarding its mission of achieving price level stability) and bad mistakes in policymaking, which magnified greatly the economic damage, were avoidable.

We proceed to the charges in detail.

Faulty instrument board

The *sequence of developments* from the launch of the euro to the credit bubble-and-burst started with an almost total unreliability of the instrument board to be used by the pilots of monetary policy (the central bankers) in the newly created union.

The essence of the problem with the instrument board was the lack of basis for confidence that any chosen definition of money supply in the new union would be a reliable guide for policymakers seeking to achieve the aim of price level stability as mandated by the founding Treaty of Maastricht.

This absence of confidence stemmed from the fact that little was known about either the extent of demand (in equilibrium) for the new money (in the form of banknotes and bank deposits) or the dynamics behind its supply (how vigorously the overall stock of bank deposits would expand for any given path of monetary base).

Even the best monetary engineers under skilful instruction could not have fully fixed that problem. We shall see later (p. 184–6), though, how enhanced monetary base control together with modestly high reserve requirements might have partially fixed it.

With the passage of time the problem might have been expected to become less severe as learning took place. And it was reasonable to hope, moreover, that policymakers would devise extra checks and balances to contain the extent of monetary instability caused by the unreliability of the instrument board and thereby the ultimate damage which might result. Such hopes were dashed.

Flawed monetary framework and incomplete mandate

Right at the start of the monetary union, and indeed even in the half-year before its formal start (from mid- to end-1998), the founder members of the ECB Council took a series of ill-fated decisions regarding the design of the monetary policy framework.

In seeking to understand how these mistakes occurred, we should not underestimate the difficulty of the task awaiting the founding

policymakers of the ECB, especially in view of the defective instrument board.

The ECB Council, in the short time from the EU Summit of May 1998 (where the heads of state took the formal decision to proceed to the final stage of EMU) until the last date possible to have worked out a fully operational plan (autumn 2008) ahead of the euro's launch (1 January 1999), had to decide how to interpret and implement the key Article 105 of the Maastricht Treaty with respect to the new monetary union.

Article 105 states:

The primary objective of the European System of Central Banks (ESCB) shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down (in article 2).

The treaty left it to the ECB to interpret carefully what price stability should mean and how this could be achieved. As it turned out, the feasible time for deliberations stretched only over a few weeks. All of this was unfortunate.

The treaty writers should have set a clear set of guiding monetary principles. The guiding principles in the Treaty (the monetary clauses) should have included the goal of *monetary stability* alongside the aim of *price level stability in the long run*.

Monetary stability means that money does not become a source of serious disequilibrium in the economy (the proverbial monkey wrench in the complex machinery of the economy— see p. 10).

Money becomes a source of disequilibrium when it drives market interest rates far out of line with the neutral or natural rate level consistent with stable long-run equilibrium conditions and by more than any optimal control adjustment which well-functioning markets would produce (with long-run money supply growth anchored) in a starting situation of imbalance in the economy – for example a severe recession. (In some severe recessions markets can be well functioning only if the 'zero-rate barrier' to nominal interest rates falling into sub-zero territory is removed – see p. 172–4).

Monetary instability can occur without any symptom in the form of the price level for goods and services rising over the short or medium term. Instead the symptom might be temperature swings in asset and credit markets (in extremes these produce bubbles and bursts) driven in

considerable part by the central bank first steering money interest rates far below the optimal path in a period of time when the economy is regaining balance (after a recession-shock) and later keeping them below the neutral level consistent with continuing overall equilibrium. (The *neutral* level of interest rate is the *natural* rate plus the average annual rate of price increase expected over the very long run; in the gold standard world, that rate of increase was zero, and so economists originally made no distinction between the two terms.)

Monetary stability and price level stability in the very long run are partly overlapping concepts and are sometimes not mutually achievable. The goal of monetary stability has to be missed (to a moderate degree) over some medium-term periods so as to achieve the aim of long-run price stability.

The element of trade-off between the two aims here – monetary stability and price stability in the very long-run – shares some appearances with the trade-off in the much discussed dual mandate of the Federal Reserve, which is charged by Congress to pursue price stability and full employment. But that dual mandate is in main part phoney, based on a Keynesian notion of higher employment rates being attainable via the engineering of inflation. As we see below, the dual mandate of monetary stability and price stability in the long-run, though harder to grasp, is of greater substance.

The friction between the requirements of monetary stability and long-run price stability is an essential and perennial source of disturbance in the modern economy. The Treaty makers should have provided some guidelines for the ECB to manage the friction.

The friction arises from the fact that the aim of *price level stability over the very long run* might require the deliberate creation of some limited monetary instability. Moreover the pursuit of monetary stability should involve sometimes the generation of short- and medium-term price level instability even though this might induce some concerns about the likely attainment of price level stability in the very long run.

For example, during a spurt of productivity growth or terms of trade improvement, the price level should be allowed to fall. If by contrast the central bank tries to resist the forces driving down prices it might fuel a credit-and-asset bubble (symptoms of severe monetary disequilibrium).

Similarly if the central bank resists price level rises driven by real sources, such as sudden energy shortage, an abrupt fall in productivity or in the terms of trade, it would generate monetary disequilibrium with the symptoms of asset and credit deflation (among other symptoms also).

Moreover some price level fluctuation up and down with the business cycle is part of the benign process by which the capitalist economy pulls itself out of recession and should not be resisted by a central bank mistakenly zealous about achieving price level stability over too short a time period. It is not possible, though, even without such zeal to exclude totally some episodes of monetary instability if serious about the purpose of attaining price level stability in the very long run.

It may be that the price level has drifted through time well above or below the guidelines consistent with long-run stability, even though there has been no serious episode of monetary instability. For example, most of the real shocks (such as productivity growth, terms of trade improvement) may have been in the direction of driving the price level downwards.

In that case there has to be some deliberate injection of controlled monetary disequilibrium towards achieving the long-run price level target. This can be done in a context of decades rather than years – as was indeed the case with the functioning of automatic mechanisms under the gold standard (see Brown, 1940).

No attempt to construct automatic money control mechanism

In our monetary world outside the golden Garden of Eden (a romanticization of a complex reality!) from which we were expelled in 1914, a replacement-stabilizing mechanism (for fine-tuning the extent of monetary disequilibrium to be created towards attaining price stability in the very long run), as automatic as possible, has to be constructed. The likely delicate mechanism has to be capable of opening more fully or partially closing the tap of new monetary base supply as required so as to maintain monetary stability and yet go easy on that objective to the minimum extent necessary to sustain price stability in the very long run.

The drafters of the Treaty did not mention at all the fundamental juxtaposition of monetary stability with the aim of long-run price level stability. They did not specify how the best automatic mechanism should be designed for limiting the essential degree of monetary instability required for long-run price level stability. This big omission left the way clear for fatal errors in design of the monetary framework and in subsequent policymaking.

The Treaty should have provided for a much more comprehensive review surrounding the design of monetary framework and for this to take place in an open, not secret, forum. There should have been ample time (perhaps one year between the EU Summit deciding to proceed

with EMU and on which countries would be founder members to the actual start, rather than just six months) for the design process and even longer to allow for needed institutional modifications (especially as regards reserve requirements) to occur towards creating the best possible money control system.

There was a wide range of suggestions available from the well-known literature of monetary economics for the ECB framework-design committee (under Professor Issing) to take on board in the course of their work.

Botched output from the secret 'Issing Committee'

No available evidence indicates that the ECB at the start undertook an appropriate review of alternative ways in which the Treaty's albeit imperfect specification of price level stability as the ultimate aim should be made operational, even if an impossibly short time-framework for final decisions on monetary framework was amply to blame.

One possibility (choice 1) would have been the targeting of a trajectory for money supply growth over time at a low average rate (deemed to be consistent with the price level being 'broadly stable' over the very long run, albeit with considerable swings possible up or down over multi-year periods and also with considerable short-term volatility). The 'central path of the price level' (abstracting from white noise and transitory disequilibrium) would be determined by equilibrating forces (which would balance supply and demand for money as for all other goods in general equilibrium). The price level would be one variable among many to be solved in the process of achieving general equilibrium. In the short-run, there could be considerable disequilibrium!

This monetary targeting might have been coupled with the setting of a quantifiable guideline for price level stability in the very long run (say a ten-year average price level – calculated for the present and previous nine years – which is 0–10% higher than the previous ten-year average for the period 10–20 years ago) so as to monitor that this ultimate aim is indeed likely to be achieved. (Perhaps the broadest of all price indices, thoroughly revised on the basis of new evidence about the past, the GDP or private consumption deflator, would have been used in this calculation). Signs that the price level path might be going astray relative to the aim of stability in the very long run would lead to a twiggling of the monetary targeting – meaning a revision in particular to the rule specifying the expansion rate.

Monitoring signs of potential difficulties in meeting the aim of price level stability in the very long run and of achieving monetary stability

in the present was bound to be challenging in the new monetary union given the lack of knowledge about the nature of the demand for money (technically the money demand function). The accumulation of evidence that the aim (of long-run price level stability) might well be in danger or that monetary instability was forming would feed back to a review of the rule used to determine the targeted path for the chosen monetary aggregate. There would be the key issue of what particular definition of money to select, with the possibilities ranging from narrow to wide.

Later in this book the argument is presented that the narrowest of definitions would be best, subject to a revamp of reserve requirements (so as to foster a more stable demand for reserves – see Chapter 5, p. 184–5).

In effect the target would be set for high-powered money (reserves plus cash in circulation) – alternatively described as monetary base – and not for any wider aggregate. The revamp of reserve requirements, however, which would be essential towards the success of a monetary base targeting system, was not feasible, even if deemed as optimal, in the rushed circumstances of summer 1998. (The UK, so long as it kept open the option of being a founder member of EMU, had blocked all discussions of this issue. But in May 1998 the UK had made the final decision against becoming a founder member.)

Choice 1 (of method to make the Treaty's ultimate aim of price stability operational) would have been consistent with the propositions of Milton Friedman (even though he did not recommend that his famous $x\%$ p.a. expansion rule should apply to monetary base but to a wider aggregate and he would have been cool to the suggested variation of including a guideline for the price level in the long run), who in his famous collection of essays under the title of *The Optimum Quantity of Money* (Friedman, 2006) had rejected the setting of a price level target in favour of a money supply target. (In technical jargon the money supply would be the intermediate target selected so as to achieve the long-run aim of price level stability.)

Choice 1 might also have found favour with the Austrian School economists, providing that the process for setting money supply targets was sufficiently flexible.

The 'Austrians' (see, for example, Hayek and Salerno, 2008) argued that the price level consistent with monetary stability (including money performing its function of reliable long-run store of value) could vary up or down by significant amounts over the short- or medium-run if productivity growth and/or the terms of trade shifted considerably. Also the price level should fluctuate in accordance with the business

cycle, with a wide span of prices (most of all in the cyclically sensitive industries) falling to a low point during the recession phase and picking up into the recovery phase.

This pro-cyclical movement of prices is indeed in principle a key automatic stabilizer – inducing consumption and investment spending by the financially fit households and businesses during the recession (as they take advantage of transitorily low prices) and in encouraging some households and businesses to postpone spending in the boom phase of the cycle (in the expectation that prices will be lower during the cooler next phase). In a situation where there are firm expectations of the price level rising by say 2% p.a. on average over the very long-run, it may be that the benign cyclical fluctuation of prices should be expressed in terms of the rate of price rise falling below long-run average in recession and rising above during say the early recovery phase or later in the boom phase. These cyclically induced changes in the pace of price level increase should not be interpreted as signifying monetary disequilibrium. These key insights of the Austrian School were referred to earlier in this indictment (see pp. 5–6).

According to the Austrian School (see Hayek and Salerno, 2008, and von Mises, 1971) the overriding principle of monetary management should be that money does not become the ‘monkey-wrench’ in the economic machinery (the phrase attributed to J. S. Mill and famously re-quoted by Milton Friedman – see Friedman, 2006). This means (as highlighted in an earlier indictment above –see p. 5) that money interest rates should not be allowed to get far out of line with neutral or natural levels (which in turn fluctuate through time according to such influences as range of investment opportunity or propensities to save). Monetary stability is defined by the money not becoming the monkey wrench.

The big problem for the Austrian School is how practical policy-makers can interpret this prescription when the neutral or natural rate might vary considerably over time and be hard to estimate with any precision. And what meaning should be given to ‘far out of line’. When an economy is in severe recession, ideally the normal self-recuperative forces in a capitalist economy should produce a path for interest rates which for some time would (with long-run money supply growth firmly anchored) be well below the neutral or natural rates which would prevail in long-run equilibrium. (As we shall see this ideal might run into conflict with a zero rate boundary – see p. 172).

The famous ‘Taylor rule’ stems from an attempt to discover the optimal path for interest rates relative to the natural or neutral rate through all-too-common periods of economic disequilibrium without having

to depend on market revelation and using instead the black box of econometrics and optimal control theory. But among other problems this rule requires knowledge of the neutral rate of interest and the exact degree of slack in the economy, and like all econometric hypotheses, depends on the stability of the underlying relationships estimated.

The Austrians could concur with those monetary economists from other schools who argue that the most practical way forward would be to target high-powered money (defined as the total of bank reserves and currency in circulation; high-powered money is the same as what is sometimes described as monetary base), while allowing as much scope as feasible for markets to determine even short-term interest rates.

ECB architects destroy pivot role for monetary base

A key argument for targeting high-powered money (the monetary base) is grounded on the belief that, given a firm monetary anchor (in this case a target for high-powered money growth), the market would do a better job of steering interest rates close to the ideal equilibrium path (and in discovery of the natural or neutral interest rate level – a crucial element in the auto-piloting process) than the monetary bureaucracies (central banks).

Very short-term money rates would be highly volatile as was the case under the gold standard regime. The volatility would stem from passing shortages and excesses in the market for bank reserves. The average level of these rates, though, over several weeks or months, should be fairly stable. Anyhow it is the rates for medium-term and long-term maturities which would have the greatest information content.

The Austrians would be in favour of discretionary twiggling of the monetary expansion rule to take account of new information regarding the likely profile through time of the real demand for money (especially high-powered money) consistent with overall equilibrium. And some deliberate controlled overshoots or undershoots of the rule could be required to attain long-run price level stability even though that means some monetary instability.

Essential to the operation of monetary base (high-powered money) targeting is first, unrestricted scope for the differential between the rate of return on excess reserves (beyond the legal minimum) and on other risk-free assets to fluctuate so as to balance supply and demand in the market for bank reserves. Second, an institutional structure must have been designed in which demand for monetary base is likely to be a stable function of a few key identifiable variables, including in particular real incomes.

The first requirement is achieved where the rate of interest on reserves (and excess reserves) at the central bank is fixed at zero throughout (albeit subject to an emergency drop to negative level in a financial panic and severe recession – see p. 172). The second requirement is satisfied by a high level of reserve requirements on the public's transaction deposits with the banks.

The ECB in its design of monetary framework jettisoned both requirements for the operation of monetary base targeting or for any fulcrum role for monetary base in policymaking. Moreover its scheme for paying interest on reserves had the potential to become an infernal destabilizing force during a severe financial crisis, as in fact was to occur in 2007–8 (see p. 90).

High reserve requirements were rejected in part to meet UK objections (see p. 9) but also in line with current fashionable views of not cramping banking industry competitiveness by imposing a tax on transaction deposits sold by resident banks as against other near-alternative assets including offshore deposits.

In the mid-1990s the Bundesbank had reduced reserve requirements substantially already towards countering competitive pressures for German banks from Luxembourg in particular. But it continued with payment of zero interest on reserves right up to the end of its sovereign existence.

Such concerns about competitiveness were doubtless a factor (albeit mitigated by Luxembourg becoming a part of EMU and thereby subject to any reserve requirements) in why the architects of EMU's operating system decided in favour of paying interest on deposits with the ECB at only a modest margin below official repo rates. But another newer factor was the concern to reinforce the new central bank's power to control short-term interest rates within tight limits of the chosen official peg (adjusted, typically by micro-amounts at a time, in line with monetary micro-policy decisions).

Professor Issing rejects advice from Vienna and Chicago

There is no evidence from any published material or from any other source that Professor Issing's secret committee designing the monetary policy framework (in summer 1998) gave weight to the Austrian School's arguments.

'Giving weight to' does not mean comprehensive endorsement. The committee could have raised important practical reservations. In particular, in view of the newness of EMU and public scepticism about

the ECB's likely success in avoiding inflation, there had to be an easily understandable target to measure (this success). Austrian 'poetic' concepts of monetary stability might have jarred with that purpose.

It can well be doubted whether a sceptical public would have had patience with the sophisticated argument that monetary inflation need not show itself up as rising prices for goods and services but as rising asset prices, or that a rising price level for goods and services might not be symptomatic of monetary inflation.

It would have been possible in principle for Professor Issing's Committee to include the concept of monetary stability alongside a goal of long-run price level stability even though this had not been specified in the founding treaty.

In so far as public scepticism meant that such a dual mandate (stable price level in the very long-run plus monetary stability) was impractical, then creation of a new monetary union was likely to be at a considerable cost in terms of generating monetary instability.

The omission of an overriding concept of monetary stability along Austrian School lines played a key role in the global credit bubble-and-bust which was to follow.

Under its self-imposed code of secrecy, the ECB has never released transcripts or other documentary evidence of key discussions between its policymakers – including their chosen external advisers – in the critical months before the euro's launch. Perhaps if these officials had known that all evidence, including the transcript of the discussions would be published, the deliberations on this key issue would have been fuller and more efficient.

The ECB's first chief economist and founding board member Professor Otmar Issing writes (see Issing, 2008) that he did discuss within his research team the concern that severe monetary disequilibrium capable of eventually producing credit and asset bubbles could coexist with observed price level stability (as defined by a target average inflation rate over say a two-year period set at a low level).

And there is also some autobiographical evidence (from Professor Issing) to suggest that there was a passing informal review of something similar to the Friedman proposal for money supply targeting without an explicit short- or medium-term numerically expressed aim for the price level.

None of these deliberations, however, which occurred in a necessarily very short period of time during summer and early autumn 1998, translated into any impressive design features of the monetary framework.

(Yes, there was the sketch of what was subsequently described as the 'monetary pillar', but this remained little more than a blurred section of the original architectural sketch – see below.)

A second possible way in which to make the Treaty's specification of price level stability operational, policy choice 2 (for outline of policy choice 1, see pp. 8–9) was for the ECB to reject definition of the ultimate aim in terms of a very long-run price parameter (as in choice 1). Instead the ECB would stipulate a medium-term (say two years) desired path for say the overall consumer price index (CPI), expressed as an average annual rate of change. A practical problem here, amid the many theoretical problems already discussed on the basis of Chicago and Vienna critiques, would be that the so-called harmonized index of consumer prices (HICP) hammered out in committee by the EU Statistics Office excluded altogether house prices or rents and once estimated remained unchangeable even if subsequent re-estimation revealed past error.

In seeking to achieve this two-year path for the price level, the central bank could set a target for growth in a selected money supply aggregate (choice 2a), adjusting the target on the basis of any serious new evidence concerning the relationship between money and inflation. Its tool for achieving the money target could be either strict pegging (adjustable) of a key money interest rate (for example, overnight) or the setting of a subsidiary target for so-called high-powered money growth (reserves and cash) while allowing even the overnight and other short-term rates to fluctuate within a wide margin as determined by conditions in the money market.

Or alternatively the central bank (in its pursuance of the two-year path for the price level) could set no target for money (choice 2b), and instead rely on forecasts for inflation based on an array of econometric tools to be applied to a whole range of variables to be monitored, one of which could be money supply. In this case the central bank would adjust repeatedly the peg for very short-term rates so as to forge a path for these that would (hopefully) achieve the ultimate objective for the price level (over a two-year period).

(Rate-pegging is a 'fair-weather' operational policy. If continued during a financial crisis it becomes a catalyst to a vicious cycle of instability (see pp. 89–91).)

A variation of choice 2b (let us call this 2ba) would be to give money supply a special place amid these monitored variables and set an alarm to ring if ever money supply growth estimated over a given stipulated interval strayed outside its specified range. In principle, the alarm would not be turned off even if the monitors determined that no danger

existed in the form of the price level target being missed over the 'medium-term' (meaning in practice two years) unless they were also satisfied that there were no other dangers present (for example, inflation in the long run or a bubble in the credit market).

Response to the alarm would include a change in the official interest rate (normally specified with respect to a very short maturity in the money market), which under all versions of policy 2b is set on an entirely discretionary basis in line with policymakers' views about how changes in short-term money market rates influence the actual inflation outcome.

The fantasy of the monetary pillar

The ECB policy-board ratified the Issing Committee's proposals in October 1998 and announced 'the main elements of its stability-oriented monetary policy strategy'.

The Committee had in effect decided in favour of option 2ba above. It stipulated the price level aim in terms of the rise in the euro-area HICP over the 'medium-term' (with subsequent practice demonstrating that this meant around two years), stating that this should not be more than 2% p.a.

There was no indication that the policy board had any realization that rate-pegging under its choice 2ba would have to be suspended or implemented in an abnormal way under conditions of financial crisis (see p. 90).

It was left unspecified (until spring 2003) as to how the ECB would respond to inflation outcomes well below 2% p.a. But early policy-rate decisions implicitly filled that gap (see p. 20).

The ECB board in reaching its decision as regards the definition of price level stability including its selection of numerical reference value betrayed the trust put in it by the founders of monetary union (albeit that the founders were wrong to have staked such an important issue for future economic prosperity of their peoples on a small group of central bankers holding discussions entirely at their discretion in secret and instead of bringing in a wider range of decision makers in an open process with much more time in which to implement their architectural plan).

The announced construction (by the ECB) of an alarm system based on money supply monitoring which would be sensitive to danger over a long-run frame of reference transcending the two-year definition of price stability was largely fantasy. And in particular there was no careful specification of one such danger – temperature swings in credit and asset markets which culminate in severe economic disequilibrium and related waste.

The decision on policy framework as described put at great risk the achievement of monetary stability. Serious monetary disequilibrium – full of damaging consequences for the real economy – could result from an over-strict pursuance of the price-level aim as defined.

The ECB board appears (from the evidence available) to have been at best complacent about the possibilities (as raised for example by the Austrian School) that a positive productivity shock coupled with price level path targeting over medium-term periods (say two years) could lead to a credit bubble or that a negative terms of trade shock (in particular a big jump in the price of oil) similarly coupled could lead to depression.

In its first decade the ECB became the engine of both these examples of monetary instability.

And the evidence reveals no awareness on the part of the ECB about the possibility of benign pro-cyclical moves of the price level (see p. 10). In consequence the ECB became inclined to spot illusory threats of inflation falling too low (as in 1999 and 2003).

No shelter from ‘English-speaking’ monetary instability

The ECB, in following a quasi-inflation targeting regime, was in great company. (The term ‘quasi’ is used to acknowledge that the ECB’s formal description of its policy framework includes a ‘monetary pillar’ even though this has never become a well-drawn component of any detailed drawing).

The Federal Reserve and Bank of England were committing very similar types of errors.

That was no excuse for failure.

The ECB as a new institution driven by the idea of setting a high standard of monetary excellence and carrying out the mission of sheltering the new monetary union from ‘English-speaking instability’ (francophone writers use the term ‘Anglo-Saxon’) should have done better than its peers.

The Bank of England, after all, had been at the bottom end of the scale (in terms of monetary policy performance) during the decade of the Great Inflation (1970s) (it enjoyed less independence than from the government), so it did not make history in being the worst performer (in terms of inducing credit bubbles and burst) during the debacle of monetary policies around the world wrought by ‘inflation targeting’.

Professor Issing does show some possible disquiet about the company in which he found himself in stating (see Issing, 2008) that his secretly deliberating committee decided against following a monetary

framework in any significant way embracing the strict inflation targeting pursued by the Bank of England. In writing about the work of his secret committee, Issing comments:

Of particular value to us (the committee) were the visits by prominent experts who combined an academic background with central bank experience. For instance, we were able to discuss the whole spectrum of issues relating to inflation targeting with one of its proponents, Bank of England Governor Professor Mervyn King Inflation targeting was well on the way to becoming the 'state of the art' in central bank policy-making. What could have been more obvious than to follow the example of these central banks (which had adopted inflation-targeting) and the urging of leading economists? There are persuasive reasons why the ECB at the time took a different course.

Professor Issing mentions UK and New Zealand by name but is too politically correct to refer to the quasi-inflation targeting of the Federal Reserve. In any case it was only four years later, in 2002, that the leading academic proponent of inflation targeting, Professor Bernanke, was appointed by President Bush as Governor of the Federal Reserve Board. The irony is that practice did not match intention!

The new event from a historical perspective was that the ECB, as successor to the Bundesbank in the role of leading European monetary authority, joined by its actions (but not fully by its announcements) the crowd of popular (and deeply flawed) monetary opinion, even though its senior officials appreciated some of its fallacies (though not in terms of a thoroughgoing Austrian School refutation!). The protests of the ECB's chief policy-architect through the early years, Professor Issing, that his institution remained distant from the crowd were largely meaningless.

How different the ECB's performance during the monetary madness of the early twenty-first century was from the Bundesbank's top historical performance in distinguishing itself from the crowd of popular monetary opinion during the Great Inflation (of the 1970s)! Would the old Bundesbank (before bending before the imperative set by Chancellor Kohl of attaining the EMU destination on schedule), operating counterfactually without the encumbrance of EMU, not have remained nearer to past performance? (There is a continuation of this counterfactual narrative later in this volume – see p. 130).

Milton Friedman had warned long ago that setting the aim of monetary policy in terms of a stipulated price level outcome over a two-year period (or any other short or medium-term period) would reduce the

accountability of the central bank (see Friedman, 1966). For the outcome in any such period could be attributed only in part to central bank policy, given the range of white noise and non-monetary factors outside the control of the central bank which potentially affects short- and medium-term measured inflation rates. Hence there would be a wide range of plausible excuses for failure to achieve the aim. Instead, central bankers should be made responsible for something over which they have a considerably greater degree of control – the path of the money supply (and in the case of the monetary base control is 100%).

In fact the ECB had a fair degree of success in meeting its stipulated ‘medium-term’ target for the price level during its first decade, with the average rate of inflation barely above 2% p.a. And so Milton Friedman’s warning about lack of responsibility amid a plethora of excuses did not in fact become relevant during that period. It would have been better if the ECB had missed the price target (in the direction of prices under-shooting) and its officials had discovered why this should be broadcast as good news!

Indeed more relevant in practice than Friedman’s concern about responsibility was the Austrian critique that price level targeting especially over short- *and* medium-term periods even if successful in its own terms could go along with the emergence of serious monetary disequilibrium (one key manifestation of this could be asset and credit bubbles on the one hand and severe recessionary deflation on the other). The Austrian School economists would accept that a price level aim should be set over the very long-run (as occurred endogenously under the pre-1914 international gold standard). But their ‘very long-run’ was far and away beyond the medium-term as conceptualized by Professor Issing’s secret committee and even further beyond the medium-term as implemented in practice by ECB policymakers.

The Austrian critique leads on to a further accusation in the present indictment.

Faulty monetary framework leads to three big policy mistakes

In choosing to define price stability as inflation (measured by HICP) at *not more than 2% p.a. on average over the medium-term* (in practice policymaking during the first decade of EMU is wholly consistent with medium-term meaning a two-year period despite the existence of many textual references in official publications and speeches to longer time-horizons) – supplemented by a further ‘clarification’ in spring 2003 that too low inflation, meaning more than a tiny margin below 2% p.a. would be contrary to the aim of monetary policy – the ECB

substantially raised the likelihood of serious monetary disequilibrium ahead (defined to include the symptoms of rising temperature in asset and credit markets).

Indeed, allowing for 'good' price level fluctuations up or down related simply to the business cycle in which a recessionary phase might well last as much as two years, the notion of a two-year period for measurement purposes was palpably absurd.

In practice the ECB Board followed what was to prove disastrous monetary fashion in the US and UK (albeit that the Federal Reserve did not adopt explicit inflation-targeting, mainly out of concern that this could become a point of leverage for greater Congressional control over its policy decisions). ECB officials who pretended that the small actual differences between their own policy framework and that of the Federal Reserve were more than technical or linguistic and that the long-run component of its monetary alarm system had any operational capabilities were at best in a state of self-delusion.

As a matter of semantics, as we have seen, the ECB denied right from the start it was following the fashion of inflation targeting. In subsequent refinements (of its communication regarding the framework) the ECB stressed that its policy decisions are based on two pillars (first, medium-term inflation forecasts based on the highest quality of econometric work carried out by its staff and second, money supply developments considered in a long-term time frame including possible implications well beyond a two-year period) and so distinguishes itself from some other central banks which target a given low inflation rate over a similar time-period (two years) without any separate cross-check to money supply growth.

Crucially, however, in common with all inflation-targeting central banks, the ECB stipulates a precise formulation of a stable desired average rate of rise in the price level over a fairly short period of time (it is mainly semantics whether this is a two-year period as officially for the Bank of England or the 'medium-term' as for the ECB) rather than acknowledging that the rate of rise in the price level should fluctuate by a considerable amount over the short- and medium-run consistent with price level stability in the very long-run. Indeed that is what happened under the international gold standard – when there were occasional way-out years in which the price level rose by 5% or more, as in the UK during the Boer War, and long stretches of price level rises or falls, but in the very long run, price stability reigned.

Some ECB officials, including notably Professor Otmar Issing, were undoubtedly aware of the dangers in pursuing price level targets over

short-term or medium-term horizons and realized that monetary disequilibrium could indeed manifest itself in asset price inflation and credit market over-heating well before any goods and service price inflation might emerge (and emergence might never occur if the bubble burst first). In practice, however, ECB policymakers (including Professor Issing) were not sufficiently sensitive to these risks.

The unreliability of the monetary indicator in the new world of EMU threw the policymakers off the scent (of credit and asset bubble in the making). This unreliability was one factor in the failure to specify a serious long-run dimension to monetary monitoring.

In the first decade of EMU, three episodes of monetary disequilibrium – first, 1998 Q4 through 1999 (see p. 51), second, 2003 to 2005/6 (see p. 57) and third, 2007 H2 to 2008 Q3 (see p. 91) – were to result from the ECB's adoption of a 2% p.a. inflation target (in official terminology a price level path over the medium-term).

Each episode of disequilibrium was grave in its own way, with the third entering the competition for the worst monetary mistake in European or global financial history since the early 1930s.

The monetary error of 1998–9

Right at the start of EMU, the official aim of the price level rising by 2% p.a. (or a little less) over the medium-term came in for some immediate practical clarification, in a deeply unsettling fashion. When the ECB opened its doors, inflation in the euro-area was down at 1% p.a. If seeking to minimize monetary disequilibrium, the ECB would have done better to aim at first for a continuing level of price increase around that level rather than immediately seeking to breathe in a higher rate of inflation. And if medium-term meant nearer five years than two, then there was nothing to worry about in inflation now being a little below 2% p.a.!

After all, with the IT revolution in full swing, oil prices at a two-decade low and terms of trade improving rapidly as cheap imports from Eastern Europe and China ballooned, a policy of driving inflation back up to 2% p.a. was surely wildly expansionary by any Austrian definition! (ECB officials remained perma-bears on euro-area productivity even in a period of IT revolution, perhaps because the data available in the European countries almost certainly underestimated its current growth. The data widely failed to pick up quality improvements related to technological innovation, meaning that the underlying inflation rate as measured for output of standardized quality was overstated.)

In addition there is the general point that the price level should move pro-cyclically even within a monetary regime which specifies the aim of

absolute price level stability in the very long run. This (1998) was a year of recession or near-recession in the euro-area.

During the boom periods, manufacturers in the highly cyclical industries (especially automobiles) should be charging high margins to compensate in part for the loss which they incur in business recessions. Indeed in a well-functioning market economy firms in highly cyclical industries should tend to have relatively low debt and high equity in their capital structures so as to contain the danger of bankruptcy during recession. Vital equity is attracted to cyclical industries on the basic premise of extraordinarily high profit during boom-time and such equity in effect insures labour and bondholders against recession-destruction of income and capital. And during the recession, the fall of prices in the highly cyclical industries to below normal levels are an inducement to contra-cyclical spending by financially fit firms and households who take advantage of low prices now compared to when prosperity returns.

Inflation below 2% p.a. in 1998 should not have been construed by the ECB as a reason for exceptional monetary ease. Benign cyclical fluctuation of prices on its own could explain a dip of the recorded rate of price increase dipping below the long-run average rate aimed at as the anchor to inflation expectations. The monetary decisions of the ECB at that time hinted at the extent to which the newly constructed monetary policy framework was indeed flawed.

There is some evidence (see Chapter 2, p. 51) to suggest that the ECB in early 1999 was concerned that inflation had already fallen into a dangerous low zone – dangerous in the sense that if the next recession (beyond the cyclical recovery generally forecast for 1999–2000) were to become severe, the central bank would very quickly find that conventional monetary policy reached its limit to provide any stimulus (once risk-free rates fell to zero).

If the ECB were indeed greatly concerned on this score, there were two ways of dealing with it boldly. The first way was to aim for a considerably higher inflation rate (say 4–5% p.a.) during the next economic recovery and expansion phases (of the business cycle). If successful, then in a subsequent severe recession deeply negative risk-free rates could be reached in real terms even though under conventional monetary policy money market rates (even risk-free) could not fall below zero.

This option (aiming for steady-state inflation at say 4–5% p.a.) is discussed further in Chapters 2 and 5. Its suitability to the circumstances of EMU is found to be highly questionable (see p. 52–3). And in practical terms there was surely no great likelihood of such an inflation rate

being reached in just one cyclical recovery. There are also more general grounds for rejection.

One of these grounds has been hinted at already. The higher the long-term average inflation rate which is taken as reference benchmark by monetary policymakers, the weaker becomes the inbuilt recovery mechanism during recession of a transitory fall in many prices coupled with the expectation that these will re-bounce in the upturn (that expectation justifies spending in the depths of the recession, when cyclically sensitive prices are at their lowest, by the financially strong – see p. 10). There is no evidence, though, that anyone in the ECB gave any attention to this mechanism, let alone believed that it could play a role in driving the economy out of the recession or near-recession of 1998.

The other bold option (for the ECB in confronting a hypothetical danger of monetary policy paralysis in severe recession) was to draft a contingency emergency scheme which would be on the shelf ready in time for possible use were the next recession to prove severe. This scheme would allow risk-free rates to fall to deeply negative levels in both nominal and real terms and yet be consistent with aiming for very low inflation or absolute price level stability over the very long run (see full discussion on p. 172).

No contingency planning, no boldness

The ECB did not draft any contingency plan for deep recession or financial panic. Instead right at the start of monetary policymaking (in late 1998 and early 1999) it sought bureaucratic safety in seeking to lift inflation a little from the then ‘low level’ (relative to the aim for the price level over the ‘medium-term’).

Inflation, though, running at 2% p.a. instead of 1% p.a. makes only a small potential difference to the extent that risk-free rates in real terms can fall below zero. So long as the zero rate barrier remains firmly in place the path followed by the risk-free rates during a severe recession or panic would be constrained still at a well-above optimal level. Moreover, the somewhat higher inflation can get in the way of the key pro-cyclical price level mechanism (price cuts during the recession together with the expectation of price level rebound afterwards) which potentially plays such an important role in generating a subsequent recovery. (In general, the lower frequency of big price cuts would mean less of a spending response.)

Given the problems (instabilities) which accompanied getting inflation up from 1% p.a. to 2% p.a., it is just as well the ECB was not bolder on that particular score (aiming for a higher inflation rate than 2%)!

Monetary policy blunder triggered 1999–2000 euro crisis

A consequence of the ECB's implicit decision in 1999 to drive inflation higher (the euro-area CPI was then rising at around 1% p.a.) towards 2% (put into operation by cutting money rates far below neutral level despite the absence of any severe economic disequilibrium in a recessionary direction) was to bring about the precipitous overshooting decline of the euro, fuelling a later troubling increase in inflation (to above the target level) which crippled euro-area economic recovery in the early-2000s.

ECB policymakers puffed and fumed about many subjects during the precipitous decline of the euro in 1999–2000. President Duisenberg in Don Quixote fashion took on the title of Mr Euro shooting in all directions. But there is no evidence to suggest that the ECB realized even in part they were largely to blame through the pursuit of a destabilizing monetary policy (breathing inflation into the euro-area economy).

At a time when the euro was a totally new currency, incipient weakness could be interpreted by anxious investors as revealing only feeble fundamental demand for the euro as a store of value given its potential flaws. Hence a monetary blunder by the ECB in triggering an initial fall (of the euro) could become the source of a confidence crisis in the new currency (which is what occurred!).

ECB follows astrology (econometrics based on dubious data)

Also real estate markets in some countries did begin to warm (most of all in Holland at this early stage of EMU but also elsewhere) around this time (1999–2000). In most cases, though, the temperature rise was from low temperate or even cool levels (as for France). In any event, the ECB in choosing to target the movement of a particularly simplistic definition of the price level (euro-area CPI), which excluded almost altogether the price of housing (whether in capital or rental terms), removed itself one stage further from housing market developments.

ECB policymakers realized the problems of definition with euro-area CPI (and how it would fail to pick up a rise of residential space occupancy costs, surely an important component of the overall price level for goods and services) but made no urgent effort in the following years to bring about an improvement.

Yes, there were research papers, speeches and working groups (including national statistical office representation) on the issue, but no strong direction from Frankfurt to get things moving! The hesitancy to back intuition (admittedly in short supply, it seems, around central

bank policymaking tables, including that in Frankfurt) about the big picture and instead following statistics of evident low quality (as in the case of euro-area productivity and indeed of CPI), whilst emphasizing the output of the 'high-quality and high-powered econometric model' constructed within the Economic Research Directorate, are flaws in policymaking by the Frankfurt-based monetary bureaucracy demonstrated repeatedly (and most dramatically in 2007–8, see pp. 20–1).

Monetary error of 2003–5

Then there was the second 'breathing in inflation' error when in spring 2003 the ECB indicated its concern that year-on-year rises in the consumer price index (HICP) might soon fall significantly below 2%. Yet considerations of overall monetary equilibrium at the time suggested that observed price level rises should have fallen well below 2% and that such a fall would still have been consistent with 'price level stability' in the very long-run (not the misleading 'medium-term' of the ECB official-speak), even where this were defined as a path where prices on average, say over a ten-year period, were around 20–25% higher than over the average of the prior ten-year period (the equivalent of an average price level rise at 2% p.a.).

It is true that ECB officials remained dubious about the hypothesis of a secular increase in productivity growth (this hypothesis was the basis of the Austrian critique that the rate of price level rise for several years should be well below any very long-run aim for this). The statistics did not show it (except for Germany). They did not have the confidence to suggest that the statistics were deceptive – even though it was widely known that many of the national price indices used for compiling euro-area CPI (HICP) made inadequate allowance for the improving quality of goods and services produced. (In technical jargon, hedonistic estimation of the price level was an underdeveloped technique in Europe as compared to that in the US). And the passing jump of food and energy prices at the start of the decade had made them sceptical about any improvement in the terms of trade.

Yet the big picture was still one of IT revolution in progress and even cheaper imports from China and other emerging market economies whether in East Asia or Eastern Europe. And nowhere in the ECB analysis published at the time does there emerge the notion of a benign cyclical swing in the price level (or of the rate of price level increase falling below the long-run average aim for this). The cyclical argument for a dip in inflation, though, was fading from 2003 onwards, given the re-bounce in the euro-area economies from the recession of 2001–3.

The spring 2003 re-affirmation and tightened specification of an explicit 2% p.a. inflation target (forward-looking over a two-year period) by the ECB coincided with dramatic monetary news in the US.

The Federal Reserve under the special prompting of Professor Ben Bernanke (appointed a governor in 2002) decided in favour of a policy of 'breathing inflation back into the US economy' for fear of inflation falling too far (towards zero rather than near the unofficial target level of 2% p.a.). This was the first time in US monetary history that the Federal Reserve shifted policy towards raising the rate of inflation (from an already positive level).

The key role of Ben Bernanke in pushing for the implementation of this policy is found in the transcript of policy discussions of that time published in full in May 2009. Professor Bernanke was particularly impressed by the 'paralysis of deflation' in Japan, evidently unaware of the possibility as highlighted later by Professor Sakakibara that this country never suffered monetary deflation (defined as a fall in the price level driven by monetary disequilibrium) at all in the 1990s – see p. 58. The alternative explanation – to monetary deflation – for the episodes of a falling Japanese price level during the 'lost decade' and beyond was the combination of first a benign cyclical fall in prices during recession and second a good deflation driven by both rapid economic integration between Japan and China and the IT revolution.

The doomed 2003 revision of ECB monetary framework

The ECB's announcements in spring 2003 (in effect a clarification that the ECB would seek to forestall any significant dip of the price level path as measured over two-year periods significantly below 2% p.a. and would be as vigilant in this as preventing any rise above) got less media notice (still substantial!) than the Federal Reserve's. This was at least in part understandable as the rate of increase in the euro-area CPI was coasting at around the target level (albeit that the price level in Germany was virtually stable in underlying terms – see below). Hence the policy shift was less obvious in Frankfurt than in Washington (where it was not a question of forestalling a further plausible decline in inflation if monetary policy remained neutral – as in the euro-area – but of pushing up the rate of price level increase from a rate – around 1% p.a. – already deemed to be too low).

The ECB in effect reiterated (in spring 2003) that it would block the equilibrium forces emanating from accelerated productivity growth, terms of trade improvement, and business cycle weakness, which were pressing the rate of price level increase down below 2% (as would have

happened if market rates were following a path closer to neutral level rather than being driven far below by present and expected future rate-pegging in the money market). Yet this was still a period when the IT revolution was in full swing, even if its effects were not being registered by the European statistics offices.

Hence yet again (as in its opening formulation in 1998 as described above) the ECB, in revising in spring 2003 its monetary framework, totally failed to distance itself and tread a different path from the flawed policies being adopted on the opposite side of the Atlantic (and the English Channel).

The 2003 decision to resist any fall of inflation seriously below 2% p.a. was a critical factor in the creation of the credit and real estate bubbles.

The 2003 decision was taken in a situation where on some measures (excluding the price of public goods and services) the underlying price level in Germany was actually falling slightly. The IMF, headed by an ex-senior finance official in the German government (Horst Koehler), together with the IMF's Economic Counsellor (Kenneth Rogoff), were warning ominously about the dire state of the German economy.

The coincidence of a dark mood concerning German economic prospects with a monetary blunder at the level of the euro-area as a whole is one piece of evidence (among many others) in support of the next point in the indictment.

ECB makes policy for Germany, not for euro-area

At several critical junctures for ECB monetary policymaking, German-centric factors have influenced decision-making to an extraordinary extent (well beyond the weight of the Germany economy in the total euro-area economy).

Professor Mundell's quip that in monetary union policy is made for the largest member (for example, New South Wales in Australia, Ontario in Canada) applies also to the euro-area despite all the protestation of European political correctness. Further evidence is reviewed in detail in subsequent chapters to support this charge at three crucial periods.

The first (of these three periods) was on the eve of the euro's launch and during its first year (1998–9) when one influence behind the decision to ease monetary policy despite overall solid economic expansion amid a golden low rate of inflation at the euro-area level was the underperformance of the German economy. This underperformance was in part due to the continuing slump in the construction industry

there following the post unification boom (bubble) and in part through the repeated upward adjustments of the Deutsche mark within the European Monetary System, well beyond what could be justified by differential inflation.

The second period encompasses the reformulation of monetary framework in spring 2003 already described and the subsequent three years or so experience of over-stimulatory (non-neutral) monetary policy continuing despite symptoms of monetary disequilibrium such as real estate and credit markets heating up in Spain, France, Italy and several smaller economies.

These events occurred when Germany was still experiencing a construction sector downturn and its real estate markets were still soft. From a business cycle perspective, Germany was in a relatively weak situation compared to the other euro-area countries. There was concern (within Germany) about business investment remaining weak overall due to the re-location of production into cheap labour countries to the East (most of which were soon to come into EU). Inflation as measured in Germany was at the bottom end of the range for euro-area members. German banks were with the benefit of hindsight getting heavily drawn into the warming up global credit markets, but that was not registering on any market or official monitoring device.

The third period during which German economic conditions assumed over-proportionate influence on policymaking (with the Bundesbank President, Professor Axel Weber, and the ECB chief economist, Professor Jürgen Stark – himself an ex-Bundesbanker – both very influential) was in the aftermath of the first big credit quake of summer 2007 and continuing into almost all of 2008 (except possibly for the last few weeks of that year). It seemed then to the Bundesbank (and to the main forecasting institutes) that the German economy was still in a strong growth phase despite the big slowdown elsewhere in the euro-area (and beyond).

In the first quarter of 2008 coincident economic indicators (these lag somewhat behind reality!) suggested Germany was in a boom driven by exports to Russia, Eastern Europe, the Middle East and China in particular. (Later events and data were to show that the Bundesbankers were remarkably slow in realizing the downturn of German overall business conditions which set in already in spring 2008. And their concerns about the oil price bubble spilling over into wage-cost inflation – a perennial fear among the Bundesbankers – turned out to be fantasy).

More generally what has been perceived by Bundesbankers, ex-Bundesbankers and their allies within the ECB policymaking council, as the best monetary path from a German-centric viewpoint has not

always been what the full revelations of Time suggest was in fact the case! And this applies in particular to the failure of the ECB to realize the extent of the credit bubble which was building up in the euro-area from 2003 onwards, the particular role in that of the rapidly expanding inter-bank market, and the fact that German banks were becoming dangerously exposed even though the real estate market in Germany remained cool or cold.

German savings surplus swamped infant euro-credit market

It would be wrong to put all the blame for the euro-roots (there were strong US roots also!) of the global credit bubble at the door of the ECB or even more narrowly of the Bundesbankers and ex-Bundesbankers and their allies who have sat around its policymaking table.

Some part of the blame can be attributed to flaws in the very essence of EMU.

The coming together into monetary union in 1999 of Germany, where the savings surplus was set to bulge (a corollary of continuing construction sector wind-down and transfer of some stages of manufacturing production to the newly opened-up cheap labour countries to the East), with large countries (especially Spain) where construction activity was set to boom and savings deficits widen (households there responding to the historic opportunity of low interest rates superseding the high interest rates which had been associated with pesetas, liras and until recently French francs) was bound to create testing conditions for central bankers, bankers and financial markets. All three failed the test.

The one-fit-all monetary policy meant that the price level would climb fastest in those countries which were now in the swing of construction boom and where savings deficits were expanding. The rise in price level would be at a much lower rate (if even positive) in the main country (Germany) moving in the opposite direction (savings surplus rising). Correspondingly real interest rates (as measured with reference to relevant national price level expectations) in the economies in construction boom and widening savings deficits fell to significantly negative levels. This fall of real rates in Spain and other savings-deficit economies was in itself a powerful source of overall disequilibrium.

The formation of monetary union in itself was virtually pre-programmed to increase the potential divergence of savings surpluses and deficits between Germany and the other countries. Without union, a lower level of interest rates in Germany than elsewhere, coupled with exchange risk between the German currency and the currencies of those European countries in big savings deficit, would have kept the

divergence (in equilibrium) between savings surpluses and deficits within tighter limits.

Those tighter limits are not self-evidently a 'good thing'. In terms of neoclassical economic modelling, the removal of barriers (including exchange risk) to capital flows leads to a more efficient allocation of resources between the countries participating in the union. Scarce capital goes to a greater extent towards the biggest investment opportunities. (On the other hand such benefits might be outweighed by the costs of sacrificing monetary independence).

In fact the emergence of recycling in the form of German savings surpluses being channelled into the savings deficit countries (the largest of which by far was Spain) went along with a growing potential credit problem.

Were the lenders to (including depositors), or equity investors in those intermediaries who were active in the transfer of capital taking sufficient note of the credit risks, involved (related to the capacity to service debt of the borrowers in the savings deficit countries)? Were the intermediaries charging sufficiently for assuming the credit risk and controlling their exposure to this risk adequately? And was the ECB – or any other authority with responsibility within EMU – on due alert to monitor potential malfunctioning, especially overheating of credit markets in the euro-area, related to this recycling process?

An important element of the transfer was German banks lending surplus funds (excess of deposits over loans) into the Spanish banking system – sometimes on a secured basis (via the purchase of so-called covered bonds where the loan from the German financial institution to the Spanish bank was secured by a portfolio of mortgages on Spanish real estate).

Subsequent events starting with the credit quake of summer 2007 revealed that the banks and investors in or lenders to the banks underestimated the risks of such 'inter-bank loans' within the euro-area context or indeed as between the euro-area and EU countries outside the euro-area (in the latter case this had nothing to do with the transfer problem generated directly by the coming together of savings surplus and deficit countries in monetary union). The largest of the latter group was the UK.

Under the complex rules which described the procedures for ECB money market operations, the new central bank's secured lending operations extended to subsidiaries in the euro-area of non-euro area banks and the security could take the form of eligible assets in any EU country, even if not a member of monetary union (by far the biggest example

was the UK). Hence a British bank subsidiary in France (or any other euro-area country) could present parcels of asset-backed paper based on UK residential mortgages for discounting at the ECB.

British banks became huge borrowers in the exponentially growing euro-money markets towards financing the UK real estate and credit bubbles. They covered the currency mismatch (between euro borrowing and Sterling lending) by entering into sterling–euro currency swaps (buying pounds spot for euros and selling the pounds forward for euros).

The ultimate buyers of pounds in the forward market (from the British banks) were most plausibly in many cases the carry traders who were shorting the yen (and sometimes Swiss francs) against high coupon currencies (in this case the pound) so as to gain thereby from the large interest rate spread between the two currencies. The counterpart sale of pounds in the spot market came to a considerable extent out of the mega-trade deficit of the UK.

No diagnosis of monetary disequilibrium despite rising temperature

There is no evidence from ECB statements (including speeches by its Board members) during the years of booming euro-credit business in all its forms that officials realized that the temperature in euro-credit markets was climbing fast and likely to culminate in a bubble or burst.

Nor is there any evidence that the ECB was monitoring the particular credit risks which emanated from the huge savings divergence between Germany on the one hand and the countries in construction boom (and real estate boom) on the other (including the UK, via the channels described).

Of course ECB officials could claim that monetary policymakers had no role in spotting bubbles in advance and should come in only to clear up afterwards. That after all was the so-called *Blinder doctrine* followed by the Federal Reserve under Alan Greenspan and subsequently Ben Bernanke.

The ECB should have done better than the Federal Reserve.

One aim of the EMU was to conduct monetary policy in a superior way (to what was possible before union) given the new degree of freedom from external influence (attributable to an enlarged monetary area). No independent European well-designed and well-tested monetary doctrine emerged.

Instead the ECB in practice largely copied the flawed US framework of monetary control, and to such an extent that critically it failed to

react to growing symptoms of severe monetary instability in the form of temperature rise in credit and asset markets.

The ECB had no power to directly cool credit markets via raising margin requirements or minimum loan to value ratios, in contrast to some such authority (albeit very clumsy and never used in modern times) possessed by the Federal Reserve. Much more importantly (than blunderbuss control actions), the ECB could have run a tighter monetary policy, taking account of the warming up credit markets, even though overall inflation was still running at 'no more than' 2% p.a. ECB Board Members could have given speeches highlighting the dangers of the situation and remonstrating with private capital markets to use more acumen in judging the value of bank equity and debt; or they could have remonstrated with the national central banks to raise margin requirements on risky real estate lending.

None of this happened. One reason was what we might describe as *euro-nationalism* (defined p. 33) and euro-euphoria.

ECB officials wrongly diagnosed many of the symptoms of rising temperature in credit markets as indications that the euro was indeed taking off as international money and that euro financial market integration was flourishing.

This wrong diagnosis was not limited to the ECB.

Capital markets – and especially equity markets – applauded (and rewarded in terms of share price) banks which were rapidly expanding on the assumption that they were seizing the opportunities in a brave new world of euro-led financial integration, rather than realizing that hidden leverage and growingly risky and under-priced credit positions were being assumed.

Euro launch spurred irrational exuberance about banks

The launch of EMU did not make it inevitable that such inefficient use of knowledge and bad judgement (as just described) should occur in European capital markets concerning the apparent successes of rapidly expanding bank groups and the quality of credit. But such dangers rose with the launch.

The creation of a new monetary regime, EMU, just when the temperature in global credit markets was about to start rising, and its accompaniment in the form of drum-beating (whether by officials, analysts, journalists) about the big new opportunities which financial market integration in Europe would bring, increased the danger of various psychological behaviour patterns becoming prevalent (as stressed, for example, by behavioural finance theorists and summarized under

the well-known catch phrases of speculative displacement, irrational exuberance, learning processes) which would power credit bubble formation.

ECB officials out of misguided pride became cheerleaders in the credit warming process. They were too ready to read euro success and broadcast this rather than first examining more sinister explanations for the apparent good news. A particular illustration of this was the unqualified praise which ECB officials gave to the outward signs of rapid financial market integration in Europe – whether fast growth in the inter-bank and wholesale overnight money markets, or the growth of a euro-denominated corporate bond market.

In praising uncritically the take-off of the euro-denominated corporate bond market (on one occasion the claim was that new issues were now outpacing those in the US), ECB officials failed to realize that an extraordinarily large share of such paper was being issued by banks (flashing red as regards leverage ratios) and the extent to which the bonds were being bought by highly leveraged non-bank financial intermediaries (especially hedge funds) at remarkably low credit spreads. In effect their search for evidence of euro-success led them astray in their monitoring of temperature (and solvency risks) in the euro-area financial system.

The integration of two big countries into EMU right at the start – Italy and Spain – where typically high interest rates and other restrictions had held back mortgage credit growth for decades before set the stage for financial intermediary institutions in those countries to experience rapid business growth. In turn the high profits growth for the leading banks in Spain and Italy helped fuel the temperature rise in their equity markets which allowed them to become (by aggressive merger and acquisitions) leading euro-wide institutions.

There is no evidence that the ECB or capital markets became wary about the risks implicit in the rapid ascent to euro-area (and indeed global) stardom of Spanish or Italian banks. Instead the capital markets fell into the trap of reading rapid expansion of domestic banks in Spain, Italy or elsewhere in the euro-area as evidence of a genuine renaissance in the 'European financial space', applauding the emergence of newly efficient and profitable global players.

Such exaggerated optimism in the context of 'speculative displacement' (the term is found in the Aliber-Kindleberger analysis of bubbles followed by their bursting and refers to a big change in the economic or political environment which is followed by a jump in Knightian uncertainty which sometimes eventually stimulates various forms of

irrationality) is a well-known feature recognized by students of bubbles through the ages (see Aliber and Kindleberger, 2005). In this case, the replacement of various second-order high-coupon currencies by the low coupon euro was the speculative displacement.

Euro-nationalists and Quai d'Orsay gain control

The excitement created by the new money and the opportunities which it could bring to financial institutions in the integrating European space was distinct from *euro-nationalism*. This latter phenomenon features in particular the enthusiasm about the reduction in US hegemony – economic, financial and geo-political – which EMU might bring.

Euro-nationalism, perhaps an inevitable outgrowth of EMU, has led the ECB into expensive errors with respect to its G-7 diplomacy and has also gone along with a systematic under-estimation of European economic vulnerability to US economic and financial developments.

In fact euro-nationalism, with its evident pitfalls, was pre-programmed as a feature within the ECB by the virtually pre-arranged appointment of M. Trichet as the second President.

According to the deal between French President Chirac and German Chancellor Kohl at the May 1998 EU Summit, Germany's strong preference as President, Wilhelm Duisenberg, was to be succeeded by Claude Trichet with the change-over to take place well before the end of the eight-year term of office.

Already identifiable as a euro-nationalist from his long career as top French economic diplomat, it was predictable that he would use his office to push forward an agenda long popular in the Quai d'Orsay (French foreign office) of combating US monetary hegemony.

(This agenda was a component of the wider French policy aim described as multipolarity, evident for example in the special relationship – albeit intermittent – between Paris and Beijing.)

M. Trichet's big opportunity to push forward the euro-nationalist agenda came with the Dubai G-7 summit (autumn 2003). In the context of an already weak dollar against the euro (which the ECB was attributing to the US mega current account deficit and its counterpart in 'too low US savings' rather than to the fundamental source of over-stimulatory US monetary policy), M. Trichet embraced the case (suddenly being put forward by the Bush Administration responding to protectionist pressure in Congress most of all vis-à-vis China) for East Asian currency appreciation.

The idea of breaking up the dollar bloc in East Asia was superficially attractive also from a trade viewpoint for Europe, which could gain

competitiveness (in Asia) from the 'inevitable' (in the view of M. Trichet and his economist advisers at the Banque de France) appreciation of currencies there. He formed an unholy alliance with the currency populists in Washington to demand a break-up of the Asian dollar bloc, meaning in particular that Beijing should unpeg its currency against the US dollar and make sure it climbed – far from inevitable if all exchange restrictions were to be lifted and official intervention halted simultaneously!

In dealing with China, M. Trichet had to be duly sensitive to Paris's special relationship to Beijing. In consequence, he and his colleagues in French diplomacy presented themselves as forging a middle way – a milder path of currency adjustment than what the Washington neo-mercantilists were putting forward!

ECB joined fateful Washington assault on Asian dollar bloc

There is no evidence to suggest that any serious debate occurred around the ECB policymaking table about whether it would be of overall benefit to the euro-area for the Asian dollar bloc to disintegrate. And even if there had been a debate, there is no record of a strong alternative view within the ECB. That is disappointing in terms of the ECB's policymaking record.

The whole episode is another illustration of the flaws of an independent central bank so insulated from the political arena – particularly in the context of a monetary union unaccompanied by political union.

What was the alternative view which could have been considered, and might well have entered the policy debate, in a more open system?

A robust and frictionless capital outflow between the huge savings surplus countries of East Asia and the biggest savings deficit country the US – such as would occur within the context of a dollar bloc where exchange risk was only slight – was beneficial also for Europe. The break-up of the dollar bloc in itself would introduce huge new uncertainties into the global flow of funds. In principle the emergence of exchange risk between East Asia and the US would mean a fall in the equilibrium level of interest rates in the former and a rise in the latter together with a rise in the East Asian currencies and fall of the US dollar.

Who, though, had the least idea of where the new equilibrium levels would be? In the interim there was likely to be an extended learning process in the marketplace, such as accompanies any such major 'speculative displacement' (in the Aliber–Kindleberger sense of a huge change in the economic, financial or political environment – see p. 32). Surely the danger loomed of this process fuelling speculative runs (especially in the dollar exchange rate)?

Was there not enough monetary uncertainty in the world already through the launching of EMU and the change of monetary frameworks announced by both the ECB and the Federal Reserve in spring 2003 without adding the break-up of the Asian dollar bloc to the list?

Dollar plunge leads ECB policy astray in 2004

The further plunge of the dollar which developed as a consequence of the 'successful' ECB–Washington demarche at the Dubai summit (towards breaking up the Asian dollar bloc) led ECB monetary policy seriously astray and laid the seeds of a future global force of instability – an explosive bubble in the yen carry trade.

There is an accumulation of evidence to suggest that one factor at play around the ECB policy board which delayed any tightening of monetary stance already in 2004 on evidence of excess monetary ease (including the heating up real estate markets) was the strength of the euro against the dollar, itself exacerbated by the break-up of the Asian dollar bloc.

During the episode of intense dollar weakness in 2003–4, the ECB put too much weight on the exchange rate (primarily of the dollar against the euro) in terms of judging the overall appropriateness of its monetary stance and not enough on other factors (for example monetary data, evidence of temperature rise in credit or real estate markets).

The break-up of the Asian dollar bloc also laid the seeds of the future yen carry trade bubble. The Bank of Japan, out of fright at the super-strong yen triggered by the Dubai summit (on top of over-stimulatory US monetary stance), decided to introduce (in early 2006) its own anaemic and abridged form of inflation-targeting. This was used to justify holding interest rates in Japan at sub-neutral levels rather than boldly adopting a framework of monetary stability untarnished by contemporary fashion in the US and European. The engendering of monetary disequilibrium in Japan in turn stimulated powerfully the yen carry trade into the zone of irrational exuberance.

The overheated yen carry trade became one of the catalysts to credit market temperature rise not just in many East Asian countries (especially South Korea) but also in Europe (in hot real estate markets and private equity markets) and in particular in the emerging market economies of Central Europe.

European banks, riding a wave of enthusiasm in the equity markets about their long-term profit outlooks as enlarged in particular by euro-induced financial integration in Europe became aggressive participants in a new emerging market loan business (of which Central Europe was

the epicentre, but also including East Asia), an area (of business) which US banks were avoiding this time round. In addition, European banks became huge participants in the US credit boom – including a whole range of what were to become ‘toxic assets’.

This was the first time since the late nineteenth century that European investors had got sucked into a US credit bubble. With no natural dollar deposit base to match, European banks became critically dependent on funding themselves in overnight and very short-maturity dollar repo markets.

There is no evidence that ECB officials during this period (mid-2000s) were aware or pointing to the dangers related to European banks’ high involvement in foreign – and especially US – credit booms. Instead they gave speeches about how in the new age of the euro, European countries had indeed gained a new degree of independence from US economic or financial shock. Exactly the opposite was the reality.

Not only did the ECB totally fail to grapple with the extent of financial interdependence that had grown up under their watch but it exaggerated the degree of economic independence that monetary union had brought.

ECB repeatedly underestimates danger (for Europe) of US recession

On the eve and into the early stages of both recessions in the first decade of monetary union (early 2001 and early/mid 2008), the ECB repeated the same error of assessing that the euro-area economy could avoid being dragged down by a sharp US downturn (or that indeed the euro-area economy was subject to the same forces that were pulling the US economy down). Policy at a critical cyclical turning point fell far behind the curve.

In the case of the recession which started in the US in November 2007, heralded by the US growth recession (defined as a period of below trend but still positive growth) from mid-2006 to early 2007 and later much more loudly by the global credit market quake of July/August 2007, the ECB at first denied that the euro-area economies would follow suit. During the growth-recession phase, the ECB was firmly on the side of the economic optimists (predicting no hard landing in the US nor severe downturn in its real estate market).

In late 2007 and early 2008 there may have been some divergence of view within the ECB about the economic outlook (with the Bundesbankers and ex-Bundesbankers remaining optimistic) but key officials could agree on a continuing tough monetary stance due to their common concern that sky-high oil and commodity prices would

drive up inflation. That toughness is evident from the juxtaposition of the actual risk-free interest rate rising at the same time as the bursting of the credit bubble surely meant a big drop in the equilibrium risk-free rate (together with a much wider than normal spread of risky rates above the risk-free rate).

The ECB policymakers in deciding to toughen their monetary stance through the first three quarters of 2008 completely failed to put a substantial probability on there being an oil price bubble.

In their analysis of the observed spike in the CPI, the ECB policymakers failed to make the key distinction between monetary inflation and an upward movement of the price level explained by real factors (in this case a bubble-driven shortage of oil), which in any case might subsequently go into reverse.

No consideration of alternative strategies in wake of credit quake

It seems that the credit quake of July/August 2007 took ECB policymakers to a large degree by surprise, even though they appreciated that credit markets had long been warm or hot in the sense of credit spreads being abnormally low. The biggest surprise (to ECB policymakers) was the extent to which European banks were participants in the US section of the credit bubble and how far this participation had been hidden in off-balance sheet entities (so-called structured investment vehicles or SIVs).

As the European inter-bank markets became suddenly submerged in crisis (many banks finding it impossible to roll-over borrowings in inter-bank market except in some cases at lofty premiums to normal rates – in other cases not at all) on August 9 in reaction to news of BNP Paribas freezing three of its investment funds and the rescue of Europe's highest profile sub-prime casualty IKB (with the high-risk debt in a SIV), the ECB ordered that the taps be opened wide open – meaning that the ECB should offer unlimited funds (against eligible) collateral at the then overnight rate (of above 4% p.a.).

The ECB decision (of 9 August 2007) (reached by telephone conference between the policymaking officials with anecdotal evidence suggesting that the Bundesbank played a key coordinating role) to make massive secured loans to any bank on demand at a rate near to the actual unchanged official rate appears to have been taken without any consideration of the main alternative plan of action and without any consideration of the exit strategy.

It is also obvious (with supporting evidence) that those making the decision wrongly diagnosed the source of the crisis as a liquidity shortage rather than an eruption of insolvency danger.

The alternative action plan would have been to immediately cut the rate on the overnight deposit facility at the ECB to zero (in response to the crisis in the inter-bank funding markets) while imposing a premium charge on secured lending above a given quota amount to any bank (and this charge would rise with the amount of excess over the quota). Larger premiums would apply to any extraordinary unsecured lending by the ECB (subject to limits on a case-by-case basis).

Under this plan, the yield on short-maturity high-quality euro-government bonds would have collapsed simultaneously to near zero under the pressure of those banks with excess reserves seeking any alternative risk-free outlet to leaving them at the ECB (where they would now earn zero). In the wholesale money markets, there would have been an instantaneous fanning out of rates – with those banks recognized as less weak being able to attract non-insured funds at very low rates (only a little above zero) while those seen as weak (or under suspicion) having to pay rates well above the official repo rate applicable to normal size borrowing from the ECB.

Given the wide spread which would have immediately developed between rates on low-risk deposits and higher risk inter-bank or wholesale lending, the banks with excess reserves or non-banks with an appetite for risk-arbitrage would have ploughed some funds towards the weaker banks or towards money market-type paper (on which the yields would be well above risk-free level).

There would have been a cluster of financial institutions which could not satisfy their funding needs even at high rates in the private markets – except to some limited degree in secured repo markets where a procedure for placing collateral including paper of so-called top quality backed by mortgages was already in place (this market itself froze up at the worst point of the crisis) – and who would have been big borrowers at premium rates from the ECB.

In turn, the ECB would have had to decide (in conjunction with national authorities in the member countries) whether to continue such emergency lending to the very weak institutions (as classic lender of last resort) or to insist on restructuring. (The options would range from an injection of government capital to a liquidation process in which a government entity would take over the banks' loan assets while selling the deposits – the goodwill element – to another stronger bank while wiping out its shareholders and bondholders.)

ECB officials remained in a state of denial about the extent of insolvency risk related to the European home-grown credit bubble (hot real estate markets in Spain, UK, France, Eastern Europe, Italy, or more

general participation in emerging market loans or private equity boom) and well into 2008 continued to stress that there was a crisis of liquidity rather than potential insolvency among several major institutions. And as regards its money market operations, the ECB continued to defy any market solution in the form of allowing spreads between weak and less weak bank rates to widen (alongside a rise of rates on risk-credits to non-banks), which would have produced a profit incentive to re-capitalization.

In particular the less weak banks by issuing equity capital (a procedure which would have required full disclosure) and so reducing the riskiness of their (non-insured) deposits (in that depositors would now be protected by a larger equity cushion) would have been able to earn widened margins on their on-lending whether to other (weaker) banks or to non-banks.

Bogus separation principle

In their conduct of monetary policy from the quake of August 2007 through to the crunch of Autumn 2008 the ECB promulgated a bogus doctrine called the separation principle. This led policy far astray (from optimal).

According to this doctrine, there should continue to be virtually only one rate in the overnight market (rather than a span of rates applying to institutions of now starkly different credit risk) and this rate should continue to be pegged closely to the announced official repo rate. This rate should be set as in normal times in line with inflation-targeting requirements.

Separately, the amount of credit support operations (sterilized secured lending to the banks) should be determined so as to maintain 'liquidity' of the money markets and the rate applied on these operations should be uniform for all (and very close to the official repo rate).

In fact, under the circumstances of inflamed risk perceptions and highly heterogeneous credit-risk of differing financial institutions relevant even to overnight borrowing, the separation principle aggravated disequilibrium.

In equilibrium, there would not in such circumstances be one rate in the overnight market for all institutions. In the absence of intervention to suppress differentials, there would be a wide span of rates – lowest for the strongest financial institutions, highest for the weakest.

In order to allow the markets to function in this way, the ECB would have abandoned the attempt to peg one overnight rate for all. Interest rates on overnight deposits with itself would have been cut to zero.

And the ECB would have added reserves (on an unsterilized basis) through open-market operation such as to meet any increased demand for excess reserves and so prevent a shortage of high-powered money developing which would have manifested itself in wide range of risk-free rates (such as short-maturity government bonds or repo rates secured on government bonds) rising far above zero.

Quite to the contrary, at the peak of the financial crisis in September 2008, the ECB moved to narrow the band between its deposit rate (paid on excess reserves placed with it) and its marginal lending rate, redoubling its efforts to peg one uniform overnight rate for all. Unsurprisingly this action in defiance of market forces resulted in a huge round-trip, where stronger institutions with excess reserves parked them at the ECB and the ECB in turn became the only marginal lender to the weaker institutions.

In applying the separation principle, the ECB lost total sight of a fundamental shift occurring in the pattern of equilibrium interest rates across the marketplace and so acted in a direction contrary to equilibrium tendencies, thereby intensifying the financial crisis and economic downturn.

The ECB was also acting in contradiction of the well-established monetary response of previous financial panics in history. Under the gold standard, or under subsequent paper money standards where reserves paid zero interest (the norm until the ECB's creation), the central bank would allow (unless blocked by the overriding obligation to defend the gold parity now under attack) risk-free rates on near-money assets (for example, short-maturity government bills) to fall towards zero under the pressure of funds seeking a safe haven, while pumping extra monetary base into the system so as to prevent any temporary shortage of reserves (banks scrambling to increase excess reserves so as to protect themselves against panic withdrawal of funds) from developing (of which a manifestation would be a re-bounce of risk-free rates of return on near-money assets such as T-bills or short-maturity government bonds).

In the presence of heightened risk aversion and grown credit risks, the equilibrium tendency was surely for the risk-free interest rate to fall relative to risky interest rates. On top, the overall lurching of the global economy towards recession (in fact US and Japanese recession already started in November 2007 unknown to contemporary economic observers) meant that the average cost of capital across all risk-categories should surely be falling (so as to balance an increasing propensity to save with a decreasing propensity to spend).

Even leaving that last consideration aside and taking at face value (without criticism) the ECB's intent to steer market rates above neutral level so as to defend the euro-area against 'inflation dangers', it should still have been the case that the risk-free rate as represented by short-maturity government bond yields and overnight money rates (as applicable to the least weak financial institutions) should have been falling to very low levels, whilst the risky rates applicable say to one-month or three-month inter-bank lending or re-po lending secured by non-tip-top paper would have been rising.

In resisting this tendency by pegging an overnight rate and setting a high floor to the government bill rates (by offering unlimited access to its deposit facility at near the pegged rate) – and by effecting massive intervention on a sterilized basis in the term-secured lending markets (so as to stop riskier rates rising there) – the ECB acted as a destabilizing influence on the euro-area economy.

In fact, by applying the bogus separation principle, the ECB not only acted as an economic de-stabilizer but it magnified the amount of disequilibrium in the credit markets.

By preventing a fan of market rates widening out in the context of heightened credit risks, the ECB added to the perceived job of 'liquidity maintenance', the misnomer for recycling of funds on a sterilized basis by the ECB towards the weak institutions.

If the market had been allowed to operate freely, several channels of credit flow which in fact clogged up would have been kept clear under the power of much wider spreads.

Of course as on so many issues the ECB could claim that it was in good company. Other central banks, including the Federal Reserve, were following versions of the same separation principle, at least until late winter 2007/8 (when the Bernanke Federal Reserve embarked on further rate cuts, albeit inadequate – see Hetzel). As already emphasized, though, in these indictments, should the ECB as a new institution not have aimed to be above the crowd and especially to outperform the Federal Reserve?

In fact at this time (until late autumn 2008), reserves at the Federal Reserve were still zero interest bearing and so some of the automatic stabilizing behaviour of risk-free rates did occur there (with T-bill rates in particular falling to zero). It was late in the day that Professor Bernanke resolved to follow the ECB in implementing a regime where interest would be paid on reserves so as to strengthen his institution's power to peg money rates.

There is another issue related to the flawed separation principle and the many other listed mistakes of the ECB in this indictment.

Lack of accountability

Flaws in the construction of EMU – in particular, the weak standards set for transparency and accountability set by the Maastricht Treaty – meant that major decisions in policymaking (such as how to respond to the ‘liquidity crisis’ of August 2007 and the subsequent enunciation of the separation principle; and earlier in 2003 or 1998 the design or re-design of monetary framework) were not subject to challenge from inside or outside in any effective way.

ECB officials have boasted throughout the lifetime of EMU that monetary policymaking is transparent and accountable. They cite the press conferences that follow on immediately from the monthly policy board meeting. On closer examination these provide no serious challenge to policymakers – most of the questions are about whether a rate increase (or decrease) was discussed or not discussed; and on the rare occasions that any difficult question is asked it is snuffed out by a filibuster of loquaciousness on the part of the President, frequently with some evidence of incomprehension of the exact point made by the questioner! There is no serious opportunity for follow-up questions and of course the President selects which journalists to ask the question!

Then there is the Monthly Report in which the ECB policymakers can explain the basis of their policy. That never reveals the nature of any debate or alternative policies which have been considered around the (policymaking) table. Yes, there is some disclosure of the macro-economic forecasts and ECB members certainly take pride in the depth and sophistication of the econometric work. But by their nature these forecasts are mostly wrong and everyone knows they will likely be wrong. A central bank is not an economic forecasting institute.

The interest, when it comes to transparency or accountability, is the specific alternative scenarios and risks which were discussed together with the collective thought processes (including considerations of monetary principles) which led up to the key policy decisions. The ECB has never outlined these.

There are the regular testimonies of the ECB President to the EU Parliament. But a review of all the transcripts shows no seriously critical and well-founded questions on monetary policymaking or damaging challenges for the ECB which might change the course of policy or trigger a re-drafting of the monetary framework. Has any journalist or parliamentarian ever had the opportunity or the preparedness to ask

the ECB President directly why his institution made the serious error of steering an over-easy monetary policy in 1999, 2003–5, and worst of all of imposing a monetary squeeze in late 2007 and most of 2008 when a recession had already set in the US and Japan and very likely had already spread or was spreading to Europe?

The answer is no.

More important even than these flaws in accountability is the absence of any such questions during the periods the policy mistakes were being made in the hope that the policymakers would realize their mistake or that democratic pressures would be brought on them to realize these!

ECB officials pride themselves on the transparency and accountability which stems from their annual ECB Watchers Symposium, where outside renowned economists deliver papers and partake in discussion related to live monetary issues. Apparently here is indeed an opportunity for outside challenge. Yet there is absolutely no hint of acrimony or even heated exchange to be found amidst the carefully crafted summary transcripts of proceedings. The symposium is put together by a Frankfurt research institute funded in part by the Bundesbank! Participation is by invitation of the institute. The tone as judged by material available is one of deference and polite exchange within a club. There is no chance of discomfort here.

In principle there could have been a national political dimension to accountability. The French government, in particular, could have appointed an intellectually provocative head of its central bank, willing to break the ranks of silent conformity in Frankfurt, to challenge policymaking consensus (see Marsh, 2009). That has not happened to date, perhaps because there has been no intention of undermining a French President (of the ECB). Italian governments, even those headed by Silvio Berlusconi, have similarly passed up any such opportunity. And in Germany it would be politically taboo to challenge the central bank, given the prevailing concern that any political interference would present serious dangers in the long run for monetary stability.

ECB abstains from key role in recommending new EMU members

The ECB has strenuously sought to keep outside EU politics of any description, except to when it comes to lecturing national governments on their budgetary policies or lack of economic reform policies (such as to boost productivity) – neither of which are within its constitutional mandate.

Towards bypassing points of controversy, the ECB smothered one key issue of responsibility within its mandate. Under the Treaty of

Maastricht, the ECB was to have an equal role with the European Commission in drawing up reports (each independent) on the eligibility of any applicant to join monetary union. Very early on, the ECB made clear that it had no intention of being drawn into such a political minefield, restricting its report to laying out the facts without any recommendation. In effect it passed the responsibility to the Commission and the EU Council.

The procedure which the ECB has ended up by following on issues of new members joining EMU has been entirely cynical.

For example, the ECB raised no objection to the EU Commission's verdict (2006) that Lithuania should not be allowed to join EMU despite this country just missing one entry test and then by only 0.1 percentage points on the inflation score (which was no miss at all if the inflation benchmark had been limited to other EMU countries rather than including an artificially low current inflation rate at the time in the UK). Rather it published its own bland factual summary on the matter with no conclusion. This was a bare-faced decision by the EU Commission, with no expert protest from the ECB, to allow Germany to get its way with its Russian policy (not worth hurting German interests by annoying Russia over extending the euro to the Baltics!).

As a matter of constitutional fact (according to the Maastricht Treaty) the ECB could have broken from the Commission's stance and produced an expert evaluation free of politics which could have been used by those in the Council inclined to favour European liberalism and democracy over sucking up to the Putin dictatorship.

Three years later (in 2009), the ECB and the European Commission might have been patting themselves on the back once the global credit crisis erupted for having either by omission or commission obstructed Lithuania's entry into EMU (even though there is no evidence that a possible credit bubble figured in the Commission's case for rejecting Lithuania or in the ECB's refusal to challenge that rejection). The Baltics with their massive real estate cycles (relative to the size of the economy) and critical dependence on large capital inflows via the banking sector fell into deep recessions.

If Lithuania had been in the euro-area, the ECB would have had to extend its rescue mission to domestic banks or Russian linked banks there (against the collateral of dodgy domestic credit assets) in order to counter and hopefully pre-empt a damaging run of capital out of that country on the fear of a forced withdrawal from EMU. Even so, any such rescue would have been tiny relative to the size of any of the big EMU countries.

In the event, in early spring 2009, the post-bubble crisis in the Baltic countries deepened with intense speculation that Latvia would be the first forced to engineer a huge devaluation of its currency. As the IMF was called in, replenished with the promise of vast new financing as negotiated at the April 2009 G-20 summit (where France obtained remarkable diplomatic success in spearheading multilateral aid for this institution now with Strauss-Kahn – an ex-French finance minister – at its head with the explicit intention of bailing out the emerging market economies in Eastern Europe and implicitly the weak euro-area countries) the speculation started to fade with respect to the immediate future amid savage public expenditure cuts and fantastically high interest rates.

Again the ECB played a role (by omission) in passing up a historic opportunity for the EU to use monetary union as a means of solidifying the economic and political future of a region bordering on Russia where the menace from the Putin–Medvedev dictatorship had become only too clear a year earlier.

Instead of devoting half his press statement on 4 June 2009, to the ECB's latest forecasts on the economic outlook, almost certain to be wrong again, President Trichet could have used his platform to float the historic proposal that the Baltics should be admitted immediately into EMU, subject first to a 40% devaluation of their currencies. That would have worked most likely a miracle, in that interest rates in the Baltics would have collapsed and the devaluation would have given a big impetus to economic recovery there.

M. Trichet, despite his literary idealism on the subject of 'Europe' (see Brown, 2004) implicitly decided not to risk taking on Berlin (where Russia first was still the leading principle at the Foreign Office) over the issue of any bold move to buttress the position of the Baltics as safely outside the reach of the Putin–Medvedev dictatorship.

It could surprise no one that M. Trichet yet again acted as a loyal ally of Paris in firmly backing IMF involvement in the salvage operation rather than euro-expansion.

The Baltic crisis had destabilizing implications for weaker euro-area members. Already in early 2009, even Spain and Italy had become the subject of forced withdrawal rumours (with the key danger being a collapse of the government bond market under bankruptcy fears in turn driving a wave of capital flight out of the banking systems as local depositors in particular sought safety against EMU withdrawal risks by placing their funds instead with German, French or Dutch banks).

Ireland, Greece or Portugal were intermediary cases where any effective lending package to sustain their membership of EMU would have

been much larger than for Lithuania but much smaller than for Italy or Spain. Any intervention for the last two countries – in the form of loans from the strong (credit-rated) governments to the weak – would have to be truly massive, albeit potentially diluted via IMF involvement. And this brings us to the final element in the indictment.

EMU fails test of first serious global recession

EMU has failed the stress test of a serious global recession. Following the global financial market freeze-up in the wake of the Lehman bankruptcy (September 2008) doubts began to surface about potential bankruptcy crisis for the weakest credit-rated government in EMU and the possibility of EMU break-up (in the sense of one or more country being forced out by financial crisis) became a significant factor in market valuations.

How can this vulnerability of confidence in the future of EMU to severe recession and credit crisis be explained? First, there had been the gigantic credit and real estate bubbles in Spain and the enfeeblement of its banking system by their collapse. No doubt one element in the bubble formation had been the sharp decline in interest rates which accompanied the change of monetary regime (from the peseta to the euro).

Second, there was the weak starting position of Italian public finances (with very high debt to GDP ratio – well over 100%).

Third, unit labour costs had been rising in Spain and Italy relative to Germany during the first decade of EMU. That was fine when capital was flowing in to finance a domestic construction and real estate boom (most of all in Spain). And the Italian export sector had been dynamic, even if subject to growing competition from cheap labour countries. But now with domestic booms (bubbles) over, any long-run path to prosperity would likely be accompanied by some permanent shrinkage of the over-bloated and in some inefficient non-traded goods and services industry and a re-balancing towards exports.

In the context of monetary union big reductions in wages and prices in the once-bubble economies would be required to bring about that adjustment if a long-running bulge in frictional and structural unemployment were to be avoided. Alternatively there could be large flows of labour out of Spain or Italy in the medium term to find profitable employment opportunity elsewhere, mainly in other EU countries. But labour flows within EMU were unlikely to be anything as robust as say between different states in the US or provinces in Canada.

The probability of continuing severe economic conditions in a long period of economic disequilibrium, together with massive bail-outs of

the domestic banking systems now reeling from bubble-related losses (in the case of Italy these were to a considerable extent in Eastern Europe) made the outlook for public finances bleak. And without any automatic provision for grants to the weakest government from the strongest governments (as from Washington to the states) the spectre of national bankruptcy loomed.

Self-indictment of euro-complacency

As ECB officials showered their praise on EMU at its tenth anniversary in the immediate wake of the Great Financial Panic (for which the catalyst was the Lehman bankruptcy) the words of President Trichet provide the final self-indictment of complacency.

In an interview with *Le Figaro Magazine* (7 January 2009) he exclaimed:

The euro is evidently an advantage for those democracies that have chosen to adopt it. It has proven its stability, its resistance to shocks and its resilience in the face of financial economic turmoil. Once again, I would say, the euro has been a key factor in providing a shield against international turmoil. [...] We were the first central bank to react immediately when the international financial turbulence first appeared (9 August 2007). [...] Europe was able to take decisions even in the most difficult circumstances. [...] The euro is a big success.

The editor of the *European Wall Street Journal* was on M. Trichet's side. In a lead article on 2 January 2009, he wrote:

The Single European currency, born on New Year's Day in 1999, is a rare economic shining star of the past decade.

Evidently EMU and the ECB have powerful officials within and friends without who would speak in their defence against any indictment. We discover in subsequent chapters how that defence could stack up and what the prosecution could respond.

2

Origins of the Euro-Bubble

How were such great hopes dashed?

Here was a new central bank and a new monetary union which started up at the end of the 1990s. Yes, there were the cynics right at the start, including Milton Friedman who warned that EMU would not survive the first serious recession.

But the euro-enthusiasts – and they were now in charge of Europe’s monetary destiny – boasted that a new financial economic and political future had dawned.

The boast proved to be empty of content. One decade later that monetary union was submerged in the aftermath of a credit bubble which seemed to be as bleak – and on some accounts bleaker – than in the US! Political integration had made no progress at all (despite the claim of Jacques Delors that monetary union would be the catalyst to political union – see Brown, 2004) and on some accounts had moved backwards. Financial integration had moved into reverse gear.

An incipient flight of capital out of the government bond markets in a range of financially weak member countries had brought the scenario of EMU break-up or shrinkage within the mainstream of investor vision around the globe. Embarrassed euro-officials who had been praising their own record at the official tenth anniversary events had to issue statements of denial, mainly to the pompous effect that anyone who saw the danger of EMU exit must be idiotic or deluded!

In this chapter the task is to look at the history of EMU in the years up to the peak of the bubble, say early 2007, and pick out the salient factors of ensuing malaise. In effect this chapter assembles the evidence from this period towards justifying the indictments of Chapter 1.

Historical observations of Otmar Issing

Let us start with the evidence provided by Professor Otmar Issing, founder member of the ECB Board and its first Head of Economics and Research.

Much of this testimony can be found in his book *The Birth of the Euro* (2008). There he states (written in late 2007?):

Nine years on (from the run-up to the launch of EMU), the ECB can lay claim – virtually undisputed – to the success of its monetary policy. Those observers that remain sceptics at heart might at most add the qualification ‘so far’. Over this period, the average annual increase in the HICP has been 2.06 per cent. [...] Even the D-mark performed considerably less well over the period from 1950 to 1998, with a rate of 2.8%.

Well here is the statement of a single-minded general who achieved his target, never mind the cost! In this case the bill was soon to be presented in the form of an almighty credit bubble and burst. The historical comparison (with the D-mark) on close examination includes an element of fiction alongside fact (see p. 131).

Let us start with the first big policy decision in what Professor Issing claims was a decade of monetary policy success.

First big monetary policy decision was a big mistake (1998–9)

With inflation in the euro-area as a whole running at just 1% p.a. at the start of monetary union, the ECB decided in favour of monetary easing. In early December 1998 while the national central banks were still legally in existence as sovereign policymakers, the ECB (which had grown out of the European Monetary Institute, opening its doors on 1 July 1998) arranged for an across-the-board cut of official rates by all participating countries. Accordingly the official repo rate set for the start of EMU was at 3% p.a.

In a second policy move in April 1999 the Governing Council decided to reduce again all policy rates. The main refinancing rate and the deposit rate were both reduced by 50 basis points, to 2.5% and 1.5%, respectively.

Albeit with the benefit of hindsight, this sequence of monetary easing through late 1998 and early 1999 was deeply unsettling for the new

monetary union. What was so bad about inflation for a time at one percentage point below the upper limit to the inflation target? The IT revolution was now in full swing, which surely would be ushering in accelerated productivity growth globally even if the European official statisticians were bound to do a bad job of measuring this. In itself, accelerated productivity growth would lower the path of the price level through time which would be consistent with monetary equilibrium.

Late summer 1998 had seen the eruption of the Russian debt crisis leading on to the brief long-tem capital management (LTCM)-related liquidity crisis of autumn 1998 during which the Federal Reserve under Chairman Alan Greenspan embarked on a pre-emptive easing of monetary policy (taking a cue in part from a passing sharp fall in the equity market). All of that would have undoubtedly influenced sentiment around the policymaking table at the just-opened European Central Bank. But the degree of that easing by the FOMC (Federal Reserve Open Market Committee) and the slowness with which it was withdrawn has been widely criticized since – especially given its contribution to the final expansion of the NASDAQ bubble-and-burst.

Could the ECB at its start not have done better than following the mood and monetary style of Washington? And in any case, in making a big rate cut in April 1999 the ECB was already six months on from the crisis action by the Fed and concerns about a possible growth recession in the US had dissipated.

Strangely Professor Issing in his book chooses to provide little insights into how the ECB might answer such criticism. He states somewhat lamely that

[m]ajor foreign markets were still suffering the effects of the Asian crisis and the repercussions of the Russian crisis of summer 1998 were also still being felt. [...] The assessment of risks to price developments as being on the downside underlay the ECB Governing Council's decision to reduce the interest rate on the main refinancing facility by 50 basis points to 2.5% at its meeting of 8 April 1999.

A similar non-plus analysis of the monetary easing of late 1998 and spring 1999 is found in *Monetary Policy in the Euro-Area* (2001) under the joint authorship of Issing, Gaspar, Angeloni and Tristani. This account was written nearer the event and stresses the so-called 'downside risks to inflation'. The authors write:

[O]n April 8 (1999) the Governing Council was facing a situation in which all forecasts projected the euro area inflation rate to

remain around levels well within the definition of price stability in the following two years. These projections, however, were in every case the result of a sequence of reassessments, always in a downward direction, which were by themselves the manifestation of a trend leading to downward threats to price stability. While there were no expectations of the euro-area facing deflation, there was the perception of a risk that this could happen, and the main risks to price stability remained on the downside. The risk could be taken particularly seriously in light of the dangers inherent in a situation in which monetary policy operates at very low levels of inflation.

Fear of too low inflation influences ECB policy right from start

We see from the quote above that already the ECB's monetary policy in early 1999 was being driven in part by fear that inflation would enter into a dangerously low zone (dangerous in that the ECB might become powerless to provide stimulus in an economic downturn given that the equilibrium risk-free rate could fall below zero). This was a few years before such fears became enunciated by the Federal Reserve (in early 2003) – with the difference in part related to the fact that US inflation at the time (late 1990s) was further above the danger zone and in part to the coincidence of individual appointments.

The strong advocate of action against 'too low' inflation in the Federal Reserve – University of Princeton Professor Ben Bernanke – was appointed by President Bush to its Board in 2002. Even so, Alan Greenspan had been already following for many years a quasi-inflation targeting policy (he would never admit this!), failing to acknowledge that monetary equilibrium is consistent with and even requires an uneven pace of inflation or a fluctuating price level (up and down) over considerable periods of time. In particular, a phase of accelerated productivity growth (as in the mid- to late-1990s under the influence of the IT revolution and related investment spending boom) should go along with a dip in the price level to be consistent with monetary equilibrium (see p. 20). And in a weak phase of the business cycle (as in 2001–3) a dip in the price level or a lower than normal inflation rate should be considered as an essential element in how the capitalist economy auto-generates a recovery out of recession (see p. 9).

The reason why the spectre of too low inflation (not a spectre to those economists aware of the key distinction between good deflation including benign cyclical dips in inflation or the price level and monetary

deflation) first appeared in Europe was the extent of monetary savagery in the run-up to EMU. In proving their credentials to join the new union – and to resist the waves of intermittent currency flight during the early/mid-1990s – many of the national central banks (excluding the Bundesbank which was not in the position of having to prove eligibility and which in any case several years earlier during 1991–3 overdid its monetary cooling in response to the inflationary dangers evident during the post-unification boom) had pursued (earlier in the decade) disequilibrium monetary policies in a recessionary direction. Also in late 1998 Germany was in near-recession (in part related to the global trade slowdown in the wake of the Asian crisis).

There is no evidence, either in the form of contemporaneous or subsequent testimony, that ECB officials – and crucially Professor Issing – considered seriously the hypothesis that the then feeble inflation rate (around 1% p.a.), even though well below the implicit ‘medium-term’ target of 2% p.a., might well have been consistent with monetary equilibrium (taking account especially of the benign tendency for most cyclical prices in the economy to fall in the weak phase of the business cycle and rise in the recovery phase). Nor is there any evidence to demonstrate that those officials were aware of the danger (especially in a new monetary union) that breathing in a significantly higher inflation rate (above 1% p.a.) could create serious monetary disequilibrium.

An alternative policy would have been formulated with acute awareness of the credit-and-asset bubble type credit risks associated with monetary disequilibrium created albeit with the best of intentions during a recession phase. Perhaps there would have been less concern around the ECB about the perils of monetary paralysis should inflation fall too low if on the shelf there had been a contingency plan drawn up for uprooting the zero-rate floor to nominal risk-free rates should the ultimate danger of severe recession and debt deflation present itself despite the best efforts (on the part of the ECB) to avoid this (see Chapter 5).

In practice, by aiming to push inflation very slightly higher from the present level of 1% p.a. (in 1999) the ECB could not realistically hope to gain significant extra margin of firepower should the spectre of deep recession and debt deflation become reality. But even a small move in that direction could provide the fuel for a sharp decline in the new currency or a rise in asset and credit market temperature.

In principle, if a severe fall in the currency were to occur, there was a hypothetical case for going the full hog and aiming for a much higher rate of inflation (4–5% p.a.) in the long run which really would banish

the zero-rate trap under any scenario as a handicap to stimulatory monetary policy. But in practice, that response would surely be infeasible for a new currency not yet enjoying full confidence in the market place. And the hypothetical case also encounters at least three important objections in theory.

First, the shift of the long-run benchmark for price level stability from a zero or very low positive annual average rise to a high positive number is bound in itself to erode confidence in the central bank achieving the benchmark. Everyone understands that zero is zero. But once the benchmark becomes 4% p.a. or 5% p.a., why not 8% or 10%?

Second, the further away from zero is the benchmark, the less powerful becomes the key stabilizing mechanism of pro-cyclical shifts in the price level. Specifically during recessions, prices fall in the highly cyclical sectors of the economy providing an incentive for financially fit households and firms to spend in anticipation of higher prices once the economy exits recession. Such calculation becomes highly blurred in the context of high inflation.

Third, at a 4–5% rate of inflation, high reserve requirements where the interest rate on reserves is held at zero (as would be optimal) might be intolerable in terms of competitive pressures faced by the banks from financial institutions not subject to reserve requirements (see p. 12). Yet overcoming this problem by lowering reserve requirements or paying interest on reserves severely weakens overall monetary control mechanisms (see p. 11).

In any event, it was not long before the chickens came home to roost from the ECB's decision (implicit!) in spring 1999 to breathe a little inflation back into the euro-area economy. The euro started to decline, with the pace of depreciation gathering pace. From a starting level of 1.18 US\$/€ the euro had fallen to virtually 0.80 US\$ by October 2000, and the decline against the yen was even greater.

As a new currency, the euro was doubly vulnerable to a policy of breathing in inflation. Each leg down seemed to demonstrate to the sceptics about monetary union that the new money could not earn the trust of international investors. In the language of the behavioural finance theorists, there was a negative feedback loop.

ECB in state of denial about monetary source of euro's plunge 1999–2000

One salient aspect of the official reaction in Frankfurt to the euro's slide is that no one there made the connection with the monetary decision

to breathe a higher rate of inflation back into the euro-area economy. Instead, there were a series of explanations including why the euro was not undervalued by any long-run perspective or why the depreciation in fact stemmed from the strength of capital inflows into the US to take advantage of that country's pre-eminence in the IT revolution. Increasingly officials got drawn into a debate as to whether there should be official intervention to support the euro.

The ECB President, Wim Duisenberg, irritated by his colleagues' speeches studded with different nuances on the subject of the weak euro and the benefits or not of intervention, announced that he personally and no one else took responsibility for euro currency policy – 'I am Mr Euro', he told the assembled journalists.

A bout of official intervention did take place eventually in autumn 2000, as undertaken jointly by Washington and Frankfurt. With the NASDAQ bubble already bursting, the US Administration saw an advantage (some cynics saw the looming Congressional and Presidential elections as a factor here) in providing some support for US equities by driving the dollar down from its elevated levels (versus the euro). But the effect of the intervention was short lived.

The strong bounce-back of the euro from winter 2001/2 went along with a reversal of relative stance between US and euro-area monetary policies. The ECB continued to be cautious about easing policy – not least because of an inflation overhang now emerging in consequence of the earlier big devaluation (on top of jumps in food and energy prices at the start of the new decade).

The Federal Reserve, in the wake of the September 2001 terrorist attacks on the US, moved at last to a stimulatory policy towards combating recession (in the previous year up to September 2001 the Federal Reserve had been significantly 'behind the curve' – albeit less so than the ECB – and had been very late in recognizing the onset of the economic downturn). Eventually in spring 2003 the Federal Reserve came out with its more explicit version of breathing inflation into the economy than the ECB had done in early 1999 or even than the ECB was doing simultaneously (in spring 2003).

The shift by the Federal Reserve to a stimulatory policy occurred six months after the start of recession and barely two months before the start of recovery. Eventually in spring 2003, still disbelieving evidence of an economic upturn, the Federal Reserve came out with its aggressive version of breathing inflation into the economy. This was more explicit and focussed than the ECB's earlier version of the same policy enacted in the first few months of 1999. The Federal Reserve's new policy also struck

contemporaneous observers as more radical (and expansionary) in its implications than the almost simultaneous shift in monetary framework announced by the ECB in spring 2003 (see p. 57).

That is running ahead of our story. Let us return to how contemporary commentators viewed the weak euro of 1999–2000. The authors of the ECB's tenth anniversary edition of the *Monthly Bulletin* (June 2008) subtitle the period mid-1999 to end-2000 as 'Phase 2 – raising rates to contain inflationary pressures (mid-1999 to end-2000)'. There is (of course!) no mention of the fact that the inflationary pressures might have been a consequence of an earlier erroneous decision to breathe inflation higher (an exercise which apparently got out of control) back in spring 2000. Instead the authors blame extraneous events:

Over this period, sharp increases in oil prices and a general rise in import prices (was this due to euro depreciation??) continued to exert upward pressure on prices in the short term. As these increases were larger and lasted longer than previously foreseen, the risks of indirect and second-round effects on consumer price inflation via wage-setting rose significantly in the context of robust economic growth. These concerns were compounded by the development of the euro exchange rate. Its trend depreciation continued over this period, gaining momentum in, especially, the second half of 2000 when it moved further out of line with the sound fundamentals of the euro-area. As a result, the balance of risks to price stability over the medium-term was shifted upwards.

The authors congratulate (no surprise there!) the ECB policymakers.

It became clear that the downside risks to price stability identified at the time of the reduction of the key ECB interest rates in April 1999 no longer prevailed. With the ECB's economic and monetary analyses both pointing to upside risks to price stability, the Governing council raised the key ECB interest rates by a total of 225 bp in a series of interest rate hikes between November 1999 and October 2000, bringing the minimum bid rate in the Eurosystem's main refinancing operations to a level of 4.75% in October 2000.

The authors do not judge policy by the counterfactual – how much better would the outcome have been if the 200 bp rate rise had all taken place by the end of 1999, or if the starting rate cut had not been made at all in April 1999.

The counterfactual experiment should not be limited to euros and cents of lost GDP over the business cycle as a whole. There was also the damage in terms of the related plunge of the euro at its start (attributable to over-easy money) and higher-than-otherwise inflation slowing down the growth of trust among euro-area citizens in the new money.

As we shall see, this possible lack of trust played a role in restricting the freedom of choice of the ECB when it came to reformulating the monetary framework in 2003, making it more difficult to abandon quasi-inflation targeting and embracing sounder principles of monetary stability (see p. 57).

ECB's policy mistake of 1999–2000 handicaps response to 2001–02 recession

Reverting back from counterfactual to actual history, we arrive at the ECB's response to the global recession in the wake of the IT bubble bursting. Issing and his fellow authors (see Issing et al., 2001) describe this period as phase (3) 'Downward Adjustments to Key ECB Interest Rates – early 2001 to mid-2003'. They applaud the ECB's 'grand old duke of York tactics' (not a term used by the authors and stems from the English nursery rhyme 'he marched them up to the top of the hill and he marched them down again, and when they were up they were up and when they were down they were down!'):

In the course of this period, the Governing Council lowered the key ECB interest rates by a total of 275 basis points, with the minimum bid rate reaching a historically low level of 2% in June 2003. This is the lowest level of interest rates seen in Europe since the Second World War.

It seems that the authors exclude Switzerland from Europe for the purpose of this statement.

One critical issue missed is whether the ECB's inability to take a more accommodative policy stance (reducing rates to the same extent over a much shorter time span) during the recession of 2001–02 stemmed from the earlier mistake of having breathed in too much inflation during 1999–2000. Anxiety about dislodging the anchor to stable low inflation expectations already loose as a result of that earlier episode (and in particular the plunge of the euro) paralyzed decision-making.

The second critical issue is whether the ECB should still have been easing policy (as against tightening) in early 2003 given the then

explosive growth of money supply which itself might have been seen as one indicator of incipient temperature rise in credit and real estate markets.

The authors slur over that second issue, admitting that the rapid growth of M3 (which was accelerating from mid-2001 onwards) was a source of concern, but pointing out that surge in the money supply was explicable by portfolio shift ('the incidence of sizeable shifts in private investors' portfolios away from shares and other longer-term financial assets towards safe and more liquid monetary assets included in M2'). The authors do not comment on the explosive growth of M1 (especially from mid-2002 on), driven in part by very rapid growth in the overnight inter-bank market – itself an early indicator of bubble trouble.

Without further ado they move on to a discussion of 'Phase 4 – No Changes to Key ECB Interest Rates (mid-2003 to end-2005)'. In doing so they pass over the monetary framework announcements of spring 2003 in which the definition of price stability was 'clarified'.

Long day's journey into monetary madness, spring 2003

Coincidentally, early 2003 was a watershed in US monetary history (see Broadus, 2004) (and also in UK monetary history, with the Bank of England, albeit under closer government instruction but with no significant disagreement, shifting its policy framework in similar respects to the US and euro-area). At the conclusion of its May meeting (May 6), the Federal Reserve Open Market Committee had expressed concern for the first time that inflation might decline too far:

The probability of an unwelcome substantial fall in inflation, though minor, exceed(ed) that of a pickup in inflation from its already low level.

For those in the know, the newly appointed Governor, Professor Bernanke, a specialist in the Great Depression (who had concluded that the blame for this lay primarily with lack of forceful enough monetary intervention to prevent a severe recession turning into depression) and ardent advocate of inflation targeting, had persuaded Chairman Greenspan and his colleagues that the US economy now (in the wake of the earlier NASDAQ bubble-and-burst) was in danger of entering a 'Japan-style' deflation.

Federal Reserve transcripts tell us that Professor Bernanke did not totally convince Chairman Greenspan in that his hints about the next

step being the use of non-conventional policy tools – including creation of massive excess reserves – were not taken up, perhaps because the recovery of the economy became clear so soon afterwards.

In fact, Professor Eisuke Sakakibara was much later to argue that the very mild decline of the Japanese price level in the late 1990s and early 2000s was not at all bad depression-style deflation (what Austrian economists would describe as severe monetary disequilibrium in a deflationary direction) but instead good deflation attributable to jumps in productivity per man-hour and improvements in terms of trade related to rapid integration of the Japanese and Chinese economies (see p. 25).

Journeys into monetary deflations in history are characterized by an ongoing process of money creation lagging far behind money demand in real terms. In principle at a later point when expectations of price level declines continuing have become prevalent, matched by projections of persistent feeble growth or actual contraction in money supply, there may no longer be any present monetary shortage. Long-run price declines fully expected and matched by monetary developments in the same way as long-run price increases fully in tandem with monetary expansion are not evidence of monetary disequilibrium, but they are inconsistent with the aim of price level stability in the long run.

Many economists argue that there was indeed such a monetary journey into deflation in Japan during the period 1989–93 when Bank of Japan policy was extraordinarily tight through 1989–93 (see Brown, 2002). In fact the price level data do not back that claim. It is plausible, though, that the emerging gentle decline of the price level many years beyond that could have been due to the good deflation forces described by Professor Sakakibara in his revisionist account of the so-called ‘lost decade’. Also at work could have been a process of extrapolative expectations of continuing price declines based on recent history and ratified by money supply in nominal terms growing somewhat less fast than real money demand (but no longer with a shortfall such as to produce monetary disequilibrium).

As regards the US situation in early 2003, the fall of recorded price level rises to around 1% p.a. was much better explained by normal (and economically efficient) pro-cyclical behaviour (dominated by prices in the highly cyclical sectors of the US and global economy – including commodities) than any hypothesis of sinister monetary developments. Critics argued that the new Governor from Princeton University had become ‘obsessed’ with the Great Depression to the extent of giving an unrealistically high probability to a recurrence and

that moreover he had not learnt the most important lesson of all – about the Federal Reserve’s mistakes during the boom period which preceded the Great Depression (see Lowenstein, 2008 and Brown, 2008 and below, p. 60).

Early 2003 was also a critical period for the evolution of the ECB’s monetary framework. Two days following the critical May 6 FOMC meeting (after which an immediate press release detailed the decision), the ECB held a ‘press seminar on the evaluation of the ECB’s monetary policy strategy’. This consisted of a slide show by Professor Otmar Issing. The first and most important point was that the Governing Council clarified its quantitative definition of price stability.

Price stability shall be defined as a year-on-year increase in the Harmonized Index of Consumer Prices for the euro-area of below, but close to 2%.

The new element here was ‘close to’ whereas previously the degree of tolerated undershoot had been left unstated.

As before, price stability was to be assessed over a ‘medium-term’ horizon, but meaning in practical terms (though not expressly stipulated) around say a two-year period. Other points – less important – in the slide-show included semantics about whether the ECB was targeting inflation (according to Professor Issing no – but in practice yes, see p. 18); and semantics about the role of money supply path monitoring in the so-called ‘two-pillar approach’ to implementing (don’t mention the word!) inflation-targeting (see pp. 13–14).

Professor Issing’s notorious slide show

There were two particular points of interest to come out of Professor Issing’s slide show as regards the role of the monetary pillar in the monetary framework.

First, he repeated the assertion (so well-known since first public explanation of policy framework just prior to the start of EMU) that monetary phenomena deserve separate attention, from the econometric type analysis which formed the first pillar, as triggers to the raising of an alarm bell (in the corridors of the central bank). Conventional forecasting models do not capture fully the signalling capacity of monetary phenomena, whether within the two-year horizon relevant to econometric equations, or beyond. (This is a point of view on which Friedman and the Austrians would both agree – see p. 12) Monetary analysis provides a means of cross-checking from a longer-term perspective the shorter-term indications from the economic analysis which forms the ‘first pillar’.

Second, Professor Issing commented directly on bubbles:

Excess money may provide additional information for identifying financial imbalances and/or asset price bubbles, which ultimately may impact on price developments.

The impression from this second remark was that financial imbalances and asset price bubbles were not a problem in themselves except in so far as they had implications for the meeting of the long-run price objective (inflation target by any other name). That was far removed from the Austrian concept in which severe monetary disequilibrium could occur without there being an inevitable sequel in a cumulative rise or fall of the price level over the very long run. And for the Austrians that severe disequilibrium was not anything to be dismissive about. Its consequences were dire in terms of economic costs – including in particular the waste (misallocation of scarce capital, both physical and human) of the bubble-and-bursting process.

For example, the monetary disequilibrium in the US during the mid-1920s (evident, according to the Austrian analysis, in the strong temperature rise of credit and real asset markets, even though there was no symptom in the form of a rising price level for goods and services – see Rothbard, 1972), attributable to the Federal Reserve under the domination of Benjamin Strong holding down money rates well below the high neutral rate reflecting the contemporaneous technological revolution, had occurred alongside broad stability of the price level. Germany, the second largest economy in the world in the late 1920s, was also in severe monetary disequilibrium at the same time.

The German monetary disequilibrium (of a totally different nature from during the hyperinflation) stemmed from the fixed link to the US dollar of the Reichsmark as stipulated by the Dawes Plan (1924). This prevented German interest rates coming into line with the very high natural rate level which corresponded with the boundless investment opportunity to emerge in the aftermath of war and hyperinflation. The overall result was a fantastic credit-and-asset bubble in both countries (Germany and the US) without upward pressure on the overall price level in either. And yet the bubble would inevitably be followed by a burst, meaning that monetary excess would never show up in goods and services inflation.

There are no references to the possibility of severe monetary disequilibrium without the accompaniment of an actual rise in the price level in Professor Issing's speech. Instead, there was much reference to the possibility of 'deflation'. Professor Issing emphasized (in his slide show)

that there was a need for sufficient safety margin to guard against risks of 'deflation', hence the revamped wording of the price aim.

There was no comment by Professor Issing to suggest awareness of the key distinction between monetary-led deflation (initiated by a severe monetary disequilibrium in which money supply is growing well below the demand for real money balances) and various forms of non-monetary driven declines in the price level (related to terms of trade improvement, productivity growth acceleration and cyclical fluctuations) which could well be symptoms of a well-functioning capitalist economy with no monetary disequilibrium.

This re-vamped and expanded description of the monetary framework was disconcerting in several respects. Perhaps most disconcerting of all was the fact that the ECB was moving even further away from an ideal monetary framework which would recognize that the achievement of monetary stability transcended and could indeed be frustrated by an intense focus on price level changes over short or medium periods of time.

One might have hoped that now the ECB had been open for almost five years, it could build on the grown trust of euro-citizens concerning their new money to back away from such a concentration on movements of the price level over the short- and medium-term.

Instead, the policy framework reformulation made the medium-term profile of the price level an even greater focus with less room for flexibility than before (price level rises now had to be held close to 2% p.a., not falling significantly below that figure).

Yes, the mistake of the ECB (unrecognized of course in official statements) in pursuing excessively easy money policy in its first year or so had squandered some opportunity to build trust (in stability of the new money) among euro-citizens. Nonetheless, some progress had surely been made.

The innovation of setting an implicit lower bound to inflation (as well as the upper bound) implied a reinforcement of inflation-targeting (though Professor Issing denied staunchly that the ECB was an inflation targeter) which could increase the risk of severe monetary disequilibrium in the Austrian sense. If changes in real variables were driving the price level down (as for productivity acceleration or terms of trade improvement or passing cyclical weakness) or up (the reverse), the ECB by combating those pressures would induce monetary disequilibrium (of which a key eventual symptom could be asset price inflation or deflation, respectively, with all the associated misallocation and eventually waste of economic resources).

The ECB was evidently in the same intellectual culture as the Bernanke/Greenspan Federal Reserve (and Bank of England), in which temperature swings in asset and credit markets were outside the range of concern except in so far as they had implications for the inflation target. (This is one of the discredited 'Ten General Principles' of Professor Bernanke – see Brown, 2008.)

Perhaps there were nuances and throw-out remarks which suggested that Professor Issing had an understanding that monetary stability involved much more than what he revealed at the slide show. Nothing implied, however, that these reservations would seriously influence policymaking, notwithstanding the already accumulating evidence (for those who looked) of credit market temperature rise.

In the course of his presentation, Professor Issing made a point which unwittingly hinted at a grave flaw in the EMU architecture. He defended the lower limit to inflation (of close to 2%) not just in terms of avoiding the perils of deflation generally (in particular the zero rate trap) but also in terms of providing a margin for relative price fluctuation within the euro-area.

In the context of 2003, the margin to which Professor Issing implicitly referred was scope for the German economy to experience a relative price decline (*vis-à-vis* other euro-area countries) without suffering actual "deflation". This was in line with the widespread perception that sluggish domestic demand in Germany (relative to elsewhere in the euro-area), explained by the bursting of the post-unification construction boom and shifting of investment opportunity to cheap labour neighbours to the East, called for some gains in its competitiveness. Hence dynamism of exports could compensate for lack of domestic demand along the route back to overall equilibrium.

In future it could be another member economy (than Germany) which would find its route back to prosperity conditional on an increase in its competitiveness (decline in its relative price level). For example, at some possibly distant stage the already evident construction boom in Spain would come to an end. Could Professor Issing be hinting that one defence for the decision to breathe inflation higher in 1999 (notwithstanding its consequence of sharp depreciation of the euro) was the concern that the then current rate of rise in the euro-area CPI at around 1% p.a. was too low to allow for relative price level adjustment downwards without deflation in Germany?

By extension, one defence for the present decision in early 2003 to resist any contemporary downward pressure on the overall price level from rising productivity and cyclical forces for example was the

continuing avoidance of a painfully large price decline being required in Germany. Cynics could argue that this concern about the pain for the country whose equilibrium relative price level should fall would become less of a factor for the ECB (in particular for the Bundesbanker and ex-Bundesbanker around the table there) if its identity shifted from Germany to Spain – especially as the corollary of less absolute decline in the Spanish price level would be a bigger absolute German price level increase.

IMF wrong again! It warns about euro-deflation in 2003

Deflation risks in Europe were certainly on the international conference agenda at this time. The IMF issued a much discussed research paper on deflation ('How to fight deflation in a liquidity trap; committing to be irresponsible', Eggertsson, Gauti, March 1, 2003). Kenneth Rogoff, Economic Counsellor and Director to the IMF Research Department, wrote:

Our indicators suggest that the prospect of deflation cannot be entirely dismissed, and the same would be true for the euro-area as a whole; although there are higher risks for Germany. Interest rates and inflation rates will remain near or at fifty year lows throughout the globe, and a sufficiently strong negative demand shock could tilt the balance towards worldwide deflation (17 July 2003).

The IMF in its World Economic Outlook in Spring 2003, in a study put together by a special task force overseen by Kenneth Rogoff, warned that

Germany is at high risk of deflation and Japan, Hong Kong and Taiwan are vulnerable to an accelerating pace of price declines. [...] There has been a clear increase in the vulnerability to deflation for a number of industrial and emerging market economies.

The IMF report warned that deflation is seldom benign and is difficult to anticipate.

Professor Issing at his press conference understandably made no direct reference to the deflation-mongers in Washington. Calmly Professor Issing went out of this way to say that little had changed in the monetary framework. The significance of the lower limit to inflation was high at the moment because real pressures (cyclical and secular)

might be taking observed year-on-year CPI changes below the newly formulated lower bound. But the same situation had prevailed in 1999 – in fact even more so.

Why did you go to such trouble, Professor Issing?

In the question-and-answer session which followed the slide show, there was an inter-change between one journalist and Professor Issing which can be described at best superficial, at worst smug.

Q: Professor Issing, you have obviously gone to a lot of trouble to produce this review, but could you explain exactly what difference it is going to make to the way you formulate monetary policy? Will it, for example, make it easier to cut interest rates? Or is it all really a matter of presentation?

Issing: First, it was no trouble. It was not always pleasurable, but it was fascinating and, for somebody with my background, it was a very challenging aspect of my work, and cooperation with our experts is always very enjoyable. The word ‘trouble’ is certainly not appropriate. But as the President has already said, even if we had had the same clarification back in 1998, our policy would not have been any different. So I do not expect – and there is no reason to expect – a different monetary policy on the basis of the clarification of the strategy, which was decided on today.

Q: What was the point of it then?

Issing: If you are married and after four years of happy married life, perhaps one evening you sit together over a glass of wine and think about why you are so happy all the time: nobody would say it does not make sense (laughter!!!).

What issues should have been discussed at the review but were not?

We will look at this in more detail during the trial process (Chapter 4). But already in spring 2003 the rise of temperatures in credit and asset markets and how monetary policymakers should respond – without simply copying the conventional wisdom at the Federal Reserve (or Bank of England) – might well have been on the agenda.

Also of relevance could have been a thorough look at the issue of whether the extra comfort provided against the risks of monetary policy paralysis by setting a floor to inflation of *closely below 2%* was at all significant.

After all in a serious financial crisis or deep recession (or both), the optimal path of risk-free interest rates (in terms of a safe yet reasonably fast journey back to overall economic equilibrium) would surely pass through deeply negative territory at least in the short-run – somewhere between -5% and -10% . Now if the prevailing rate of inflation at such a time were $1-2\%$ due to the choice of an inflation target of 2% rather than $0-1\%$, then consistent with the zero rate boundary remaining in place real risk-free rates in the first case could fall to say -1.5% rather than -0.5% in the second. But is that difference really significant?

Surely the much bigger concern in any re-draft of the monetary framework should have been a re-look (not possible perhaps in the rushed preparation in summer 1998) at the whole question of inflation-targeting.

This re-look would have gone far beyond the tired semantic exercise to demonstrate that the ECB's framework was not such an extreme example of the monetary madness associated with inflation-targeting in the UK or in the US. Rather there would have been a good look at the Austrian or Friedmanite critiques of inflation-targeting or quasi-inflation targeting (see p. 18) interpreted flexibly enough to include the reality of the ECB's policymaking process. The re-look should have extended also to the evidence already accumulating about rising temperature levels in European in credit and real estate markets.

What warning signs were flashing?

Warning signs of monetary disequilibrium already evident in 2003–04

We have already referred to the rapid growth of M1 (see p. 57) partly on the back of a booming overnight deposit market. (This was for banks and non-banks, but only non-bank deposits included in the definition of M1.) In addition there was the explosive growth of mega banks in the euro-area, which the ECB much later (December 2008 – after the definitive bursting of the credit bubble) came to describe as LCBGs (large and complex banking groups).

It could hardly have been expected that the newly appointed ECB President, Claude Trichet (autumn 2003), would be in the vanguard of bubble spotters, not least given his own complex history regarding involvement or non-involvement in the Credit Lyonnais debacle. This had ended up with an acquittal in spring 2003 in a criminal trial where the charge was that M. Trichet as top Finance Ministry Official responsible for nationalized industries had signed off on misleading financial

statements of Credit Lyonnais, no doubt influenced by the strong ties of his political chief, Finance Minister Bérégovoy, to the Credit Lyonnais CEO – see Brown, 2004.

The blinding of vision extended far beyond the ECB presidency amid the rapture about the new age of financial integration in Europe ushered in by the euro.

ECB officials – and Professor Bernanke – cheer euro-banking boom

Some US ‘friends of the euro’ could not see the European credit bubble forming below the apparent good news of euro-driven financial integration. In the case of one friend, Professor Ben Bernanke, the cynic could say that his record of not spotting temperature rise in the US surely would suggest the same mistake when he turned to Europe! And indeed in a speech to the Institute for International Economics in Washington (26 February 2004), the then Federal Reserve Governor told his audience:

The most important benefit of the currency union has been and will continue to be its strengthening of European financial markets. Traditionally, the efficiency and scope of these markets has been hampered by the costs and risks associated with the use of multiple currencies as well as by the fragmentation arising from international differences in legal structure, accounting rules, and other institutions. Given the rapidity and frequency of trade in financial markets, even small transaction costs can hamper efficiency and liquidity in these markets. The common currency, with ongoing efforts to harmonize financial regulations and institutions, has significantly reduced those transaction costs. Together with lower country-specific macro-risks arising from the adoption of the common currency (no mention of what these are!), this reduction in transaction costs has greatly improved the breadth and efficiency of European financial markets.

No doubt these words of praise, if he had remembered them, would have been one of the many embarrassments for Professor Bernanke when later the scenario of credit bubble and burst in the US and Europe became a reality. Just as Anna Schwartz was to accuse Ben Bernanke of having learnt the wrong lesson from her and Milton Friedman’s history of the banking crises during the Great Depression (see Hirsh, 2009), it seems that he was applying another wrong lesson when reviewing financial happenings in Europe. Of course the excuse is obvious that

he could not be expected to have an intimate knowledge of what was happening on the ground.

But what about ECB officials who were meant to have such knowledge?

Consider a speech by Board Member Gertrude Tumpel-Gugerell, *'in honour of Mr Alessandro, Chief Executive Officer of Unicredito Italiano S.P.A., European Banker of the Year'* on 30 June 2003:

It is my privilege today to honour Mr Alessandro Profumo, chief executive officer of UniCredito Italiano, as European Banker of the Year 2002 (a prize proffered by the 'Group of 20+1'). [...] With the euro, monetary stability has been achieved in Europe.

[Can monetary stability really be judged over a three-year period?]

Our attention should now be devoted to the efficiency in the usage of capital as well as in other fields. This, I believe, is an area where Europe still faces considerable challenges. [...] One of the reasons put forward by the Group of 20+1 for awarding the title of European Banker of the Year to Alessandro Profumo is his success in forging a 'strong, lean and very profitable bank'. I welcome in this decision the wish to reward success in achieving efficiency. Indeed, UniCredito ranks highly among European banks in terms of its return on equity (no mention of leverage!). [...] The vocation of the euro is to serve, in due course, all the citizens of the European Union. In consequence there is the overriding need to further and complete the ongoing process of European financial integration. – This cannot be achieved by the authorities alone. It must also be achieved by market participants themselves. In this context it must be possible for market participants to exploit the potential economies of scale generated by the broader dimension of the euro area relative to the national markets. A market for corporate control within the euro-area's financial system needs to emerge to allow the creation of pan-European players in all areas of finance. And the perimeter for integration needs to be thought of increasingly as the future Member States of an enlarged European Union. [...] The considerable investments of UniCredito in Poland, in the Czech Republic and in Slovakia (in 2000 Mr. Profumo had spent US\$2 billion on acquisition of 4 banks in Eastern Europe) in particular testify to the creation of a banking group on a scale commensurate with that of the enlarged union.

Tumpel-Gugerell's enthusiasm about financial integration is understandable but was she at all focused on the possibility that what was

passing as exemplary in carrying out that aim was in reality evidence of inefficiency in European financial markets? In particular, were the equity markets over-rewarding bold expansion by various European banking groups – providing the means for this to take place – without taking due sober-rationalist note of other possible interpretations? For example were the banking groups in Spain and Italy that were spear-heading the euro-banking industry expansion being rewarded with high equity prices due to rapid earnings growth within their home territory which were related to some mixture or rising leverage and rising credit market temperature? Were these high equity prices in turn facilitating the takeover of banks in staid over-banked markets? Italy and Spain had been the two large high-interest rate currencies prior to monetary union and the collapse of rates coincident with their entry into union had set off domestic mortgage lending booms.

And in the case of UniCredito, was the arbitrage opportunity of issuing equity with the benefit of a high P/E to pay for the acquisition of a German bank with a low P/E in fact phoney – in the sense that the low P/E may have reflected justifiable angst on the part of investors about earnings outlook especially with respect to its real estate loans in Germany and abroad? Moreover the high P/E of UniCredito could have been a reflection of market failure to correctly assess the role of leverage in its performance. To be fair to Tumpel-Gugerell the big merger was to come later in 2005, when UniCredito made its all-share offer for HVB and its Austrian and Polish subsidiaries (Bank Austria Creditanstalt and BPH in Poland) for a total price tag of \$23bn. UniCredito was offering five new shares for every HVB share.

One of the real issues already alluded to by Tumpell-Gegerell was the accelerated expansion into Eastern Europe. Were the profits in what was growingly to be described as the ‘Wild East’ the fruits of pioneering a benign process of integration or of introducing a version of US sub-prime lending (in this case the teaser loans were denominated in Swiss francs) on a very thin (highly leveraged) equity capital base which one day would go terribly wrong?

Euro-banking empire-building

In most cases, the rapid expansion of the new mega banks in Europe went along in each case with a hero, who became a celebrity in the financial world for his or her acumen. As in the world of the hedge funds where a warm market or even bubble developed in the market for human talent the same was true in the banking industry. An article

in *Economics and Finance* (19 February 2007) described Alessandro Profumo's objective as to build up a European Citibank and to grapple for the world's largest markets of India and China. *'The pushing, aggressive business style peculiar to Alessandra Profumo was like a cold shower for Italian bankers'*.

In the case of Banco Santander, the Spanish bank which rose to global stardom along with the euro, the hero was Emilio Botin. According to an article in *Forbes* (14 March 2005), the billionaire had now fulfilled his lifelong ambition to transform a small regional bank once run by his grandfather into an international player. Already the largest bank in Latin America by assets it made a series of large acquisitions during the first six years of EMU (1999–2005) culminating in the \$15 billion purchase of Britain's Abbey National in 2004 (what could be more incestuous than a bank in one of the hottest credit markets in Europe – Spain – buying a bank in probably the hottest of all, the UK?). The equity market, to be fair, had judged that takeover harshly with Santander's share price tumbling by almost 10%, but that had not caused Botin to pull back – an interesting case where executive empire-building rather than a hot financial equity market was the driving force behind expansion or what was lauded as 'European financial integration' by the eurocrats!

The phenomenon of empire building and rapid expansion of European banking groups was not limited to the euro-area (where other examples included Joseph Ackerman at Deutsche Bank and Jean-Paul Votron at Fortis). UK and Swiss banking groups were all prominent in the process, and again in each case there was an individual who was personalizing the process – Fred Goodwin for the Royal Bank of Scotland, Marc Ospel for Union Bank of Switzerland.

Is it possible to pinpoint the launch of the euro as a key factor in explaining how such empire-building took place in those cases? Perhaps the strongest argument in that direction can be made for the UK in that RBS, thanks to EMU, had access to a rapidly growing interbank deposit market (where funds obtained were swapped from euros into pounds), with its operations there oiled by the ECB's discount facilities, and had become a major player in the booming Spanish real estate market, itself in part a product of the euro.

Empire-building whether inside the euro-area or on its edges would not have raised in itself a red flag within the ECB even if top officials there had been on the look out for credit warming. It had long been conventional wisdom, even before the launch of EMU, that monetary integration would be a stimulus to the formation of larger banking groups which would be no bad thing (so the wisdom went) given that

European banking had become backward in comparison with the bold new era of efficiency, high profit (and hidden leverage!) which characterized US banking (including investment banking scene).

At the Bank for International Settlements, William White, who later became renowned as a lone voice in official supranational institutions warning against the dangers of inflation targeting, had written in 1998 about the forces (including the euro) which would bring consolidation in European banking over the coming decade. Definitely, though, he did not welcome this unreservedly, warning that the development would pose challenges for national regulators and other policymakers concerned with the maintenance of financial stability (see White, William, 1998).

Euro financial integration camouflages credit bubble

More generally there was such a general condition of optimism about how the launch of the euro and the evolution of monetary union would speed the benign process of European financial integration that it would have been hard even for the shrewdest policymaker or indeed market participant to realize that much of what was passing for integration on the ground was in reality an emerging credit bubble. Some analysts, though, were perceptive even at an early stage.

For example Gabriele Galati and Kostas Tsatsaronis (July 2001) were already drawing attention to some features in the rapidly growing euro inter-bank markets which were symptomatic of temperature rise (greater degree of irrational exuberance), albeit not pressing the alarm bell, undoubtedly because of the overriding difficulty in disentangling the success of euro-led integration from bubble danger.

In that paper the authors drew attention to the boom in issuance of corporate bonds denominated in euros and related this to the global wave of merger and acquisition activity in 1999–2000. Bonds offered a flexible and attractive means of financing transaction. More specific to the European scene was the financing of capital investments and corporate transactions related to the telecommunications sector. The single currency's contribution to these developments was in the form of widening the range of investor portfolios that could be tapped with a single bond issue, thus reducing the costs of capital market financing (compared to the pre-euro alternative of several issues in one or more national monies with a complex of array of currency swap transactions alongside). The authors noted also that banks dominated bond issuance in euros – 60% of all euro-denominated bonds, a share

almost double that of banks in the dollar segment of the market. Significantly the authors highlighted the booming issue of Pfandbriefe (securitized mortgages) by the German banks and the importance (to their success) of the ECB's decision to accept such paper as collateral in repo- transactions:

The success of German banks in marketing Pfandbriefe and thus increasing the range of financing tools has prompted a number of countries to introduce legislation in recent years that would support the creation of similar types of asset backed securities.

Like so many investors, the ECB failed to see through the misleading AAA labels being stuck on these asset-backed securities by the credit-rating agencies. In any chronology, though, of how Europe's credit markets heated up through the early and mid-years of the first decade in the twenty-first century, the demonstration that ECB officials had woefully insufficient understanding or appreciation of that phenomenon only goes so far.

Yes, it is disappointing that with all the avenues of information at their command – beyond what the ordinary investor in the equity market place could assemble – that the officials were no better at avoiding the trap of not detecting a bubble below the wrapping of euro-driven financial integration which so flattered their whole endeavour. They could just about argue, however, that other officials at other institutions had more responsibility than themselves to make such a diagnosis and act on it in various ways (not least of which would have been bringing it sharply to the notice of the investing public).

ECB officials ignore explosive growth of euro-bank dollar loans

'Passing of the buck' surely does not relieve the ECB of responsibility for the lack of clear focus at that time on the possible implications of so-called euro-driven financial integration for economic stability and prosperity over the long run or on the danger of a future existential crisis for the euro which a violent bubble-and-bust sequence in European credit markets might bring.

There is no evidence from any speech or publication that any senior official at the ECB through those years had pinpointed the reality or the risks of the explosive growth in European banks' international dollar lending funded to a large extent out of non-stable sources (for example, US money market funds or currency swaps). In practice, and in fairness, it was only six years later, well after the event, that the BIS produced

its two excellent analyses of what was happening then in its March 2009 quarterly review – *The US dollar shortage in global banking* (Patrick McGuire, Peter von Goetz) and *US dollar money market funds and non-US banks* (Baba, McCauley and Ramaswamy).

Yes, for years (from the early 2000s onwards) the balance of payments data for the US highlighted massive foreign inflows into US non-government bonds and European payments data which showed massive outflows of capital via the banking sector. To some extent, though, there was the always-ready excuse that information from balance of payments statistics is so notoriously unreliable. Though the ECB statisticians (and the co-respondents at Eurostat and in the national balance of payments offices) had made valiant attempts to assemble and publish euro-area wide balance-of-payments data, the swings in errors and omissions were so large relative to the totals reported that who could have any confidence in what tentative message they seemed to be conveying about risks in the present pattern of global capital flows.

Nonetheless it is idiosyncratic at best that the ECB growingly through 2003 and beyond (into 2006) banged the table so loud at international gatherings about the US balance of payment deficit and about low savings being a source of potential serious crisis without realizing that a key source of fuel to the US warming credit markets (of which low savings were a feature) came from the European credit markets (especially the off-balance sheet activities of many European banks).

And as regards the lending boom into Eastern Europe, the ECB view (as illustrated by the Tumpel-Gugerell quote above – see p. 68) was that this was wholly a benign development accompanying the extension of the EU and ultimately the euro-zone into the ‘Wild East’. In effect, officials in Frankfurt’s Eurotower were wearing strongly filtered euro-spectacles. These apparently blocked out the landscape of growing sub-prime type lending boom (effectively teaser loans denominated in Swiss francs or euros) in some parts of Central and Eastern Europe alongside a gigantesque construction and real estate bubble. Instead, the officials saw a benign furthering of economic union.

EMU flaws block emission of monetary warnings

Let us take one step back. Suppose we accept that the leading monetary bureaucrats in Frankfurt for one reason or another would remain poorly informed about any real-world developments in European or global credit markets. Were there nonetheless indicators just from within the normal range of prudent monetary control systems that should have

been flashing yellow or red and to which the bureaucrats should have been responding by making monetary policy adjustments that in turn would have controlled the temperature in the credit markets?

We come back to the flaws in the monetary framework which was designed in such a hurry during late 1998 and then revised with so little 'lateral thinking' in early 2003. If the ECB had been operating in a wholly different frame of reference from the Federal Reserve, imbued in a system of sound money (price level stability as assessed over the very long run rather than striving to make sure that inflation as measured over any two-year period did not fall too low), the outcome would surely have been better than otherwise.

Risk-free rates at or below the current rate of inflation in non-recessionary or non-crisis situation would inevitably have raised suspicion that money rates had fallen well below neutral level. And other major central banks pursuing policies under the banner of breathing in inflation would have been seen in Frankfurt as posing a global danger (of promoting global credit bubble). The ECB would have been on high alert.

Trichet pursues French foreign policy in attacking Asian dollar bloc

While all temperature alarm systems remained turned off in the Eurotower regarding European credit markets, it was quite different with respect to the currency markets. The ECB became alarmed in late 2003 when the euro started to rise against the dollar as was inevitable so long as the ECB was falling behind the Bernanke/Greenspan Fed in its pace of breathing in inflation! ECB President Trichet had played a distinct (unintended) role in the dollar's general fall by allying himself (and his institution) with Washington in an assault on the Asian Dollar Bloc (at Dubai in autumn 2003 – see p. 33). Trichet had imagined that the assault would bring a stronger dollar against the euro and a weaker dollar against the yen and the yuan.

While ECB officials (and Paris economic diplomats long devoted to the cause of further multi-polarity in the currency world as part of the broader mission of reducing US hegemony as pursued by the French Foreign Office) were joining in this East Asian adventure, giving speeches on why currencies there were not appreciating sufficiently and on how the US should bolster the dollar against the euro by saving more (mechanism totally unclear, but probably running through a lower US current account deficit in some variant of partial equilibrium analysis),

there was an eerie silence in Frankfurt. Alarm bells should have been ringing there about the imminent dangers of catching a bad bout of monetary disequilibrium from the US!

Let us revert to the ECB's own scripted chronology to check what officials were in fact doing during the critical period of the Federal Reserve breathing inflation into the US economy from mid-2003 to mid-2005. This is the period the ECB in its anniversary review (June 2008) described as '*phase 4 – no changes to key ECB interest rates*'.

Why no change to ECB rates from mid-2003 to end-2005

Without comment the chroniclers state the strange facts that no sooner had this prolonged phase of ultra-low rates got under way (in 2003H2) than economic recovery started. Real GDP grew, on average, by 0.5% quarter-on-quarter in the first half of 2004, the highest rate recorded since the first half of 2000. On the external side, the growth of the world economy remained strong. On the domestic side, very favourable financing conditions, robust corporate earnings and business restructuring provided a positive environment for investment.

After some slowing in the first half of 2005, the expansion of economic activity regained momentum in the second half. So why was the real equivalent (taking account of inflation expectations) of the risk-free interest rate as pegged by the ECB still in slightly negative territory during this period, especially as the monetary pillar of the ECB's analytical framework was flashing yellow if not red?

The authors state that though headline M3 growth 'moderated substantially' through the second half of 2003 and early 2004, the series corrected for the estimated impact of portfolio shifts continued to grow at a sustained and slightly increasing rate through this period. In addition the annual rate of growth of loans to the private sector increased in the second half of 2003. And anyhow from mid-2004 onwards, headline M3 growth accelerated. The robust credit and monetary expansion from mid-2004 reflected the stimulatory effect of the then prevailing very low level of interest rates in the euro-area.

Eventually in December 2005, the ECB resolved on a tentative 25 bp hike in the repo rate (to 2.25%) indicating that there was no presumption of further tightening. But in the course of 2006, the ECB got more definitively into 'tightening mode' by little steps of 25 bp each time, culminating in a hike to 4% in mid-2007.

What was the ECB Chief Economist, Professor Issing, thinking during the period of ultra-low rates (to December 2005 and beyond)?

One clue comes from his speech at an ECB Workshop in October 2005 (*What Central Banks can learn from money and credit aggregates*):

[E]xtraordinary increases in asset prices in financial history have typically been accompanied by strong monetary and/or credit growth. This empirical relationship suggests that monetary and/or credit aggregates can be important indicators of the possible emergence of asset price 'bubbles' and thus are crucial to any central banks' approach to maintaining macroeconomic and price stability over the medium-term. [...] The acceleration of money supply growth from mid-2004 has been judged to be of a different quality to that observed between 2001 and 2003 (when portfolio shifts important). On the counterparts side, stronger monetary growth has been associated with increasing demand for loans to the private sector rather than capital flows from abroad. On the component side, higher M3 growth has been driven by its most liquid components, pointing to a significant impact of the low level of interest rates on monetary dynamics. Stronger monetary dynamics can no longer be interpreted as reflecting heightened financial and economic uncertainties, which have normalised since 2003. Since faster monetary growth appears to have been more fundamental in nature since mid-2004 than was the case between 2001 and 2003, the likelihood that strong monetary developments ultimately find their way through to higher prices must be seen as considerably higher. Moreover strong money and credit growth in a context of already ample liquidity in the euro-area implies that asset price developments, particularly in housing markets, need to be monitored more closely, given the potential for misalignments to emerge.

There is no doubt from this quote that Professor Issing was aware of the potential bad news for economic and financial stability contained in the monetary bulge. But there is some fuzziness (in the remarks) about whether house price or other asset price developments are in themselves cause for policy course correction or only in so far as a link can be made between these and the probable behaviour over the medium-term of the price level.

Moreover there is a total lack of urgency. It is only in autumn 2005 that Professor Issing is delivering this speech, and wait for the denouement, a micro-rate rise (25 bp) two months later! On available indices, house prices in Spain and France (and a range of small countries) had been racing ahead (in similar if not greater momentum to the Case-Shiller

indices for the US) for two years or more. Yet despite the note of disquiet there is no serious indication of this development making a big difference to the planned monetary course.

Very possibly, residential real estate market developments were a background factor in the decision to raise rates by 25 bp in December 2005. But surely a careful analysis of the present situation at that date would have suggested that the neutral rate of interest in the euro-area was already at 4–5% p.a.?

The glacial pace of advance of the pegged repo rate from a super-easy level to a still well below neutral level over the next year just created much further financial and economic disequilibrium. And there is a big item not mentioned at all in Professor Issing's speeches or articles – the rising temperature in credit markets across the euro-area and even in Germany itself (not vis-à-vis German residents but as regards German bank aggressive expansion into non-German loans and other assets).

Would a 200 bp higher rate in 2005 have pre-empted credit bubble?

One potential response of Professor Issing or any other central bank practitioner to the charge that monetary policy was critically to blame for the subsequent euro or global bubble and bust is to question whether say 200 bp or even 300 bp extra on money market rates would have made a critical difference to the outcome. That is a question which we take up in much more detail in the trial chapter (Chapter 4). For now the provisional answer is 'yes, a great deal of difference'.

Why? If investors globally and in the euro-area in particular could have earned 4% p.a. plus (in nominal terms) rather than a feeble rate of 2% p.a. or slightly more they would surely have been less desperate to bolster yield (income) by falling into the traps sprung wittingly or unwittingly by the array of financial 'innovators' in New York, London, Frankfurt or elsewhere. Why buy illiquid non-transparent paper, albeit with an AAA stamp, to get a little more return, when a good return could already be made on liquid transparent paper? Moreover, there would not have been such a queue of borrowers at the opposite end of the line, ready to issue all the paper being lapped up in many cases with varying amounts of hidden or partly hidden leverage, unless the going level of interest rates (both with respect to low-risk and high-risk credits) was well below equilibrium level.

The merchants of various types of credit paper would not have had this in the store to sell unless there was a vibrant real asset market along

with strongly rising real economic activity – both stimulated by interest rates far below neutral level – going on outside! The risks of leverage could not have remained disguised (except from the blind) if there had been a continuing roll call of bankruptcies. And the market for equities in financial intermediaries peddling the high-risk paper and in some cases taking this on to their own books would not have been in such a high temperature range with rates closer to neutral.

In sum, the ECB in its programme of adjusting its peg for the risk-free rate upwards towards neutral only at a glacial pace repeated with a lag exactly the same mistake as the Federal Reserve was making. This was a time of madness for the rate-peggers on both sides of the Atlantic.

It would have been such a feat if the ECB had distinguished itself from the rate-pegging, (quasi-) inflation targeting and inflation breathing-in Federal Reserve. But that was not to be the case. The sales material for EMU which made much of how the new creation would bring protection against ‘Anglo-Saxon’ monetary shock turned out to be bogus.

The ECB official anniversary report on monetary policy during the first ten years makes absolutely no reference to this failure. It is plausible – and indeed likely – that the perpetrators of the failure were completely blind to it!

‘Withdrawal of monetary accommodation, 2006–2007H1’

The chroniclers continue into their next subsection of history under the subtitle of *‘Phase 5 – withdrawal of monetary policy accommodation (since end-2005)’*:

Since the end of 2005, the Governing Council has raised the key ECB interest rates by a total of 200 basis points, bringing the minimum bid rate in the main refinancing operations of the Eurosystem to a level of 4% by the end of June 2007. This adjustment of the accommodative monetary policy stance was warranted in order to address risks to price stability, as identified by both the economic and the monetary analysis. [...] As regards prices, average annual inflation was 2.2% in 2006 and 2.1% in 2007, mainly driven by domestic demand. In both years, the headline inflation rate fluctuated significantly, largely on account of developments in oil prices. In 2006 it followed an increasing trend until August, mainly as a result of substantial increases in energy prices, while the annual inflation rate fell below 2% in the remaining months of the year, largely as a consequence of significantly declining oil prices and base effects. Until the third quarter of 2007,

annual inflation rates developed in line with the ECB's definition of price stability, partly because of favourable base effects stemming from energy price developments a year earlier.

In sum, a credit bubble of once-in-a-century magnitude was forming in the global economy with the European banking system arguably at its centre, with the essential fuel coming from extreme monetary disequilibrium created in Frankfurt and Washington. The monetary critic of this period in reading the notes of the policymakers cannot help but feeling like K in Kafka's *The Trial* when he comes to examine the judges notepads – all he finds is scribbling (in that case, obscene!).

And just before the bubble burst, with the maximum initial impact of the Great Credit Market Quake (August 2007) felt in Europe (to the total surprise of the ECB!) rather than the US, there had been the biggest moment of madness in the financial equity market place, also in Europe. This was the takeover battle for ABN-AMRO.

Merger mania: The takeover battle for ABN-AMRO

The saga had started on 21 February 2007 when a British hedge fund, TCI, specialized in finding profitable opportunity from triggering changes in corporate control (or management), asked the chairman of the Supervisory Board (of ABN-AMRO) to actively investigate a merger, acquisition or break-up of the bank, stating that the current stock price did not reflect the true value of the underlying assets. TCI, with a small but significant shareholding in the bank (ABN-AMRO) asked its chairman to put their request on the agenda of the annual shareholders meeting (April). Four days later the President of the Dutch Central Bank (and thereby a member of the policymaking council of the ECB), Dr Wellink, was quoted in the Dutch newspaper *NRC Handelsblad* as saying that it was unprecedented that a hedge fund should call for a bank to be broken up. President Wellink warned that there could be repercussions beyond its borders:

A bank is different from other listed companies. For us, that is a bridge too far.

Evidently President Wellink got no public show of support – albeit that there is no evidence that he requested this! – from his colleagues in the ECB. Meanwhile TCI went public with its case citing that excluding dividends ABN-AMRO had returned zero since May 2000 compared to

a 44% return for its European banking peers! This stodgy bank had not been a full participant in the go-go profitable opportunities of investment banking, and TCI was determined to exploit the profit from acting as catalyst to a change in direction (towards full participation!). The CEO of Citigroup was famously to say (in early summer 2007) that when everyone else is dancing then you have to get up and join. ABN-AMRO management, according to TCI, were failing to join the dance. By getting ABN-AMRO into the dance (fully involved in the global credit bubble) TCI was to make its profit.

The rest is history – the bid from Barclays and finally a superior cash offer from a joint syndicate of three European banks all deeply steeped in the euro- and global-credit bubbles (Fortis, Santander and RBS) and all enjoying valuations in global equity markets which rested on a high degree of confidence in a never-ending rapidly growing profits stream from investment banking (albeit that in the case of RBS there had been periodic jitters about the aggressive expansion plans of its CEO on some previous occasions) and on an unawareness of actual leverage.

Among the big gainers were the shareholders of ABN-AMRO who collected the cash and were not tempted to join the dance by buying other financial equities! Among the big losers were the tax payers in the UK, Holland, Belgium and Luxembourg, who had eventually to foot the bill (around one year later) for rescuing two of the three consortium banks – RBS and Fortis – and of course the shareholders (and some categories of bondholders) in the consortium banks which had squandered their capital in the takeover.

The takeover could not have taken place if the financial equity markets had been operating efficiently – correctly discounting the huge risks which accompanied Europe's highly leveraged big banks (by and large the regulators ignored leverage concentrating instead on a flawed BIS bank-risk measurement system, widely described as 'Basel 2').

Incredibly in hindsight, the vote of Fortis shareholders in favour of the takeover took place literally on the eve of the Great Credit Quake (August 8). Despite an ominous warning from ABN-AMRO's CEO, Rijkman Groenink (carried in *Het Financieele Dagblad*, the Dutch financial daily) to Fortis shareholders that a successful bid by the consortium would further weigh on Fortis's share price and that shareholders should vote against it, an overwhelming 90% majority voted in favour (August 6). The loud pre-quake rumblings already to be heard in the global financial market place apparently had no impact on the shareholders. Even more incredibly the following Friday (after the Great Credit Quake of August 8), RBS shareholders gave their approval.

A little more than a year later both groups of shareholders had lost almost everything. Well, we all know the saying that the Gods make mad who they want to destroy, albeit that in this case the catalyst of destruction TCI, was laughing all the way to the bank. The much bigger question relates to the policy issues raised by this madness.

First, there is the general point that the madness could only have developed in a climate of extreme monetary disequilibrium such as had been fostered by inflation-targeting central banks on both sides of the Atlantic.

Second, if the ECB had been assuming at all any role in monitoring and controlling possibly dangerous rises in credit market temperature and ready to use instruments including but also going beyond its pegging of the overnight rate in the euro-system, then it would have been doubly unlikely for such madness to occur.

And third, despite all the literature on efficient capital markets and empirical evidence supporting that hypothesis, huge irrationality had apparently become prevalent in a core component of the global equity market. (The hypothesis of irrationality or inefficiency could be rejected on the basis of huge failure in the market for information, including gross asymmetries and lack of big enough incentive for investigative journalists or analysts to make discovery and publish their findings.)

As regards that third issue, one plausible hypothesis was that not only ECB officials but also equity market investors had been so lulled by the music of financial integration and its potential efficiency (and profit gains) that they had become uncritical of the underlying business models and blind to the growing risks which lay behind the demonstrated bank profits. All three of the bidding banks had share prices which in their fullness at the peak reflected an uncritical appraisal of continuing the go-go profits from a European-made component of the global credit market (Spanish mortgage boom, East European lending, UK commercial and residential real estate mortgage boom, private equity boom) and of the risks (including those built on leverage) related to these.

Some (but not all) of this (in its full extent) might have happened even with the most sober of ECB monetary policies over the preceding years (and including 2007). After all there had been a Great Bubble and subsequent Panic in the US in 1905–07 without a central bank there yet in existence (see p. 201). Even in that early historical episode the proverbial monetary monkey wrench had not been absent – but it was de-personalized and de-institutionalized (instead gold discoveries and shifts in demand for high-powered money related to financial innovation, together with huge uncertainty concerning the natural interest rate

level in the wake of the San Francisco earthquake, played key monetary roles). And in the days following the Great Credit Quake of August 2007, there was much speculation and hope about how the new central bank in Europe and its US counterpart could act to alleviate the consequences. Few could imagine at this early stage that the ECB, together with the Federal Reserve and Bank of England, all in their own ways, would make the consequences much worse.

3

The Bursting of the Bubble

The monetary policies on both sides of the Atlantic leading up to the global credit bubble (2003–7) and accompanying its burst (spring 2007 to spring 2009) may not have fully satisfied the definition of catastrophic. But how far short they were of that benchmark and the definition itself will doubtless long remain a matter of heated historical debate.

The global turmoil and distress (whether economic, political or geopolitical) associated with the monetary mess (especially in the US and Europe) – if that becomes the description – of the first decade in the twenty-first century seems from the viewpoint of 2010 to be of a lower order than for the years around the Great Crash and the Great Depression (say 1929–35). And there has not been the same degree of monetary nationalism this time round which so heavily contributed to the devilish chain of European political and geopolitical events in the 1930s. That is not a very exacting standard of comparison!

After all, what could get worse in Europe than the biggest economy (Germany) in the throes of perhaps the most severe credit and real estate bubble-bursting episode in modern history experiencing a savage tightening of monetary policy when already in deep slump (1929–31) with its own policymakers (and even well-meaning policymakers in leading foreign capitals) almost totally blind to the possibility of devaluing or floating the currency (Reichsmark).

Even if open-eyed, there were considerable obstacles to such a step given the commitment of Germany under the Dawes Plan – a US-sponsored treaty in 1924 under which the Weimar Republic obtained an international loan and re-scheduling of reparations obligations towards stabilizing its money in the wake of hyperinflation – to maintain a fixed parity between the mark and the gold dollar (see Brown, 1986).

Simultaneous with that German predicament, another large European country (the UK) unleashed a beggar-your-neighbour devaluation (September 1931), triggering a deep crisis of confidence in much of the remaining world on the gold standard (with the important exception of France which had returned to gold at a very cheap exchange rate level in 1926–8), most particularly the US.

Yet there are echoes of the earlier monetary catastrophe in the present-day monetary tumult (or catastrophe?) which are eerie and troubling for those who believe strongly in human progress. Here was a renowned professor in monetary economics at the head of the Federal Reserve, who on the occasion of Milton Friedman's ninetieth birthday party had said that the monetary mistakes which surrounded the Great Depression would never be made again. There were grounds to question whether the professor had learnt the wrong lessons.

No monetary progress in US or Europe?

The professor (Ben Bernanke) had been the key proponent (back in 2003 already) of the expansionary policy (breathing in inflation) which had played such a critical role in generating the bubble in the first place (even if the buck ultimately stopped at Alan Greenspan's desk). Indeed, much of the 'neo-Austrian' critique (see Rothbard, 1972) of US monetary policy in the 1920s under the leadership of New York Federal Reserve Governor Benjamin Strong in the 1920s could be replicated against the Greenspan–Bernanke Federal Reserve.

At a time when real forces (productivity surge due to technological revolution and terms of trade improvement) were putting downward pressure on the equilibrium level of goods and services prices, the Federal Reserve was setting monetary conditions such as to produce a stable or gently rising price level. In doing so the Federal Reserve created grave monetary disequilibrium with its main symptom being a sharp rise of temperature in credit and asset markets.

Other critics, including in particular John Taylor (2009), highlighted how the ignoring of monetary rules (his own brand in particular – the so-called Taylor Rule!) – more complex than those of Milton Friedman – had sewn the seeds of crisis. And then, Milton Friedman's co-author of *A Monetary History of the US*, Anna Schwartz, argued that Professor Bernanke had misdiagnosed the crisis which erupted in summer 2007 as a liquidity crisis (the situation in autumn 1930) when in fact it was a solvency crisis (in the 1929–33 episode as examined by Friedman and Schwartz a real solvency issue erupted only much later on in the depths of

depression) (see Schwartz, 2009). That misdiagnosis led on to that fateful weekend in mid-September 2008 when there was no contingency plan on the shelf for the threatened insolvency of Lehman. John Taylor provided additional important evidence to bear on that point (see Taylor, 2009).

Finally, the critics of cyclical fine-tuning accused Professor Bernanke of having made even bigger mistakes than the much criticized successor (George Harrison) of Benjamin Strong (see Meltzer, 2004), who after all had not stood in the way of risk-free rates generally (including T-bill and short-maturity government bonds) collapsing to virtually zero immediately following the October 1929 Wall Street Crash. The New York Federal Reserve had then supplied adequate extra reserves to the banking system (equivalently expanding the supply of monetary base) for that purpose.

In the later episode the Federal Reserve got in the way of the powerful move down to zero of risk-free rates, engaging in a novel type of sterilized lending to the weakest banks, while seeking to break the overall rate decline out of residual concerns about meeting the quasi-inflation target. Indeed in early October 2008, in the darkest days of the financial panic, the Bernanke Fed unbelievably announced the innovation of paying interest on reserves with the express purpose of tightening control over risk-free rates and preventing their collapse to below the implicit official target range for these!

However troubling the echoes on the western side of the Atlantic (of the mistakes in the mid and late 1920s/early 30s), those on the eastern side were even more so. As in the US, the policymakers in Frankfurt had pursued quasi-inflation targeting (no ECB official would admit to that!), blind to the real (non-monetary) forces (such as productivity growth or terms of trade improvement or business cycle dynamics) which might be lowering the price level, and sceptical of or unsympathetic towards any degree of monetary auto-piloting based on rules (with justification in part given the newness of the union and the surprisingly wide divergences in economic condition between member countries).

In Frankfurt's corridors of monetary power there was apparently a very low state of alert (if any) with respect to the financial and economic dangers emanating from the US, even though a key justification for European Monetary Union (EMU) in the first place had been to protect the member countries to a greater extent than before from US monetary shock! Unwished for strength of the euro against the dollar in 2003–4, even though ultimately triggered by US monetary disequilibrium, had disabled any putative alarm system (in the Eurotower) installed to detect imminent or present US monetary shock (see p. 73).

True, Frankfurt had the excuse (for poor overall monetary policy performance) of an unreliable indicator board (with M3 data hard to interpret because of the newness of monetary union) and the difficulties of steering one policy to suit all in a union with much greater regional divergences and far less flexibility (whether in terms of relative wages, prices or inter-regional labour movements) than the US. That, though, was a self-wrought problem for the participating members of the EMU. The consenting democracies which had signed up surely reckoned with such significant costs to range against the potential benefits (even though some of the smooth-talking euro sales persons may not have spelt this out!).

What the consenting electorates (in so far as they were asked for approval) could not have reckoned with (as a certainty as against a low-probability scenario) was the seriousness of policy framework error and subsequently monetary policymaking error which lay ahead, both during the period when global credit market temperatures (including those in Europe) were rising and later when they started to descend precipitously. Yes, the errors continued to resemble those in the US, but eventually they rang out even louder. That is running ahead of our story.

Summer 2007 credit quake

The story of those serious monetary policy mistakes in the post-bubble period starts in summer 2007 with the seize-up of the inter-bank money markets on 9 August. John Taylor describes this seize-up as the 'Landing of a Black Swan in the Money Market' (see Taylor, 2009). (For two excellent chronologies of the crisis see Jordan, 2008 and Brunnermeier, 2008.)

The immediate trigger to the seize-up was the announcement (9 August) by BNP Paribas, France's biggest bank, that it had halted withdrawals from three investment funds because it could not 'fairly' value their holdings now that US sub-prime mortgage losses were rolling credit markets. The funds had about 1.6 billion of euros (on 7 August), with about a third of that in sub-prime mortgage securities rated AA or higher. This followed announcements in the days before by Bear Stearns that it was stopping similar redemptions. And on 2 August the German bank, IKB Deutsche Industriebank, had revealed it was in trouble because of investment in US sub-prime loans where these had been in an off-balance sheet structured investment vehicle.

After US house prices had peaked in 2006, it became more and more obvious to some market participants that a rapidly growing number of

sub-prime borrowers would soon be unable to service their debt with the amount of potential shortfall becoming ever more alarming. Prices of sub-prime-backed securities had started to ease in early 2007.

As 2007 progressed, the deteriorating sub-prime market began affecting the confidence in related structure finance products and during the course of July 2007 had triggered a sudden general re-pricing of credit risk beyond the confines of residential mortgage products. There was a ballooning of credit spreads in the credit-derivative markets, especially as related to higher-risk categories of credit (whether mortgages or leveraged loans to non-financial corporation). And in the US banking industry, the worsening plight (and slide in equity price) of Countrywide, the giant aggressive California-based mortgage lender, was making it into the daily financial headlines.

All of this formed the background to a sudden and general 'seizing up' in European inter-bank money markets on the morning of 9 August. The catalysts were the events which demonstrated that many of the European banks had huge exposure (hitherto camouflaged) to the US sub-prime market and especially via off-balance sheet vehicles (so-called structured investment vehicles) which financed themselves in the so-called asset-backed commercial paper markets.

ECB's panic response to money seize-up, 9 August 2007

It seems (there is no hard evidence of discussions and unless a revolution takes place within EMU the practice of official secrecy means that no such evidence will become available in the future) that the ECB President, M. Trichet, alerted in his Brittany summer house to the seizing up of the European money markets, shared in the view of his colleagues assembled in teleconference that this was an epic crisis of liquidity.

Some hearsay evidence suggests that the Bundesbank played the lead role in initiating and coordinating the initial response to the seizing up. This role in part may have been forced on the Bundesbank by circumstances – the lightness of the holiday staffing in the ECB and M. Trichet's absence on vacation. The hearsay evidence is consistent with the later revealed role of the Bundesbank as staunch defender of the Separation Principle according to which liquidity provision was to be distinguished from the chosen path for the policy interest rate – see p. 39.

The response of the ECB to the crisis was to make unlimited funds available through the secured lending markets to all applicant banks at around the official repo rate (4% p.a.), which remained unchanged.

By such operations the ECB (on Thursday, 9 August) 'put' nearly €95bn into European financial institutions, followed by a somewhat smaller operation (€61bn) on Friday. On the same Thursday and Friday, the Federal Reserve's Open Market Trading Desk injected funds in similar fashion, 'putting' in a total of \$38bn.

'Putting' here did not mean an expansion of the monetary base. Rather, at issue was a sterilized operation, in which ECB lending to banks experiencing a sudden shortage of funds was matched by ECB borrowing from banks in the reverse situation (unwillingness to lend out surplus funds in the inter-bank market, except possibly to a limited extent at much greater margins over risk-free rates than normal). This borrowing (by the ECB) could take the form of those institutions piling up excess reserves in the deposit facility at the ECB earning interest rate at just one percentage point below the unchanged official repo rate (at 4%), or repo operations in which the ECB would borrow short-maturity funds and lend out government bonds or bills.

What exactly were the forces generating such huge intervention?

With the benefit of hindsight and much circumstantial evidence it has become clear that what happened on 9 August far transcended a crisis of liquidity. This was already a crisis of solvency. (And as AEI scholar Alex Pollock points out the two phenomena are inevitably linked in varying degrees – see Pollock, 2009).

The huge reported (sterilized) injections by the ECB involved much more than liquidity provision. They were in effect a combination of massive price-rigging operations (suppressing or containing any rise in risk premiums in the inter-bank deposit markets) and of emergency quasi-capital assistance (to the weakest banks) by the central banks. (The term quasi is used as there was no matching change in the banks' legal capital structure). The capital could not have been available in the given circumstances from any other source.

The solvency issue stemmed in the immediate from the unknown amount of loss on so-far camouflaged holdings of sub-prime US assets by some European financial institutions. But there was also another dimension to the solvency issue – one about which ECB officials were totally mum. This was the extent of potential loss on holdings of European financial institutions in their own domestic (European) credit markets – whether related to hot residential real estate markets in Spain, UK, France and Holland, or to private equity lending in those same countries and including Germany, or to the booming loans into the Wild East (much of which was related to hot real estate markets and booming construction sectors there).

Those banks with a chronic surplus of funds (more non-bank client deposits than non-bank client loans) – as was largely the case in Germany, corresponding to that country's massive savings surplus – who had during recent years simply lent the excess into the booming inter-bank (unsecured) loan market in Europe suddenly realized that they had become greatly overextended to credit risk there. What to one bank had seemed like a low-risk overnight inter-bank loan suddenly came into view, in terms of the bigger systemic picture which was emerging, as high risk.

As the less weak banks in surplus pulled their funds out of the inter-bank markets, they had a choice between deploying these in short-maturity government bond markets (of which the safest and most liquid in Europe is Bunds) or into the deposit facility at the ECB (on which interest accrued at a fixed small margin below the official repo rate). Arbitrage between these two (denominated in euro) meant that rates on both remained closely in line and near to the official repo rate.

Failure of the ECB (and Fed) to promptly diagnose insolvency

If the ECB (and Federal Reserve) had looked around hard in those late summer days (of 2007) they would have discovered plenty of evidence suggesting a solvency element to the crisis. (See Schwartz, 2009 and Taylor, 2009 for two strong critiques of the Federal Reserve under Professor Bernanke for its similar failure to make such a diagnosis with resulting huge cost for the US – and global – economy). For example, whereas rates on repo-transactions secured by top quality government bonds between banks remained steady, unsecured rates in the inter-bank market (in so far as funds were available to any particular borrower) rose sharply as did rates on secured borrowing (repos) where the security took the form of less than tip-top government bonds (for example, AAA-rated mortgage-backed paper).

In this situation of a sudden re-appraisal of risks (meaning solvency risks) across the whole spectrum of credit including especially bank (and inter-bank) credit, the emergency decision by the ECB on 9 August 2007 to supply all bank demands for secured funds (against any eligible collateral – not just top government bonds) at the fixed repo rate (a virtually risk-free rate of 4% p.a.) was bound to create huge round-tripping.

Banks with funds flowing back, courtesy of the ECB, from the repayment of asset-backed commercial paper or from maturing inter-bank

loans or from repos secured on mortgage-backed paper took the money and ran. Where did they run – mainly to the ECB stupid (otherwise into short-maturity Bunds)! The ECB was keeping the rate on its so-called deposit facility at just one percentage point below the repo rate (meaning in effect around 3%) and banks with excess funds (due to reflow of funds described) could now simply deposit with the ECB. Some banks with excess funds available continued to lend in the overnight markets within tightened limits (and only to banks deemed safe) at the target rate of the ECB set for this (4% p.a.).

If the ECB's view about this all being a liquidity crisis were correct, then within a few days or weeks there should have been a reflux. Inter-bank lending at the old rates would have resumed and the ECB could have withdrawn its support. Of course this did not occur!

The ECB had constructed, unintentionally it seems through lack of knowledge and appropriate analysis, a whole pyramid of secured lending (most of which was against increasingly dodgy assets such as the so-called AAA residential mortgage-backed securities emanating from Spain or the UK) to the banks under most stress at well below the rates which would have prevailed without the ECB's intervention and in several important cases (the weakest banks) well beyond what would be available at any market rates.

Meanwhile the ECB strove with total success to keep the overnight rates (for those banks able to obtain funds there within albeit shrunken inter-bank limits) at the official repo rate of around 4% (and of course there was arbitrage between the repo and overnight deposit markets to keep the two in line with each other). Arbitrage operations by the less weak banks in surplus meant that risk-free rates (as quoted on short maturity government bonds denominated in euros) also remained at around that level.

A superior crisis response ignored by the ECB (and Fed)

The outcome brought about by the ECB's massive response of 9–10 August was very far from a market solution or from a solution consistent with overall economic equilibrium. And the monetary framework constructed at the dawn of EMU – in particular the payment of interest on excess reserves at only a fine margin below the official rate and emphasis on micro-management of micro-official interest rate changes – had much to answer for in any serious investigation as to why a better solution did not materialize. What form would this have taken? Here are the main elements.

First, with a high degree of uncertainty relating to the non-transparent risks which may be residing in various banks, and yet an immediate presumption that these were heterogeneous (some banks suspected of being in much weaker conditions than others), it no longer made sense as an operational strategy for the ECB to peg one uniform overnight rate. Even in the overnight unsecured markets the weaker banks (those where possible solvency risks were higher) should have been paying a substantially higher rate for funds than the less weak banks.

In effect the operational strategy of the ECB would have changed from rate pegging in the overnight inter-bank deposit market to setting a quantitative target for monetary base, evidently not possible to implement with any precision in the midst of a panic as against in broad brush terms so as to make sure that risk free rates would fall to zero. Alternatively the ECB could have carried out rate-pegging in the very short-maturity repo market based exclusively on top-quality government bonds (with the peg at a level well below the pre-crisis official repo rate, possibly already as far down as zero).

Second, the ECB would not have stood in the way of a wide spread forming between risk-free and higher risk rates (depending on counterparty) whether at short or long maturities. Nor should the ECB have acted to prevent a wide spread developing between repo rates secured on top-quality government bonds and those secured on dodgy collateral (albeit AAA), such as UK or Spanish mortgages. Consistent with this 'laissez-faire' approach, allowing markets to set spreads (related to solvency or credit risks) the ECB would have removed various obstacles (to such market determination) – including in particular the now well-above equilibrium interest rate (then fixed at 3% p.a.) on its deposit facility (where banks could place excess funds) and the now in most cases generous Lombard rate (5% p.a., only one percentage point above the official repo rate) which it charged on unsecured lending.

Optimally the ECB would have reduced the overnight rate (on deposits with itself) to zero (meaning that risk-averse banks could not gain interest by parking funds at the ECB; they would have had to place these in short-maturity government bonds, driving the yields on these down towards zero, or else taking on some risk and lending at higher rates). And ECB lending at the Lombard rate would have been strictly limited for any one institution (according to normal prudential yardsticks), with the Lombard rate itself set on a sliding scale (each successive tranche borrowed at a higher margin above the official repo rate). The amount lent by the ECB against eligible collateral would also have been restricted according to normal practice,

and following market developments a higher rate would have been charged on secured lending against non-government than against top government collateral.

Third, the ECB in its estimation of the market-clearing level of risk-free rates of interest, which would be the basis for any quasi-pegging operation in the short-maturity government bond markets or in the market for short-maturity repos secured on government bonds, would have deduced that this was now surely much lower than on the eve of the crisis. The rise of a whole spectrum of rates (in absolute terms) on higher risk credits surely had to have as a corollary (from the viewpoint of overall balance in the economy – including an optimal path back from present panic conditions to full equilibrium) a lower level of risk-free rates.

Moreover, in the new reality of financial crisis surely the likelihood had increased of recessionary developments being under way, adding further justification to revising down estimates of the present market-clearing risk-free rate of interest to well below neutral or natural rate benchmarks based on an eventually unchanged long-run equilibrium path for the economy. (It was also highly plausible that the credit bubble bursting would mean a change in that path and in such a way as to lower the natural rate of interest).

Over and above all this, surely it was justifiable to lower the alert on inflation and increase the alert on depression. Sure, the ECB had a predisposition towards econometric modelling. But in present circumstances of extreme discontinuity any forecast from such a process had to be treated with the utmost caution. And in any case were a recession or depression to get going that could set off a vicious circle of ever worse insolvency within the financial system.

Fourth, there would have been the pressing issue what to do with banks which could not raise sufficient funds in the markets, even at the widened spreads prevailing, and who came up against the normal prudential limits at the ECB's official windows for Lombard credit or secured credit. This was not a new issue – it can be traced back through the financial history books to the whole discussion around the lender of last resort role.

In this role, the central bank determines first, whether the institution which is cash starved is still solvent. If so, then it lends, albeit at a highly penal rate, while seeking a resolution (either new equity capital raising or merger). By contrast where the central bank (or regulatory authority) determines that the institution is insolvent but with a going concern or net asset value which likely exceeds deposits outstanding,

then a controlled de-leverage plan (imposing haircuts on bond-holders and debt-for-equity swaps) takes place linked to a re-capitalization plan.

In the dour case of deep insolvency being suspected right at the start (not enough value to match deposits) then there may be no alternative to immediate closure (with the deposit insurance corporation taking a lead role in disposing of assets).

If the ECB (and Federal Reserve) had gone down this route (incorporating points one to four above) of recognizing an insolvency crisis as such rather than mis-diagnosing it or mis-treating it (with an unpublicized correct diagnosis) as a liquidity crisis there are grounds for imagining that the eventual economic and financial outcome would have been better than what actually occurred.

Instead the ECB rolled over vast amounts of loans largely secured against dodgy assets (some packaged together so as to meet the eligibility requirements of the ECB) to the weakest institutions at subsidized spreads and far beyond 'normal' prudent levels without exerting any of the standard textbook pressure for prompt re-capitalization. Simultaneously the ECB steered policy rates – and together with these risk-free rates in general – higher, out of fear that the growing oil bubble would push up inflation.

Counterfactual monetary history of autumn 2007 to 2008

Let us look at the counterfactual case in more detail so as to draw out how this would have been better than what actually happened (from the viewpoint of the overall economy and financial system). Suppose in reaction to the trauma of 9 August (2007), the ECB had indeed lowered dramatically the floor to risk-free rates (by cutting its overnight deposit rate to zero) allowing these in principle to fall sharply – indeed possibly all the way to zero as had occurred during some great previous world financial panics including October 1929, see p. 84). That step would have been the catalyst to a wide span of interest rates (according to the risk of the borrower) forming.

Then weak but still widely deemed as solvent banks might have been able to borrow say at 5–6% p.a. in the overnight markets and at some premium above that (to a limited extent) in the term money markets (unsecured). Repo rates fixed with respect to dodgy (non-government) collateral would have been well above the risk-free rate especially where the borrower was a weak bank. Less weak banks would have been able to fund themselves at rates much below those risky rates (with the exact

rate depending on the category of collateral used if any). Repo rates based on government bonds would have fallen towards zero in line with the downward pressure on risk-free rates.

The ECB would have injected additional high-powered money into the system so as to relieve any shortage due to banks seeking to build up excess reserves to protect themselves against withdrawals. One guide to the adequacy of the injection would have been rates on risk-free near money assets (such as short-maturity government bonds) not re-bounding due to banks scrambling out of anything for cash.

Note that even if the ECB had not thought through this plan of action on day one, instead supplying unlimited funds as in fact occurred, it could have implemented it in the days that followed, by refusing to roll-over repos or other lending except according to the counter-factual framework as described here.

In this counter-factual world the less weak banks would have scrambled to demonstrate their financial soundness – revealing to the marketplace the full extent of their loan and asset portfolios and the extent of the cushion (to depositors) provided by their capital base. This scrambling process is evident in that great financial panic of 1907, the last great panic before the creation of the Federal Reserve and the advent of Keynesian policy prescriptions, in which the less weak trust banks demonstrated their soundness to the rescue committee instituted by J. P. Morgan in the wake of the failure of Knickerbocker Trust Company (with a lead role played by Benjamin Strong, then Bankers Trust vice-president and protégé of Morgan, later of Federal Reserve fame or infamy for his role in the 1920s credit bubble – see Bruner and Carr, 2007 and Rothbard, 1972).

The less weak banks would have had a big incentive to go out and raise more equity capital – as by doing so they would push down their overall cost of funding to nearer the risk-free level and capture market share from their weaker rivals. Their well-cushioned (by extra equity protection) deposits would appeal to a widened retail base, meaning they could make a new pitch for deposit business and the long-term profits (for example, through the sale of other products) that might be associated with this. (These equity-bolstered banks would have been able to carry on charging the same elevated rates reflecting client credit risk across a broad spectrum of their floating rate loan book).

It is true that the issuance of more equity capital could have diluted present equity outstanding if indeed (as would be probable) there were no mechanism for the original shareholders to claw back windfall gains bestowed by the re-capitalization on the holders of bank debt. But that

dilution would be less, most likely, than the extra present value to be gained from business profit enhancement derived from being able to market deposits with a deepened equity cushion. (Note that the mechanisms leading to this outcome are weakened in the situation of government, or its agencies, issuing blanket insurance on deposits across all banking institutions, weak or strong).

What would have happened to the weakest banks which could survive only with lender of last resort assistance?

Autumn 2008 would have been brought forward to autumn 2007 in terms of the European governments having to provide explicit injections of capital towards an emergency stabilization of the weakest elements. But that task would surely have been less daunting (and damaging) in 2007 than in 2008 given the lack of intervening recession and fear of depression which emerged.

If the US authorities had been similarly pre-emptive then there may well not have been the Lehman shock which threw the global economy into the clutches of a Great Financial Panic. And a sharp fall of the risk-free rate of interest in Europe and the US, perhaps all the way to zero already in Autumn 2007 would surely have reduced the severity of the looming downturn. Instead the ECB steered policy during the year from the First Big Quake of August 2007 on the basis of three disastrous premises.

Three disastrous premises of ECB's reaction to credit quake

The first premise was that the euro-area (and especially Germany) would be on the edge of any economic storm sweeping through the global economy in its aftermath.

The second premise was that there continued to be a serious danger of inflation in the euro-area economy and indeed that this had increased in consequence of the surge in oil and commodity prices (from late 2007 into mid-2008). Buttressing ECB explanations of this danger was a reference to the 'monetary pillar' and in particular to a continuing rapid growth of bank lending as reflected in contemporaneous banking sector statistics.

The third premise was that the central bank monetary pilots, in steering the rate of interest in the overnight money market (a dubious concept at a time of extreme heterogeneity of credit risk among the banks), should maintain a strict focus on the aim for the price level over the medium-term (2% p.a. inflation or just below over say a two-year period) while blocking their ears to the financial storms raging around

them. It should be left to the liquidity crisis management team (which also included the monetary pilots in a different role) to use an entirely independent tool (subsidized and sterilized credit operations) to alleviate the funding stress in the banking system. This last premise in effect amounted to the pernicious 'separation principle' (see p. 86).

The basis of the economic optimism (as indeed inflation concern) was German-centric. Germany continued to enjoy booming business with Russia, Eastern Europe and the Middle East oil exporters in particular through the first few months of 2008. It seemed as if the strength of the euro (reaching a crescendo in the first half of 2008 as the ECB allowed monetary conditions to tighten sharply while the Federal Reserve was in more temperate mode though far from aggressive ease) was having no serious negative influence on German export industry. Had the Deutsche Bundesbank not long sung the tune (as far back as the late 1960s!) about how well German exports withstood a strong currency?

Blinded by econometrics and statistics

The Deutsche Bundesbank, now under the presidency of a renowned econometrics professor (Axel Weber), seemed to be putting more emphasis than ever before on the output of the models. Otmar Issing, the *eminence grise* in the ECB at the start, and to a moderate degree sceptical of econometrics according to his autobiographic account (see Issing, 2008), had retired in autumn 2006.

The warnings of Professor von Mises (1971) carried no weight in the ECB Council:

There is not, and there cannot be, such a thing as quantitative economics. The usual method employed in business forecasts is statistical and thereby retrospective. They depict trends that prevailed in the past and are familiar to everybody. They in no way answer the questions that all people, and especially businessmen, are asking. People know that trends can change; they are afraid they will change; and they would like to know when the change will occur. But the statistician knows only what everybody knows, namely, that they have not changed!

The data which was being fed into the econometrics model on which the ECB prided itself, supplemented by the ECB's analysis of the 'second pillar' of its monetary framework, did not produce any hint of serious

recession risk ahead. Instead it was the amber or even red inflation light which was blinking! Money supply data was still growing strongly, reflecting in part strong increases in lending to the business sector. Could this lending surge represent a crisis-led re-intermediation, with corporations no longer able to tap the euro-denominated bond market (in that one main investor there, the credit-hedge funds, were in crisis) tapping already negotiated credit lines?

ECB and Bundesbank officials shook their heads in doubt. Figures are figures they said! On the subject of figures, though, should monetary data and the monetary pillar not to be interpreted in a long-run sense which transcended the econometric focus? So why was such a big point being made of the most recent money supply and lending behaviour in the midst of a financial panic? No answer!

As for the Jeremiahs who came to Frankfurt or Paris and started to talk about potential asset price declines in France (where according to OECD indices the real estate market had been as bubbly as in UK) and more urgently in Spain or bursting real estate and credit bubbles in Eastern Europe they were politely ridiculed. French banks had been so conservative, unlike their US counterparts. And there was absolutely no sign of weakness ahead in the French real estate market. In any case there had been no overhang of construction in the key Paris metropolitan area! And in Spain, had analysts not been warning about this for years? Moreover Spain could gain offsetting benefits from its strong Latin American connections. To suggest that the East European miracle was largely a speculative bubble was to ignore all the solid evidence of remarkable economic progress built on solid integration with the advanced economies to the West.

These attitudes about the economic outlook which could be gained first hand in interviews with monetary officials in Frankfurt also percolate through the official reports and autobiographical accounts of the period. Thus in mid-2008 (in the tenth anniversary report), the ECB editorialists wrote:

A cross-check with the monetary analysis confirmed that upside risks to price stability prevailed at medium to longer term horizons. Money and credit expansion remained very vigorous throughout this phase (end-2005 onwards including 2007/8), supported by a persistently strong growth of bank loans to the private sector. Viewed from a medium-term perspective, the marked dynamism of monetary and credit growth reflected a continuation of the persistent upward trend in the underlying rate of monetary expansion observed since

mid-2004. As such, it added further to the accumulation of liquidity which, in an environment of continued strong money and credit growth, pointed to upside risks to price stability over the medium to longer term. [...] Thus far there has been little evidence that the financial market turmoil has strongly influenced the overall dynamics of money and credit expansion.

Further evidence of the ECB's state of mind comes from the press conference on 3 July 2008, of which the main task was to explain a surprise 25 bp rate hike (taking the official repo rate up to 4.25%; market rates were well above 5%). M. Trichet explained:

This decision was taken to prevent broadly based second-round effects of the oil price rise (then near its peak level of around \$150 per barrel) and to counteract the increasing upside risks to price stability over the medium-term. (Second round effects were euro-speak for fear that powerful German union, most of all IG Metall, would set off a process of wage-price inflation by seeking compensation for rising oil prices). HICP inflation rates have continued to rise significantly since the autumn of last year. They are expected to remain well above the level consistent with price stability for a more protracted period than previously thought.

Moreover continued very vigorous money and credit growth and the absence thus far of significant constraints on bank loan supply in a context of ongoing financial market tensions confirm our assessment of upside risks to price stability over the medium-term.

Whilst the latest data confirm the expected weakening of real GDP growth in mid-2008 after exceptionally strong growth in the first quarter (arithmetically this stemmed entirely from Germany then at the peak of its export boom), the economic fundamentals of the euro-area are sound. [...] On the basis of our current assessment, the monetary policy stance following today's decision will contribute to achieving our objective. [...] Whilst moderating, growth in the world economy is expected to remain resilient, benefiting in particular from continued robust growth in emerging economies. This should support euro-area external demand. The fundamentals of the euro-area economy remain sound and the euro-area does not suffer from major imbalances. In this context, investment growth in the euro area should continue to support economic activity, as rates of capacity utilization remain elevated and profitability in the non-financial corporate sector has been sustained.

In the question-and-answer session which followed, M. Trichet admonished *those (i.e. the German trade unions or French public sector workers!) who think they can embark on second-round exercises because they want to deny that there is a transfer of resources from consumers to suppliers, are paving the way for a long period of a high level of inflation, slow growth, stagnation and unemployment at a higher and higher level. There was full employment in Europe before the first oil shock, and at the end of the 1970s we had dramatic mass unemployment which we are only starting to get out of. So that is a similarity and that is why in particular we are so attached to our message on 'no second-round effects.*

ECB in 2008 believes it is the reincarnated Bundesbank of 2003!

In his usual show of verbal eloquence (some critics would say this was practised so as to stifle the opportunity for criticism!) M. Trichet had let the cat out of the bag.

The ECB saw itself as repeating the success of the Bundesbank in 1973–4, which by contrast to other central banks at the time had single-mindedly attacked virulent monetary inflation notwithstanding widespread gloom about the near-term recessionary or even depressionary economic outlook. In consequence, Germany could balm in the sun of price stability for the following decade while other countries delayed coming to grips with the disease.

Within weeks this reading from the laboratory of history was shown to have been completely misapplied in present circumstances as Europe joined the rest of the world in a sharp deep recession and the price level in the euro-area started to decline (albeit that this did not signify monetary deflation – see p. 58).

M. Trichet's aim to emulate the success of the Bundesbank back in the mid-1970s by pioneering a distinct monetary response which turned out to be right where everyone else was wrong and so bringing long-run fame to itself and its currency turned out to be total pie in the sky! He evidently had not learnt one key fact about the 1973 Bundesbank success. That had not been based on economic forecasting prowess, with the crystal ball gazers in the Bundesbank having greater skill or luck than their counterparts in foreign central banks. Rather the success was due to the Bundesbank pioneering a new framework of monetary control different from the consensus wisdom of central bankers elsewhere at that time (including prominently the US).

The Bundesbank in 2003–4 had been the first central bank to switch to monetary base targeting and jettison Keynesian type fine-tuning in staking out its adventurous course towards a re-assertion of price stability after the cumulative monetary flaws of the recent past. In summer 2007, M. Trichet and his colleagues had designed no new monetary framework (to replace in this case quasi-inflation targeting based on micro-management of money rates of interest) and they were certainly not monetary pioneers.

In the crude language of US presidential election campaigning, one could say, 'No, M. Trichet, no Professor Stark, and no Professor Weber, you are not Dr Emminger and Dr Schlesinger!'. That may well be an unfair comment to make but it would be the stuff of a more democratic and transparent monetary policymaking process – a theme to which we return in the final chapter of this book (see p. 188).

The heightened concern about inflation which M. Trichet voiced in his (now) notorious July 2008 press conference is puzzling in several respects. Just a month later, after the first violent move down of the oil price as the commodity bubble burst, M. Trichet told the subsequent (regular monthly) press conference (7 August 2008):

I consider that the peak in the price of oil and commodities was abnormal and did not correspond to what would be an equilibrium price. But we will see what happens. We have to be, again, totally humble in the presence of facts and figures, and we will see what happens. I think 'high and volatile' is a good description, a good way to capture things in the present situation.

But where was that humility (as regards price-level forecasts) to be found the month before (July) when he was admonishing labour unions not to seek wage awards which compensated for oil price movements. Indeed the unions (and wage negotiators) appeared to have greater understanding of the volatility of the oil price than the European central bankers in that there is no evidence in retrospect for the first half of 2008 of any wage-price spiral getting under way. And it is on the question of how to respond to CPI jumps related to the oil bubble where the most significant difference can be found between the ECB and Federal Reserve at that time in their steering of monetary policy (otherwise so similar).

Whereas the Federal Reserve through the first half of 2008 ignored to a considerable (but far from total!) extent the oil price bubble the ECB responded as if a serious menace of cost-push inflation threatened.

The concern around the ECB policymaking table appears to have been that the \$150 oil price might dislodge the anchor to stable and low inflation expectations formation in the euro-area (particularly in the heavily unionized German auto industry).

The reality was totally different – not least in that the US and Japan had already entered recession the previous November (2007), although that date was not fixed until a year later by the statisticians. Recessionary forces with their source in the crashing of the global credit bubble had already become very strong (albeit not registered in the backward-looking real economic data and puzzling monetary data) in the euro-area. (Indeed one research group – the Centre for Economic Policy Research – was to claim much later in March 2009 that the euro-area had in fact entered recession in January 2008 if applying the same metrics to that determination as the National Bureau in the US).

Though the Federal Reserve in spring and summer 2008 did not join the ECB in the mistake of an alarmist response to the so-called oil price-induced ‘inflation’ scare, critics fault it for treading still a deeply sub-optimal path. In particular, as Leo Hetzel (2009), a senior adviser to the Richmond Federal Reserve Bank, points out the Federal Reserve drove term money market rates higher through spring 2008 and the growing gap between these and the falling natural rate contributed materially to the severity of the recession already in the summer quarter of 2008 (Q3) before the Lehman collapse. Hetzel writes:

What caused the appearance of a deep recession? The explanation here highlights a monetary policy shock in the form of a failure by the Fed to follow a decline in the natural interest rate with reductions in the funds rate. Specifically, the absence of a funds rate reduction between April 30, 2008 and October 8, 2008, despite deterioration in economic activity, represented a contractionary departure. Moreover the FOMC effectively tightened monetary policy in June by pushing up the expected path of the federal funds rate through hawkish commentary. By June 18, futures markets predicted a funds rate of 2.5% for November 2008.

Hetzel points out that it was not just the Federal Reserve encouraging expectations of higher rates at this time. There was also the example of the ECB and Bank of England. And then there was the BIS which in its annual report published in late June 2008 appeared to call for higher rates.

Again, as discussed earlier in this volume, (see p. 19), the issue is not so much one of whether the ECB was piloting monetary policy marginally

worse or better than the Federal Reserve, but its complete failure in the mission of developing and following a superior monetary framework (and eventually monetary policy) to the highly disequilibrium-prone US one.

ECB's analysis of inflation danger from high oil was deeply flawed

The difference in attitude between the Federal Reserve and ECB towards oil price developments was not a new feature of 2008. For several years back (since energy prices started to rise at the beginning of the decade), the Federal Reserve had focused on a core measure of price level rise (the private consumption deflator excluding food and energy) whereas the ECB had insisted that its focus should remain the overall measure (in the case of the euro-area including food and energy, but excluding almost totally any imputed rental equivalent of house prices – see p. 23). And no consensus existed among economists outside the central banks as to what measure of inflation should be adopted for the purpose of monetary policy steering.

There were two main arguments for focusing on the core measure.

First, oil (and food) price changes over short periods could be violent, and so if the central bank were trying to assess the underlying rate of inflation it was best to filter the short-term changes in oil prices out of the reckoning.

Second, in line with the Austrian School teachings, the objectives of price level stability in the very long-run and monetary equilibrium did not require (and might indeed be inconsistent with) price level stability over the short- or even medium-run. During periods of negative resource shock (such as would be symptomized by a jump in energy prices) not allowing money to become a source of disequilibrium would mean accepting a transitory rise in the price level and conversely during periods of positive resource shock (such as a big improvement in the terms of trade or a jump in productivity).

The Federal Reserve, in focusing on core inflation measures, was influenced mainly by the first argument. At no point in that institution's almost 100 years' history have Austrian ideas gained any traction or even any written mention in its policymaking.

The ECB in choosing the overall inflation measure (without taking out the volatile food and energy component) strangely made implicit reference to the Austrian school teaching, albeit the critics might say in highly convoluted form. The authors of the ECB monthly reports on several occasions made comments to the effect that yes, there was a

trend rise in energy prices which was an inevitable consequence of China's rapid growth; but by the same token China's entry into the global economy was a source of significant downward pressure on the price of manufactured goods (a terms of trade gain). These two real source effects – according to the ECB – would broadly offset each other in trend terms. So yes, monetary equilibrium might imply price level stability over the medium-term notwithstanding real source upward pressure on prices from growing oil shortage.

The problem in this synthesis of real effects – including oil – on the price level (by the authors of the ECB report and apparently reflected in ECB policy discussions) was that the huge jump in the price of oil during the second half of 2007 and the first half of 2008 could hardly be described as in line with an underlying trend. Only the trend component of the oil price rise should have been netted against trend terms of trade improvement when calculating actual upward pressure on the price level from real sources during this period. Most of the actual oil price rise should have been treated as a real resource shock, even after netting out other real related forces on the price level.

The author can say on the basis of meetings with ECB officials that there was some sympathy for seeking to decipher the underlying rate of inflation without the white noise of oil price spikes. But there was a concern that any such doctoring up in public would be the beginning of a slippery slope away from the absolute respect by all 'social partners' for price level stability. It was best from this perspective to keep measurement simple. That would have been fine if actual decisions on policy interest rates took the core measurement (rather than the headline price level change) into account without this being publicly stated. There is no evidence of such 'sophistication'.

Rather, at a time of growing recession around the globe including the euro-area (a wide recession in the euro-area was not yet generally recognized albeit that there was no doubt already about a downturn in Italy), the ECB raised in July 2008 its policy rate and rates on virtually risk-free money market rates rose upwards in step (rates on unsecured inter-bank loans – to the limited extent that these could be arranged – rose by somewhat more, but the corresponding risk premiums were compressed well below where these would have been under the hypothetical alternative monetary policy described above). These term money market rates were the basis for many loan rates fixed under rollover contracts in commercial borrowing agreements.

Perhaps under a sane monetary policy some of the higher risk borrowing rates would have risen in absolute terms consistent with equilibrium

tendencies. But the risk-free rates should surely have plunged even during the oil bubble (if they had not already done so in autumn 2007). The response from Frankfurt monetary officials to any such suggestion was that lowering the official rate or reducing its visibility (by allowing a wider market determination of the interest rate structure) would interfere negatively with its supreme task of assuring price stability (according to the refined definition of 2003).

Bogus separation principle becomes ECB mantra

The separation principle had become a mantra – one policy tool (the path of the overnight money rate) for preserving price stability and one policy tool (a mass of subsidized sterilized lending collateralized against increasingly dodgy assets) for dealing with the ‘liquidity problem in the banking sector’ (in fact an insolvency problem, but not yet admitted as such).

It is the first time in monetary or financial history that the separation principle was applied. In previous great financial panics, the central bank did not stand in the way of risk-free rates generally (including rates on near-money assets such as short-maturity government bonds) falling towards zero (under the pressure of a general flight into safety by investors) unless they were constrained to do so by a threat to the national currency’s exchange rate or gold parity (under a fixed exchange rate system or international gold standard) (see Eichengreen, 1997). The euro is a freely floating currency not subject to such legal constraints on monetary action in crisis.

Two main obstacles now stood in the way of the fall of risk-free rates.

First, there was the payment of interest on reserves (until the start of EMU almost all major central banks paid no interest on reserves at any time) coupled with a total lack of flexibility in savagely cutting that interest (rate) in financial crisis.

Second, the ECB was applying the ‘separation principle’ in a way to veto swamping the system with extra reserves (high-powered money) as would be required to prevent a pre-cautionary surge in demand for reserves inducing a monetary squeeze (see p. 90).

No exit plan from crisis intervention following 2007 quake

Now it would certainly have been no surprise if in secret ECB officials throughout winter 2007/8, and spring/summer 2008, were in desperate communication about the exit problem (how to run down massive

ECB lending to the financially weak institutions) with national finance ministries, including those in EU countries outside EMU whose banks via branches in the euro-areas had heavily availed themselves of ECB 'liquidity help' (the UK was the outstanding example of such a country).

How would the ECB one day shrink back its balance sheet to normal level and extricate itself from massive secured lending operations to the weakest banks?

Yes, the ECB loans were secured. But if the ECB refused to renew those secured loans and grabbed the collateral it would trigger widespread insolvency from the viewpoint of the banking system as a whole. The weakest banks had no possibility of refinancing themselves from private sources. And given the dodgy nature of much of the collateral, what could the ECB realistically obtain for it in a fire sale?

In fact the only exit (for the ECB from secured lending to the weakest banks during the crisis) was an EU-wide effort to re-capitalize the banking system (at least the weakest banks). And the solvency together with the related re-capitalization problem would be all the more difficult if meantime ECB policies contributed to a steep recession. Here was another big reason for caution in anti-inflationary zeal.

No evidence of such discussions has filtered out into the public domain. The plunge in US and European bank stocks in summer 2008 (an obvious indicator of a deepening insolvency crisis) was not sufficient to provoke any change of tune in Frankfurt.

The Separation Principle remained supreme.

Lehman bankruptcy causes rate-fixers in Frankfurt to dig in

Even when the Lehman bankruptcy and threatened insolvency of AIG eventually triggered a rash of bank insolvency crises in Europe (the first crisis point being Fortis, followed in quick succession by middle-size banks in Germany and France and then one of the largest UK banks) the rate fixers in Frankfurt could not let go.

In fact the rate-fixers tightened their grip! Simultaneous with an internationally coordinated 50 bp rate cut in early October 2008, the ECB announced that it was narrowing the bands either side of the official repo rate within which money rates could float as set by its marginal deposit rate and marginal lending rate. The narrowing was apparently prompted by the Bundesbank which was concerned about the ECB losing strict control of market rates (and thereby allowing a greater than optimal easing of monetary policy) under present turbulent conditions.

By narrowing the gap of the marginal deposit rate below the official repo rate to just 50 bp the ECB continued to set a high floor for the broad span of risk-free rates for short-maturity top euro-government bond markets and for government-bond secured repo rates. These continued at well above 3% into the period of intense crisis.

No wonder that record round-trips took place in the form of the less weak banks depositing excess funds at the ECB which in turn lent them out at subsidized rates (and beyond any normal prudential limit) to the weakest banks. This was such a far cry from what would have occurred under a classical monetary system in which high-powered money (deposits at the central bank and bank notes in circulation) was all non-interest bearing.

In the 'classical system' risk-free rates on near-money assets (for example, Treasury bills or their equivalent) would have been driven down by a flight into safety and the central bank would have been busy pumping in high-powered money to pre-empt any shortage of this developing amid the panic. The architects of the ECB's monetary framework had almost certainly overlooked that danger (the perverse overriding of automatic stabilizers during a financial crisis) in their ordaining that deposits at the central bank should pay interest (see p. 53).

Indeed, under the classical monetary system (with no interest paid on reserves) risk-free rates would indeed come under downward pressure most likely before the full crisis erupts, as investors seek safety. The spread between the risk-free rate on, for example, short-maturity government bonds and money market rates is there a leading indicator of crisis. And in the thick of the crisis, the collapsed level of risk-free rates stimulates banks and others with surplus funds to lend into the now riskier or illiquid segments of the money market.

The action of the ECB shoring up the risk-free rate to above 3% p.a. in the depth of the financial crisis (October 2008) is evidence that the separation principle was still reigning intact and consistent with there being little sympathy around the policymaking table especially on the part of the Bundesbank President, Professor Weber and ex-Bundesbanker Professor Stark for the hypothesis that the profound shock had driven down the market-clearing risk-free rate to near zero or even negative levels at the same time that high-risk rates had risen.

The econometric modelling so highly valued in ECB policy deliberation could not provide any insights in the situation of financial panic. (It is plausible – but there is no evidence to support this – that the Bundesbank President was somewhat behind real time in realizing the slump now occurring in the German economy in consequence of

its special vulnerability to a precipitous fall in world trade induced in considerable part by a freezing up of many trade credit channels). Indeed nothing suggests that the policymakers judged that a broad span of rates should emerge to reflect the present unusual degree of heterogeneity in credit quality and liquidity (in money markets).

The monetary officials in Frankfurt were still apparently in the mode of thinking that changing one interest rate, the overnight rate, was the only way to implement policy and that strict monetary control meant keeping all market rates as close as possible to that overnight rate!

Insolvency crisis in European banking deepens, late 2008

The solvency crisis in Europe continued to deepen, but the ECB persisted in applying the tools appropriate to a severe liquidity crisis. The ECB in any case could not arrange on its own remedial action for a deep solvency crisis. If this were to include public sector financing of a recapitalization process for the weak banks then governments had to become involved.

The most intense pressure was in the US dollar funding markets. European banking groups had huge short-term dollar borrowings outstanding in the repo markets where a chief lender had been the US money market funds. The freezing up of those funds in the aftermath of the Lehman bankruptcy (and other simultaneous credit events) had had a violent knock-on effect to Europe.

European banks scrambled to withdraw loans from the rest of the world (especially where repayment could be effected easily as from South Korea and Russia) in order to alleviate their immediate shortage of funds. In turn the ECB arranged vast swap lines with the Federal Reserve so as to provide dollar funds to cash-starved European banking groups (see Hórdahl and King, 2008). The solvency crisis in European banking, however, transcended this issue of funding interruption. (And indeed if the banks now short of US money market provided funds were of undoubted tip-top quality they could readily have replaced these from other sources).

At the end of the line there was growing anxiety (among non-secured lenders) about the extent of possible loss not just on the now much publicized holdings of European banking groups in US credit markets (mortgages, levered loans, etc.) but also on loans against depreciating European real estate (and in 08H2 residential real estate prices plunged by 10% in France, having been stable up to that point) and on loans to the emerging market economies in the Wild East (much of which

was secured on once hot real estate markets and in euro or Swiss franc denomination).

As national governments closed in to salvage banks from insolvency (starting with the Dutch and Belgian governments taking over Fortis at end-September 2008) an EU summit agreed that individual governments should introduce packages of re-capitalization or emergency loan guarantee operations to be determined in detail at a national level. In effect, the much-vaunted financial integration fostered by the launch of the euro had come to an end and gone into reverse – at least in respect of the banking systems.

Will a weak EMU member government default?

Bank salvage operations implemented at the national level were bound to put downward pressure on the credit-rating of governments in the euro-area where the public finances were already in weak condition or where the extent of aid to the banks was very large relative to economic size (or both!). According to many analysts, the credit rating of governments in the euro-area was more immediately sensitive than that of governments (outside the euro-area) which still retained ultimate sovereign power over a national money printing press to the deterioration in the state of public finances – including the contingent liabilities taken on in guaranteeing the banking sector or the implicit losses incurred in paying well above market price for banking assets.

In principle, if sovereign credit risk is defined in economic terms to include deliberate partial default by the government (including the central bank) unleashing an inflation shock to write down the real value of government debt, then the distinction between the credit risk of governments with and without access to printing press becomes blurred. After all, the Weimar Republic did not default on its debt in 1921–3 according to a technical legal definition, in that the printing press was used to service all obligations punctiliously, but in reality there was a default. In practice though there are important differences.

In case of a sovereign government with its own money, doubts about eventual deliberate real partial default via inflation do not translate fully into a present spike in long-term interest rates or equivalently a massive tumble in today's nominal price of government bonds. The means of generating monetary inflation involves keeping money rates of interest far below neutral for a prolonged period. Long-term interest rates are an average of short-term rates expected on a roll-over basis from the immediate present to far-out dates and thereby give those

depressed money rates a substantial weight in the averaging process. Instead the pressure of default risk in the form of deliberate inflation is likely to be felt most of all through an immediate decline of the sovereign government's currency.

By contrast, in the case of a sovereign government with no access to a national printing press a rise in default risks translates directly into lower bond prices and even into a total funding crisis (in a market panic it may not be possible at all for the government to issue bonds) and wider financial crisis (in that banks and other financial institutions hold large amounts of government bonds, now slumping in value, to match fixed money liabilities).

A danger scenario can be painted for EMU in which a New York City style crisis would erupt in one of the weak government bond markets and spread by contagion to all the weak government bond markets. And depositors with the banks in those political jurisdictions might flee the banks there out of fear that the debt crisis would bring down the banking system or trigger an exit from EMU.

Perhaps the weak government involved could summon the needed political consensus (within its country) to effect a package of draconian budgetary cutbacks (tax increases and expenditure increases). Yet this may fail to build confidence if investors fear that this is the first step to Brüning-style depression economics with the budget deficit becoming ever wider (at least relative to the shrinking size of the economy) despite the best efforts because tax revenues plunge and unemployment benefits soar.

Brüning was the Chancellor of Germany during the depths of the depression from 1930 to 1932 who instituted savage budgetary cuts under emergency decrees, legally bypassing the need for Reichstag approval. Some critics have argued that he followed this path of driving Germany into the grave so as to prove that the reparations bill was unpayable. And indeed in 1932 the Treaty of Lausanne effectively brought reparations to an end – but at what a cost!

Under such re-incarnated circumstances the only alternative to a forced exit from EMU might be a mega financing loan from the stronger governments. But would the political will exist in France, Germany, and say the Netherlands, to accomplish that?

We turn in a future chapter (Chapter 5) to a more detailed analysis of how the weak government could be forced to exit EMU and include a description of the actual mechanics (of withdrawal).

As a matter of historical record, though the possibility of forced exits had entered the range of scenarios viewed by some investors in spring 2009 and become a focus of media attention, it was a long way from

the mainstream. In particular, the recovery of global equity markets and signs of economic stabilization were soothing the most worried.

ECB policymakers journey into irrelevance as recession deepens

The ECB had almost exhausted by spring 2009 the scope for conventional monetary easing. Risk-free rates in nominal terms were at last below 1% (near zero for some money market operations, somewhat higher in the illiquid one-year German government bond market).

In December (2008), a broad coalition of policymakers around the ECB table had unusually won the argument against the Bundesbank (there is no proof of this given the rules of secrecy under which the ECB operates, but the hypothesis rests on a collection of anecdotal and media reports) and been successful in bringing about a re-widening of the interest rate corridor such as to allow short-maturity risk-free rates to fall by as much as 100 bp (rather than 50 bp) below the belatedly declining official repo rate. (The overnight deposit rate was reduced to 100 bp below the repo rate; subsequently in early 2009 as the repo rate was cut further, the Bundesbank was successful in arguing against a cut of the overnight deposit rate to 0% and so the gap narrowed to 75 bp).

Most probably the willingness of the Bundesbank to concede at this point was related to the accumulation of evidence that the German economy was now in slump (of greater severity than in France). In fact the euro-area was now (December 2008) in great economic and monetary disequilibrium, where the market-clearing risk-free interest rate would most likely be deeply negative (transitorily) were the ECB (together with EMU member governments) to take the necessary steps to removing the barrier to money rates falling below zero (see Chapter 5, p. 176).

There was no evidence that ECB policymakers realized how irrelevant they had become. And their continuing reference to implicit inflation-targeting as built into the framework of monetary policymaking 'perfected' in spring 2003 (even though by now the flaws in the framework should have become abundantly evident) was unhelpful to the economic recovery process. For example at the summer (August) 2009 monthly press conference, President Trichet told reporters that although year-on-year price level rises had turned negative, these would return towards the target of '2% or close to (from below) 2%' over the medium-term.

Presumably this reference to the expected re-emergence of low inflation was made to justify holding back from the final 25 bp cut in the

overnight deposit rate. But there was surely a mainstream scenario under which the price level in the euro-area would be falling for several years, even though the German price level might be stable (reflecting the relative price adjustment downwards required in the ex-bubble economies). In so far as the ECB promoted an underestimation in the marketplace of the likelihood of that scenario of a falling price level, it contributed to nominal medium and long-term interest rates on euros remaining at higher-than-otherwise levels.

The recovery would depend most of all on self-corrective forces of non-monetary source. The best hope here was that the steep drop in international trade brought about by the post-Lehman freeze of the global financial system would reverse itself as freeze now gave way to thaw. Businesses would cease their emergency slashing of inventories (once back into line with sunken sales volumes) and capital spending programmes. And hopefully the equity markets might lead a recuperation process.

If investors there had confidence in a better future, companies would be able to justify investment projects with pay-offs over the long run (where this future income would be priced at appropriately high levels by equity investors) even though present profit prospects were dismal. Justification would take the form of the simple answer to a simple question – does the adoption of this capital-spending programme bolster the value of my equity?

The policymakers continued through spring 2009 to debate the merits of a further 25 bp rate cut, with the Bundesbankers in particular expressing caution – as if the difference between a risk-free rate of 75 bp (the then level of yields on three-month German government bills) and 50 bp or even zero would make much difference to anything when the equilibrium level was transitorily far below that in deep negative territory! The big mistakes had already been made!

ECB refuses to admit any mistake in crisis

No one, though, would have heard the word mistake, in M. Trichet's keynote address in mid-march 2009 on *'What lessons can be learned from the economic and financial crisis?'* (speech at the '5eme Rencontres de l'Entreprise Europeenne' organised by La Tribune, Roland Berger and HEC, Paris). His introduction was promising:

Tonight, I would like to examine the roots of the current crisis and the policy responses which are taken to address it and to inspire a new sense of direction.

Unfortunately, no illumination was to follow!

In the last ten years we saw a dramatic shift in influence away from entrepreneurship in the real economy to speculation and gambling in the financial sector. The assumption and the hedging of genuine economic risk gradually ceased to be the main concern of international finance. [...] At some point, the financial system seemed to be no longer there primarily to hedge existing economic risks, but more and more to create and propagate risks on its own.

The credit boom had three multipliers.

First, ill-designed compensation schemes for loan managers reinforced the shortening of lenders' horizons. In the eyes of many loan managers, the short-run gains from an expansion of credit obscured the need for any consideration of the potential losses that their institution could incur over the long-run.

Second, the complex structure of securitized products made it difficult for the ultimate holders to assess the quality of the underlying investment.

Third, international imbalances and their potential to encourage liquidity creation on a global scale acted as the macroeconomic – and perhaps most powerful – multiplier. A chronic shortage of savings in some of the world's advanced economies was funded by an excess of savings in other parts of the world. These global macro-economic imbalances contributed to the creation of international liquidity and therefore further fuelled credit and debt accumulation.

These three multipliers went into reverse – suddenly, although not unexpectedly – sometime in the middle of 2007. Liquidity dried up. [...] The ECB moved pre-emptively. It ensured the continued functioning of the money market at the very first signs of the turbulences in August 2007. We have not shied away from action at any time since then. Our actions have been early, resolute and broadly based!

Who could M. Trichet have been hoping to fool, unless the worst fears were true about the European central bankers now inhabiting an ivory tower totally removed from the real world?

There is absolutely no mention at all in M. Trichet's speech of the cardinal error of the ECB, together with the Federal Reserve, moving in spring 2003 towards a super-easy monetary policy out of misplaced fear of deflation; or of the ignoring or lack of alarm at growing evidence of credit and asset market warming through 2003–5; or of the glacial pace of tightening through 2006; or of the failure to distinguish between liquidity and solvency crisis in summer 2007 and the suppression of all private market forces which might have brought about an early re-capitalization of the healthier parts of the financial system; or the implicit rejection of stabilizing monetary action found in previous great financial panics (risk-free rates falling being allowed to plunge and huge

injections of monetary base to meet raised demand for reserves and currency).

Instead there is the old pre-EMU French prejudice against Anglo-Saxon finance, the dogma about global imbalances (US savings deficits, East Asian savings surpluses) and financial casinos (in London and New York) being the source of a US-centred global credit bubble (a story which defies all accounts of how the invisible hand of market forces if left unrestricted should cope with the transfer of capital from parts of the world where savings are plentiful relative to domestic investment opportunity into those parts where the reverse holds). The total silence is deafening on the tightening of euro-area monetary conditions through 2008H1, the ECB's driving the risk-free rate of interest to well above 4% p.a. when recession had already started in major parts of the world, the ostensibly complete failure of the ECB to detect an oil bubble, and the misplaced reading of history (imagining a phantom danger of wage-price inflation).

The ECB's chief economist and board member Professor Jürgen Stark (ex-Bundesbanker) did not provide any more clarification when he spoke in March 2009 to a German-Luxembourg economic conference. He thankfully kept away from any historical account as to how the crisis came about. But his analysis of how the ECB was now conducting monetary policy could only mystify.

In fairness Professor Stark started by making the reasonable point that though the price level may be falling (due to sharp declines in oil prices) this was not deflation (a persistent broad-based and self-sustaining decline in the overall price level reinforced by anticipation that prices will decline further in the future) but disinflation (linked to a transitory movement in relative prices). If he had had more time he might have added a cyclical drop in the price level to the disinflation list (suppliers in the most cyclical sectors of the economy cutting profit margins at the depths of the recession and re-building them during recovery). But then he started to tread the murky waters of the separation principle:

To better understand the scale of our interventions in the interbank money market, one needs to appreciate its importance in the implementation and transmission of monetary policy. Money market interest rates, especially of short maturities, mark the starting point in the transmission of monetary policy. They determine the marginal costs of refinancing of the banking sector and thereby act through the bank lending channel. Money market interest rates are a key

factor in determining the entire yield curve and thereby are crucial for the expectations channel of monetary transmission.

Professor Stark leaves no doubt about what his attitude would have been (and presumably was!) to any suggestion, if made (and there is absolutely no evidence or reason to believe the suggestion was ever put forward at the ECB's policy meetings), that in the wake of the August 07 quake, a wide span of rates should have been allowed to form, with the risk-free rate falling towards zero and risky rates (for example to the weaker banks) rising. Any such messy outcome would have blurred (in the viewpoint of Professor Stark) the signalling from firm rate control by the ECB.

We can also see that Professor Stark was a key opponent of any idea to widen the corridor between the overnight deposit rate and the marginal lending rate in late 2008 (and why M. Trichet had to stall questioners at the November and December press conferences as to why this was not happening despite massive round-tripping, saying that it was 'under review'!).

Professor Stark then ventured into the liquidity-solvency debate, by implication suggesting that the ECB's massive interventions from summer 2007 onwards had been for liquidity purposes. He quoted the maxim:

Central banks can alleviate liquidity risks, but they cannot address the perceived solvency problems that impair the financial system.

So why had the ECB spent the year or more from the August 07 quake lending more and more on a secured subsidized sterilized basis to the weakest banks in Europe when it was apparent to almost all (except perhaps at the ECB) that there was a serious solvency issue?

The sterilization occurred via the ECB conducting reverse repo operations in the market – in effect lending securities and borrowing funds from non-banks and the stronger banks – so as to offset the loans to the weakest; and in a bazaar decision the ECB as late as June 2009 decided to amplify this sterilization operation by making the same overall amount of funds available now for one year (rather than as previously for six-months) at a below-market rate, at least with respect to the weakest banks, of 1% p.a.

There is no record in the ECB transcript of a question to Professor Stark on the futility and indeed deceptiveness (in terms of public accountability) of such lending to the insolvent!

Implicitly Professor Stark offered a defence of why the ECB had driven the risk-free rate of interest higher in spring and early summer 2008 – wait for it! If it had not been for the (avoidable) US shambles of allowing a big investment bank to blow up, the euro-area was not on course for a recession:

The crisis started in Summer 2007, as losses in the US sub-prime mortgage market, a relatively small segment of the US housing market, triggered the ongoing financial turmoil. However, its impact on the global economy remained relatively limited until the summer of 2008. However after the collapse of Lehman Brothers last September, the tensions in global financial markets escalated to a full-blown financial crisis and thereafter turned into a global economic crisis. The severe global economic downturn has now become much more synchronized. The collapse in global trade has amplified the adverse impact from the financial turmoil and caused emerging market prospects to deteriorate drastically.

Was the source of the problem really just a small section of the US housing market? Or was Professor Stark blind to the much bigger picture of a global credit bubble of which the US sub-prime mortgage market was just one component and for which the ultimate source was a monetary madness which embraced the ECB as much as the Federal Reserve?

As regards this gentle economic slowdown environment in the first half of 2008, were Spain and Italy not already in serious recession? Indeed from January 2008 the whole euro-area was subsequently identified as in recession (see p. 100). And yes, most analysts would undoubtedly agree with Professor Stark that the Great Panic following the Lehman bankruptcy was the immediate catalyst to a 08Q4 and 09Q1 slump in business activity around the world (driven by a near freeze-up of international trade credit and many other forms of credit, especially those where the now defunct 'shadow banking system' had been important). But how could Professor Stark still in March 2009 justify the only gradualist adjustment down (the previous autumn) of the peg for the overnight rate and all the efforts to prevent a sharper fall at that time in the risk-free rate (at first narrowing the corridor around the repo rate in September 2008, subsequently allowing it to return to the previous norm under the sheer weight of the round-tripping which the move triggered – see p. 109)?

And was the main justification for what rate declines did actually occur really the avoidance of a bigger decline of inflation over the medium-term (the next two years) below the target level of 2% p.a.? Or did the justification lie in the much more urgent objective to prevent

severe monetary disequilibrium such as would arise from market rates remaining far above the optimal path back to the almost certainly now lowered neutral or natural level?

That severe monetary disequilibrium may or may not have ended up with a big undershoot of inflation. Even without the appearance of such undershoot, would not all the other pain of monetary disequilibrium, including financial institutions failing and severe recession or slump together with precipitous asset deflation, justify bold action now? And did not the survival of the euro itself in present form not depend on alleviating monetary disequilibrium? Otherwise how could a forced exit from EMU of the PIGS (Portugal, Ireland, Greece and Spain) and even Italy be prevented?

A French diplomatic coup to diffuse existential crisis, spring 2009

ECB officials remained effectively mum on the issue of existential crisis of the euro as recession deepened through early 2009. This is understandable to the extent that the same officials realized that survival of the euro-area in its present wide form (as against a narrow union of France, Germany and Holland) might depend ultimately on the willingness of electorates in France, Germany and Holland to make transfers to the foreign governments within EMU at high risk of defaulting (see p. 171).

Even so, there were some forms of support which might not require such willingness – either because they could be camouflaged from electoral view (such as the ECB providing cheap ‘liquidity’ to Spanish, Greek, or Irish banks - a non-exhaustive list!) or because they were forthcoming from other sources, as for example the IMF. This Washington institution, now under a French ex-Finance Minister, hit it lucky in spring 2009, obtaining huge new resources from China, Japan and the US. Only a few months before there had been widespread chatter in G-7 circles about whether there was any rationale for the IMF’s continued existence, so incompetent had been its analysis and actions during the global credit bubble.

French economic diplomacy enjoyed crowning success at the G-20 summit in London (April 2009), where the main resolution was a re-capitalization of the IMF. All participants in the G-20 summit realized that the main destination of re-vamped IMF lending would be European countries in distress. The most obvious distress stories were in the ‘Wild East’ (ex-communist countries of central/Eastern Europe). But the more perspicacious delegates at G-20 knew that not far behind in the queue for assistance would be the ‘Club Med’ members of EMU.

The new Obama Administration promised to obtain the necessary approvals (for IMF funding) from the US Senate (no difficult questions asked as to why Germany was still the number one exporter to Iran, or conditions imposed such as EU promising to expedite Baltics' entry into EMU – see p. 45). Japan and China signed up to massive loans to the IMF at least in part towards keeping the peace in currency relations with Washington.

Less understandable is the glibness with which ECB officials repeated the mantras that exit from EMU was impossible or disastrous and that euro-membership had spared the weak countries from much greater pain. For example, when asked about exit pressures on weak governments at his press conference in mid-March (2009), M. Trichet answered as follows:

As regards your question on the issue of members of the euro-area that could be in extreme difficulty, first of all the euro-area is an area where you have considerable automatic help through the very existence of the single currency itself. For instance the balance of payments deficit, if any, is financed automatically by virtue of belonging to the euro-area. Let us not forget that. I say regularly when I am asked more direct questions that I do not comment on absurd hypotheses (any mention of exit is absurd!). I have confidence in the capacity of the governments of the euro-area in line with their own pre-eminent responsibility to convince their own people and markets that they are going in the right direction and that they are credible as regards the medium- to long-term path for sound fiscal policies.

The critic could question the notion of automatic help being bolstered by the existence of EMU. If Spain were now in slump and its private sector savings deficit plunging (as construction spending collapsed, non-real estate companies also cut back outlays and households' propensity to consume fell), the net inflow of capital from the rest of the world (especially the euro-area) – which Trichet describes as 'balance of payments deficit' – would decline in line (adjusted for the simultaneous widening of the public sector deficit). Membership of the euro-area meant that the decline in the 'balance of payments deficit' would be less gradualist than otherwise. If Spain had its own currency, nominal interest rates there could fall below the level in the euro-area. Devaluation, if reflected in higher inflation expectations, could bring real rates into negative territory. Hence the contraction of the private sector savings deficit would be slower than inside EMU.

The cheapness of the Spanish currency (together with expectations of a potential eventual re-bounce) would act as a magnet for foreign financing allowing its savings deficit to stay larger for longer (despite negative real rates). And why was the notion of Spain leaving the euro absurd? After all during the era of the gold standard, countries left gold. The mechanics would be broadly similar for exit from the euro-area (see Chapter 6). When it came to the government of Spain or any other weak member convincing its own people about the need to tighten fiscal policy and follow the right path during a recession had M. Trichet not read in the history books how Chancellor Brüning inflicted that medicine on Germany during 1930–32 and with what results rather than pursuing the path of exit from the straightjacket of the dollar exchange standard?

At last ECB refuses to join the crowd: It rejects quantitative easing

Another big topic at press conferences during the two quarters of economic slump which followed the financial system freeze-up of early autumn 2008 was why the ECB abstained from following other central banks (first the Federal Reserve, then the Bank of England) in adopting a policy of “quantitative easing”. This meant expanding the monetary base (excess reserves in particular) aggressively once the risk-free interest rate had fallen to the zero rate boundary with the aim of providing further stimulus to the economy.

There was a perfectly respectable intellectual case to be made for the central bank not venturing down this particular path. In particular, in the situation where the equilibrium risk-free rate had already fallen far below zero, it was highly dubious that the non-conventional toolbox contained any device at all – other than the highly powered tool of negative interest rates (which required for its use a forced banknote conversion plan – see Chapter 5) – capable of safe or effective use.

Yes, the ECB could buy massive amounts of government bonds in the secondary markets. But which bonds of which governments would form part of this operation? Would that include the government debt of the PIGS (acronym for Portugal, Ireland, Greece and Spain) where prices were already reflecting some significant risk of default or EMU exit? And why would the banks respond to a flotsam of extra reserves by increasing their risky loans rather than just parking these at the ECB (in its overnight deposit facility) and levying increased charges on their deposit customers? If the banks lent out the money at rates which did

not fully reflect raised risk premiums and increased risks (at a time of deep recession) and to an extent which went beyond the maximum leverage ratios appropriate in any case (where these are determined in particular by deadweight bankruptcy costs and moral hazard) they would find their equity prices plunging as investors in the bank took fright.

Yes, quantitative easing 'worked' in Communist China already during the first half of 2009 in producing a lending boom of fantastic proportions, with banks commanded to meet loan quotas by Beijing. But this was not a model to follow in a market economy and political democracy. The implicit shareholders of the banks in China, the public, had no effective voice. And a command-driven lending boom not based on market price signals would surely not bring about the efficient deployment of new capital so essential in the long run to steer the Chinese economy on to a path of economic prosperity and away from a path of bubble-and-busts with so much collateral damage.

After a financial panic and deep recession in a market economy such as those in Europe, Japan or the US, it is likely to be the financially fit firms which lead the process of recovery, drawing on funds from the equity and bond markets. The more fragile firms who are particularly important as borrowers in the bank credit markets emerge as effective demand there at a later stage in the recovery. By that point the optimal path of market-clearing risk-free interest rates may well have entered again positive territory. Bank lending growth would be consistent then with rising bank equity values – in that risk premiums and the risk level of many borrowers have decreased since the panic and its aftermath. A vast amount of excess reserves created during the recession by quantitative easing would kick in to cause the process of monetary and credit expansion to be more powerful than otherwise in an unpredictable way.

Quantitative easing in itself might well cause expectations regarding the price level over the medium-term (say 3–5 years into the future) to shift upwards even before strong recovery becomes evident, on the basis that the central bank will misjudge the power of the kicking in. That anxiety about potential inflation, inflamed perhaps by the central bank committing itself to holding rates down at abnormally low levels for an "extended period" (with the likelihood that they will not be raised in line with inflation when it emerges) might frighten some financially fit households into spending now rather than run the serious risk of their monetary assets depreciating eventually (in real terms). But it is far from clear that these stimulus effects would be particularly powerful. The strongest effect might be downward pressure on the currency. That pressure could be increased by the central bank

buying massive quantities of government bonds, raising thereby the spectre of long-time monetisation as the eventual 'solution' to a deepening crisis in public finances. The floating of such a policy strategy by ECB officials, even if in their hearts they had no stomach to carry it out, would conflict with their 'sworn' mission of price stability according to the Maastricht Treaty.

Would it not be better for the ECB to make the case that exit from recession should be powered to a considerable degree by natural forces of recovery (deep price discounts encouraging consumers and businesses to bring forward spending, bold speculators in the equity market supporting prices there at levels which priced expectations of returns in periods beyond the present recession from new capital expenditure at a reasonable level, so allowing projects to be adopted now, recuperation of international trade and business confidence led by thawing of the financial system freeze)?

Speeches of ECB officials during this time did describe the likely problems of quantitative easing (for example, see Bini-Smaghi, 2009), albeit tending to put great focus on possible losses for the ECB in holding the assets bought rather than on inherent flaws in theory! The less in-depth speeches emphasized the point that the central bank should ignore all cyclical fine-tuning and just concentrate on the long run, without analysing the particular issues related to quantitative easing (see Stark, 2009). But there was no coherent shift evident anywhere in Frankfurt away from the collection of hypotheses which lay behind the monetary framework designed in 1998 and refined further in 2003. A shift in that direction and away from the misconceptions of quasi-inflation targeting would have differentiated policymakers in Frankfurt from those in Washington or London.

In designing a new framework – a distinct European alternative – the ECB would have stood to win (if vindicated by history!) the sort of esteem which the Bundesbank won in 1973 from not following the 'global central bankers' pack'. Instead, there was a buzz which just sounded like excess caution, intellectual laziness or both – and of course the policymakers had still not exhausted conventional policy tools by allowing risk-free rates to fall to zero. A question-and-answer session at the early March 2009 press conference (of the ECB) is revealing:

Q: With the main refinancing rate at 1.5% do you think you are getting close to the limit? Last time you said you considered 0% rates inappropriate? Do you still think so?

Trichet: I confirm what I have already said. We see a number of drawbacks associated with a zero late level. [...] As regards

non-standard measures, there is no pre-commitment for any kind of non-standard measure. I exclude nothing, it would be the decision of the Governing Council and we are looking at it.

Q: You have just said you are studying the implementation of non-standard measures. Does that mean you are studying the process by which you might implement them or you are studying the need for them?

Trichet: We are discussing of course both the need and the process. And any decision would suppose that we see the need and that we agree on the process.

The reader can judge for him or herself what the ECB was up to, but none of this interchange would encourage confidence among investors in the monetary policymakers at a particularly dark hour in European financial history. Perhaps the ECB was at last refusing to follow the latest US monetary fashion (this time quantitative easing, previously quasi-inflation targeting). But did the officials in the Euro-tower realise the challenges that would lie ahead were the Federal Reserve to use its non-conventional policy tool as a weapon of undeclared currency war? It was too bad that the Frankfurt policymakers by their previous mistaken policies had left the euro-area in such a weakened economic condition. How much better it would have been if the ECB had forged its own and better-designed way right from the start of monetary union!

4

The Trial

It is time to ‘give the floor’ to what the leading officials in the project of European Monetary Union (EMU) have said and continue to say in its defence (or more aptly, in trumpeting its success). A ready-made brief on their behalf comes from Stephen Cecchetti and Kermit Schoenholtz (2008). These authors (the first is Economic Adviser and Head of the Monetary and Economics Department at the Bank for International Settlements, the second is professor at Stern School of Business, New York University) conducted a series of 17 extended interviews between June 2007 and February 2008 with a range of current and former high officials at the ECB, and with other policymakers and scholars who viewed the evolution of the ECB from privileged vantage points outside the institution.

The authors of the brief conclude:

We share the assessment of our interviewees that the ECB has enjoyed many more successes than disappointments. These successes reflect both the ECB’s design and implementation. Looking forward, we highlight the unique challenges posed by enlargement and, especially, by the euro area’s complex arrangements for guarding financial stability.

Plan of the trial

The plan in this chapter is to first, extract the main features of the positive case made in the Cecchetti–Schoenholtz brief, raising some doubts along the way. Second, we look critically at alternative direct testimonial evidence available from leading ECB officials, including in particular speeches and press conferences. Third, we seek to weigh up the evidence and consider in particular one key issue. How far, even

given the policies of monetary disequilibrium pursued by the Federal Reserve, could the ECB have steered its own monetary policy in a way so as to lessen the extent of the global credit bubble and in particular the savaging of the euro-area economy by wild temperature swings in credit and real estate markets?

Leading central bankers and ex-central bankers in Europe and the US continue to press their claim either explicitly or implicitly that monetary policy played little or virtually no role in the debacle of credit bubble and burst for which the overall economic costs are already so awesome. (In private conversation, there is some remarkable capacity for self-criticism below the top in both the Federal Reserve and Bundesbank. And within the Federal Reserve System such self-criticism has found its way into print in regional research output – see for example, Hetzel, 2009.)

Does that official claim of central bank innocence stand up to scrutiny? Or is this continuing official denial of responsibility in the economic debacle one aspect of a further troubling concern – that the central bankers have abused their independence?

This concern, particularly with reference to EMU where central bank independence is constitutionally rooted in accordance with the German *ordo-liberal* school's concept that institutions critical for the benign functioning of the market economy should be insulated from the turmoil of political democracy, if found to be justified, calls for remedies – the subject of our next chapter.

First entry in the defence of EMU – It survived!

Let's revert, however, to the first entry in the positive case (as summarized in the Cecchetti–Schoenholtz brief) for EMU.

EMU made it successfully past the starting line! Otmar Issing (one of those interviewed) stressed this particular point (in his comments to Cecchetti–Schoenholtz):

There was a clear view from a number of outside observers that we would fail and that it would be a disaster in any respect.

The authors (of the report) continue with this same point:

As late as 1997 there was widespread scepticism about whether EMU would begin on schedule as a broad union and in some quarters whether it would happen at all. Yet, here we are a full decade later and there are 15 countries where the euro is legal tender. The

21 members of the Governing Council of the ECP make monetary policy for a region of 320 million people with a GDP of roughly €9 trillion. And it is hard to find major fault with what they have done over the past decade.

Evidently the authors of the brief were not thinking of the indictments and the commentary found in the first three chapters of this book! But let us look at the narrow claim that EMU had a successful birth.

Was a successful birth an accomplishment?

Without doubt a lot of able organizers took part in the process of launching the euro. There was no equivalent to a monetary blackout due to a mega-technical hitch. That is undoubtedly a cause for pride or at least a sense of relief among those making or fitting the nuts and bolts. The monetary version of the Titanic did not fall apart on its first voyage. The vans arrived on time with the new banknotes, there was no robbery, and the distribution occurred ahead of schedule! (The authors of the brief relate an interviewee's comment that 'this enormous logistical process went more quickly and smoothly than many had expected. Most of the legacy currency was replaced within a matter of weeks, rather than months'.) The clearing system for inter-bank transfers worked efficiently. The ECB could peg an overnight rate immediately. Its operational framework for implementing monetary policy (strict control of a very short-term money market rate) did not encounter any serious technical glitch.

This pat on the back for the monetary union engineering corps and its supervisors is to lose sight of the big picture. The absence of glitch or hitch in no way demonstrates that creation of the new monetary system was an act of progress. Such demonstration would require matching, as a first step, the record to date of monetary union with the heterogeneous intentions of its advocates. Then there would be an assessment of how it performed relative to the alternatives – whether contemporary regimes in other parts of the world, or counter-factual regimes in Europe – and in absolute terms.

Yes, despite some reservations most of all in Frankfurt, the train to EMU made it all the way through to a broad union (including in particular Spain and Italy) rather than stopping at the earlier destination of narrow monetary union including France, Germany, Holland, Belgium and Luxembourg. But as subsequent events turned out, including especially the extent of the credit and real estate bubble in Spain, would it not have been better if the train had stopped one station short of that final destination?

Defence claim no. 2 – Euro as good a store of value as its predecessors

A second claim of success comes from a comment by Jean-Claude Trichet, quoted by the authors of the report:

The main challenge we saw was to transfer to the new currency what had been promised: namely, that it would be as confidence inspiring, as credible, and as good a store of value as the previous national currencies had been.

The authors of the brief (Cecchetti et al.) buttress M. Trichet's claim:

The policy tests facing the ECB at its inception were numerous and daunting. It is evident that the ECB faced an extraordinary challenge as it sought to inherit from the start the credibility of its most successful predecessor central banks. There also were great risks, as there would be no honeymoon or grace period. Any significant rise of inflation expectations or of inflation risk premiums in the run-up to EMU might have branded policy a failure even before the ECB began to exercise monetary control. [...] There was concern whether the powerful NCB Governors – and their large staffs – would overwhelm the ECB, and potentially undermine the euro-area focus of the new central bank. [...] And the ECB was to begin operations in an environment of overt scepticism. [...] The broad membership of EMU, which included several formerly high-inflation countries, raised doubts about credibility.

The authors quote Alexandre Lamfalussy (a key figure in the creation of the euro, first as President of the BIS during the period when the Delors Committee was meeting regularly there to draw up its blueprint for monetary union and later as the head of the European Monetary Institute, the predecessor of the ECB) as saying:

I feared that they would have technical problems of all kinds. Ultimately I was wrong. The implementation went extraordinarily smoothly.

They also relate a comment from Otmar Issing:

What really shocked me (when I arrived) was the lack of any reasonable information (data, etc). We were preparing monetary policy for totally uncharted waters.

A problem with the claims of survival and no technical hitch

There is a problem with all of these self-congratulations just recited. The claim that the ECB or EMU was successful because the new money is as good as the old and because really bad scenarios (of considerable likelihood) were avoided under which most citizens in the euro-area would have been much worse off than under the old monetary regime borders on the impudent! Indeed if there was really such a large probability of those bad scenarios becoming reality (and the best that could be said about the new money is that it is as good as the old) then why were those advocating the project of EMU doing so in such unequivocal terms?

Did M. Lamfalussy for example act in accordance with the highest democratic principles in deciding not to go public with his forebodings of chaos? It was not a time of war when secrecy concerning all disaster scenarios might be justified.

Was there a flaw in the European democratic processes that the leading officials and ex-officials were not quizzed under oath about the risks which were being run? If the democratic processes had been alive, and the truth about risks revealed (including the key fact the launch may well turn into a glitch-laden disaster), would the citizens-to-be of the euro-area have continued to support the train going forward towards monetary union, even where they had originally voted for the Treaty of Maastricht (referendums were held in only a few countries)?

The inclusion of the previous high-inflation countries in EMU (Spain, Italy, Portugal, Greece, Ireland) did prove an initial success in terms of citizens in those countries having a domestic medium-of-exchange which was superior to the old in some respects (in particular as regards the extent of long-run inflation danger). Citizens of all member countries (with the possible exception of Germany) now enjoyed a wider range of highly liquid instruments to choose from without incurring exchange risk or exchange transaction costs. In any overall appraisal, however, we should consider the costs of that success.

A prominent cost was the economic damage wrought by the bubbles and subsequent bursts in credit and real estate markets (the bubbles, bursts and damage being spread unevenly across the new monetary union) in so far as such turbulence could indeed be traced to flaws in monetary union and serious mistakes in ECB policymaking.

Claim no. 3 – ECB developed a state-of-the-art forecasting apparatus

The authors do not consider the cost of monetary disequilibrium attributable to EMU, most ostensibly because they wrote their report before the most devastating phase of the bubble-bursting process. They continue instead with their claims of technical prowess, focussing next on the forecasting tools which the ECB assembled from a zero starting point:

The ECB has developed a forecasting apparatus that is at the state-of-the-art in the central banking world – and as previously mentioned – routinely publishes its staff projections. In addition the broad research program of the ECB has reached a status that puts it at the frontier of applied policy analysis alongside the best research efforts of other leading central banks and academic institutions.

It was too bad that with all that it had at its command, the ECB made in its first decade three big monetary errors (first, easing in late-98/early-99 because price level rises during a period of economic slack were running at ‘only 1% p.a.’, ushering in a sharp decline of the euro and significant monetary inflation; second, fuelling a credit and asset bubble through 2003–06 out of concern that the newly refined inflation ‘target’ might be undershot; and third, pushing risk-free rates up to almost 5% half a year into the global recession – including Europe – which started in winter 2007/8 out of anxiety about the ‘inflationary potential’ of oil price rises and contributing thereby to the intensity of the economic downturn and the extent of financial system distress).

Claim 4: ECB has been a good European, ignoring national interests

The authors of the brief go on to reveal that in their discussions (with present and former senior ‘euro-officials’):

There was unanimity amongst ECB insiders that country-specific factors were irrelevant in the policy rate-setting process even at the start of EMU. Having feared a greater role for national interests, some interviewees reported reacting with surprise and satisfaction at that time. Others suggested that the long process of preparing for EMU – including joint preparatory work at the EMI – had fostered a broad consensus among euro-area central bankers about the objectives and

implementation of monetary policy that underpinned the ECB's behaviour.

We have all heard the quote from Shakespeare's *Hamlet*: 'the lady doth protest too much!'.

Of course, the policymakers were all good Europeans! Yet how come at critical junctures Germany's situation seemed to get a dominating weight in policymaking (more than just due to that country accounting for around 30% of euro-area GDP and thereby influencing significantly overall euro-area aggregates)?

In winter 1998/9, the fact that the German economy was one of the most affected by the passing slowdown in world trade following the autumn-1998 mini-financial crisis (related to Russia's default, the troubles of LTCM, and continuing retrenchment in East Asia in the aftermath of the debt crisis which erupted there in 1997) had at least some relation to the Bundesbank taking the lead in the policy easing at that time (see p. 49).

It is also plausible that the unfavourable relative cost and price level at which Germany became locked into EMU (with so many of the other member currencies having obtained big real devaluations vis-à-vis the mark in the years before) and the business malaise which accompanied that situation played a role in making German policymakers on the ECB Board over-complacent about the big decline of the euro in 1999–2000.

And the later fact that Germany was not experiencing any temperature rise in its real estate and credit markets and its price level was flat (or even slightly falling) surely contributed towards the middle one of the three large ECB errors (2003–05), when overall monetary conditions remained excessively easy (see p. 57).

The export boom in Germany which continued into the first quarter of 2008, together with a doomsday concern of German monetary policymakers about the power of unions (IG Metall in particular) to push up wages in response to oil-price hikes, help to explain the most recent and arguably biggest error (2008 – see p. 114).

Claim 5 – EMU achieved price stability and economic stability!

The Cecchetti–Schoenholtz brief was published in November 2008 just around the tenth anniversary time for EMU and so it is no surprise that some of those interviewed were in reflective mood. Anniversaries

are a time for looking back and forward. Bundesbank President Weber expressed the view (to the authors) that:

I think the success is the high degree to which price stability has been achieved [...]. Long-term inflation expectations have been stable and low and anchored at the level defined as price stability.

Hans Tietmeyer, founder ECB policy-board member in 1998 and Bundesbank President (1993–9) states (to the authors of the brief) that

From the beginning, the ECB was seen inside and outside the euro-area as independent and credible.

The then (in early 2008) New York Federal Reserve President Timothy Geithner (subsequently Treasury Secretary under President Obama) told the authors:

Since the ECB has been setting monetary policy, it has not produced a sustained period of sub-par growth; the euro-area has not experienced greater volatility of economic growth; and there has certainly not been any erosion of inflation performance. All this suggests that the ECB is performing well.

A problem with the claim of stability

Um! The Bank of France and Bundesbank had both achieved inflation of 1% p.a. or less before the start of EMU. What did the creation of EMU and the ECB offer French and German citizens that they did not have already in terms of stability?

In fact as highlighted in earlier chapters the ECB was most probably more vulnerable than would have been a still sovereign Bundesbank to the monetary preachers warning that 'inflation might fall too low'. 'Vulnerable' here includes lack of resistance to a false IMF-alarm on German and indeed global deflation risks. And it is hard to believe that the German government would have been ever been an ally of the IMF in swaying the 'Old' Bundesbank (defined to exclude the 1990s, see below) against its better judgement. (By contrast in spring 2003, Berlin, Frankfurt – including the 'new Bundesbank', and Washington had all been in step about the phoney danger of deflation, see p. 63.)

And at no point was the Bundesbank an inflation-targeter or quasi-inflation targeter, as the ECB became, with its consequences of deep monetary disequilibrium. As for the record, the Bundesbank over more than a decade (1975–87) pursued a target for the monetary base (central bank money stock), putting much less emphasis than the ECB on rigid pegging of the overnight money market rates (see Leaman, 2001). That was consistent with a set of principles which emphasized monetary stability of which a stable price level over the very long run would be a consequence but with no hang-up about delivering stability of a consumer price index over a two-year period. The erosion of principles at the Bundesbank came largely in the run-up to EMU (and even previously during the consummation of German Monetary Union) when the leadership of that institution became increasingly subject to the overriding European (and German union) objectives of Chancellor Kohl, buttressed by his choice of a monetary chief likely to be compliant with those.

Counter-factual peril – The old Bundesbank would have done better!

It is always dangerous to undertake counter-factual history-making. Even so, it is hard to imagine that without monetary union the member countries either singly or together would have gone down the road of breathing inflation higher. If the monetary order had remained unchanged – with the Bundesbank enjoying hegemony – there might have been some one-off exchange realignments in the late 1990s so that the mark would have fallen in value vis-à-vis some of its main partners. The German price level would not have been under any downward pressure in that event. In any case there is no reason to believe that a staunchly independent and self-confident Bundesbank, not weakened by a train journey to GMU (German Monetary Union) and then EMU, would have been inclined to follow currently popular monetary practice as set by the Bernanke/Greenspan Federal Reserve and praised by the IMF.

The ECB, however, as a new institution, had no such self-assurance or indeed inclination to defy fashion as set by the Federal Reserve. There was no ‘old guard’ within the new central bank, steeped in alternative monetary doctrine, and ready to do battle with the latest version of monetary populism. The Schroeder Government was siding with Washington on deflation risk (and the need to counter it). ECB officials were enjoying their time in the sun as issuers of the new global money and as partakers in the brainstorming of the annual Federal Reserve research symposium (at Kansas) or like events where the ten Bernanke

principles of inflation-targeting (a follow on from the Blinder doctrine whereby the central bank should ignore temperature upswings in asset and credit markets, concentrating instead on goods and services price changes) made up the popular gospel (amid some dissent, most notably from the BIS chief economist, William White). The old Bundesbankers, by contrast, may have decided to just stay at home! (See Brown, 2008, for a statement of the ten Bernanke principles.)

The Bundesbank at this time (2003) was at low ebb in terms of leadership, direction and exercise of influence. The current president, Ernst Welteke (the successor in 1999 to Hans Tietmeyer, the Bundesbank president who had never raised interest rates and had remained loyal to Chancellor Kohl throughout the five years running up to the launch of EMU, see Marsh, 2009) had been a blatantly political appointment of Chancellor Schroeder. Welteke's rise to the top had run from head of the SPD faction in the Hesse Federal parliament, to regional board member of the Bundesbank (appointed there by Hesse Prime Minister Eichel), to head of the Bundesbank (appointed there by Chancellor Schroeder on the advice of his finance minister, Hans Eichel).

In a counter-factual world in 2003 with a sovereign DM and a 'non-corrupted' Bundesbank still calling the monetary shots for Europe, it is hard to believe that any of the other central banks on their own would have followed the lead of the IMF or Bernanke/Greenspan Fed in deciding to breathe inflation back into their individual economies. If deflation were to in fact materialize in any of these countries outside Germany, a quick effective answer could be a downward adjustment of their currency against the Deutsche mark. There would be no need to take pre-emptive action now to bolster the inflation rate!

So what did Messrs Weber and Tietmeyer actually believe that the ECB had brought to the party? The authors of the brief do not tell us! As regards Tim Geithner's comment, presumably he would not have made it six months later into the European Slump of winter 2008–9!

It is also dubious whether Professor John Taylor would have made his flattering comment quoted in the brief if interviewed a few months later:

The biggest success of EMU to date has been to set it up from scratch, to deal with the inherent difficulties of communication and different traditions, and to have a policy apparatus which is basically working well in terms of interest rate decisions. That has to be viewed as a major achievement. It's the first time anything like that has been done.

Surely Professor Taylor as assistant secretary of the Treasury in charge of international affairs under the first Bush Administration (2001–5) was aware of the ECB's decision in spring 2003 to follow its own version of breathing inflation back into the economy (just as the Bernanke/Greenspan Federal Reserve was doing at the time)? And indeed in his critique published in 2009 of the Federal Reserve's role in the bubble-and-burst he makes explicit reference to the monetary errors in the euro-area at the same time. (These are cast, however, simplistically in terms of whether interest rates were above or below the level specified by the 'Taylor rule' as calculated for the individual member countries, most notably those 'enjoying' warm temperatures in their credit and real estate markets, rather than in terms of faulty monetary principles.)

It is far less clear whether Paul Volcker (not interviewed by the authors of the brief) was so familiar with euro-history when he praised EMU in late 2008 (Volcker, 2008). He told the assembled dignitaries at a conference held in honour of Helmut Schmidt (the German chancellor under which the train to EMU started with the launch in 1978 of the European Monetary System) that

Today, on the 30th anniversary of the EMS, the world economy faces a new and severe challenge reflected in the volatility of the US dollar and extraordinary pressure on the international financial system. In the midst of the great uncertainties, there is no doubt in my mind that Europe and therefore the world is better able to cope with that crisis by virtue of having achieved a common European currency.

Perhaps this was the type of glib praise which Paul Volcker might have re-considered later if in full possession of present and subsequent facts just as Milton Friedman might have revised subsequently his praise in 2006 (at age 94!) of Alan Greenspan (congratulating him as the Federal Reserve president whose record had refuted his long-run view of that institution as a perennial source of monetary instability).

Claim 6: A bogus comparison of inflation before and after EMU start

The authors of the brief (Cecchetti and Schoenholz) completed their work before the full financial panic developed which formed the backdrop to Paul Volcker's favourable comments about EMU. They quote the fact that over the period from 2001 (assuming that ECB policy typically affects prices with a lag of about two years) until the latest

data-point available at the time of writing (early 2008), HICP inflation averaged 2.3%. For comparison, in the pre-EMU period of 1991–8, headline inflation averaged 2.6% (but why do they exclude 1999, a year of very low inflation, from the pre-EMU performance measurement, on the same two year principal?):

Even in Germany, which boasts the pre-eminent pre-EMU inflation track record, inflation has been lower and far more stable in EMU: under the Bundesbank, German inflation averaged 3.4% from 1965 to 1998 (with a standard deviation of 3.4%), while German inflation since 2001 has averaged 1.8% (with a standard deviation of only 0.6%).

Thank you for nothing!

What is the relevance of citing inflation in Germany during the period of the Great Global Inflation of the late 1960s and 1970s, from which Germany made an early exit but only after the final crash of the Bretton Woods system and its brief Smithsonian sequel (in March 1973) allowed the Bundesbank to follow an independent monetary policy?

As to the stability of the inflation rate, that should be a source of suspicion (like the stable returns provided by the Ponzi-schemer!). Central banks which find they are piloting under ‘ideal weather conditions’ of a stable price level for goods and services (or a stable low rate of price level rise) without interruptions should be on raised alert about inducing severe monetary disequilibrium into the system. The avoidance of throwing a monkey wrench of money into the machinery of the economy – by not creating gaps between neutral and market rates – requires some instability in the price level or in the rate of price level change over the short- and medium-run!

Claim 7: ECB did well in the context of ‘trying circumstances’

The authors of the report go further in their dubious praise of the ECB’s ‘inflation record’:

In light of the trying economic circumstances of the past decade, the achievement of low and stable inflation in the euro area most likely reflects good monetary policy, not good fortune. Since its inception, the euro-area experienced large price shocks from developments in energy, commodity and currency markets – not unlike in the Great Inflation episode.

Well, yes, inflation over a very long period – high or low – is determined to a large extent by the monetary regime and how monetary policy is conducted under that regime. But where were the ‘trying circumstances’? On two big occasions (1999 and 2003) the ECB deliberately followed a policy of breathing inflation higher. The catalytic role of large price shocks (which may well subsequently reverse), better described as real resource supply shocks, in setting off a long-run process of monetary inflation or deflation is highly questionable. And in the short-run, the various types of real shocks (including sudden resource shortage, or big improvement in terms of trade) affecting an important price (such as energy) should be reflected in overall price level swings if indeed severe monetary disequilibrium is to be avoided.

The Austrian School pointed out long ago that central bank policy action to combat price level swings due to real changes in the economy (for example, terms of trade swings, an acceleration or deceleration of the productivity growth trend, real resource shock or cyclical fluctuations) is a recipe for monetary disequilibrium of which the chief symptom might well be asset and credit markets overheating or cooling down excessively (see p. 9).

Take the ideal situation where money rates (averaging out a lot of white noise) remain usually close to neutral or natural level – but with some substantial gap (from neutral or natural level) appearing during periods of economic disequilibrium (such as painful recession or unsustainable boom) with the size (of the gap) set by the efficient operation of the invisible hands (which recognize the pace of monetary base expansion as set to anchor the path of the price level over the very long run). Then there would be significant upward and downward shifts in the rate of price level change (positive or negative) over the short- and medium-run, but no serious and prolonged monetary inflation or deflation. (Note that if very long run expectations of the price level are anchored at an average rate of increase of around 1% p.a. and that is indeed the aim as specified by the central bank, then that outcome is not technically ‘monetary inflation’ in the sense of stemming from monetary disequilibrium – see p. 58.)

Claim 8: EMU promotes regional and financial efficiency

The authors of the brief make no mention of Austrian School concepts (which descend from the monetary analysis of J. S. Mill). It is not surprising therefore that they make no connection between the credit bubble bursting process already evident in Europe from summer 2007 and earlier mistakes in euro-monetary policy. Nor do the authors relate

the dynamics of the bubble to euphoria (about profits in the financial sector) bred by the euro's creation (and all the talk about the benefits of financial integration). Instead they comment:

By securing price stability, ECB policy contributed indirectly to many other advances in euro-area welfare.

One example is the progress in capital markets and the financial system. Government bond markets appear to have been largely integrated at a very early stage in EMU. The rapid expansion of markets for corporate bonds and for many derivative instruments over the past decade partly reflected the stable euro-area economic environment.

The breadth and depth of these markets facilitate the efficient allocation of savings in the region. The gradual evolution toward banking integration also contributes to regional efficiency.

It is not clear what regional efficiency is being referred to here – surely not the facilitation of lending from the savings surplus countries in Europe (principally Germany) towards the countries 'enjoying' bubbles in credit and real estate market (big examples include Spain and the UK). This transfer assumed such massive proportions due to a fundamental lack of recognition (whether by the institutions involved or their shareholders) of the credit risks involved, most critically in the inter-bank markets (see p. 28).

Claim 9: ECB deserves praise for its response to August 2007 quake!

The authors of the brief move on to discuss the issue of the ECB's role in financial stability and regulation and generally absolve it of responsibility so far. Indeed they even shower some praise on the ECB:

In the area of liquidity provision as a lender of last resort, recent experience has highlighted important ECB successes. In August 2007, the ECB boosted liquidity supply early and aggressively to counter sharp increases in funding rates as banks turned cautious and alternative private sources of funding shut down. The ECB's Bagehot-style marginal lending facility (MLF, designed to cap overnight rates in normal times) can be viewed as an automatic mechanism for calming liquidity fears in a crisis. [...] It seems fair to conclude that the ECB's toolkit for liquidity supply has been crisis-tested and satisfies current 'best practice' standards among central banks.

Well, that is light-years away from the conclusion reached in our last chapter that the ECB's application of the bogus separation principle, meaning the injection of massive amounts of sterilized liquidity at subsidized rates while fostering simultaneously a rise in risk-free rates (rather than allowing a sharp fall), was utterly counter-productive, both from the viewpoint of monetary stability and financial system stabilization.

The alternative course would have been to clear the way for an immediate fall of risk-free rate to zero, which would have made possible a sharp widening of margins on profitable loan business (where margins are measured relative to the rate banks able to offer well-equity cushioned deposits would have paid on these) and inducing thereby an early re-capitalization of still solvent banks (see p. 90). In the same spirit, the involvement of the ECB in providing US dollar funding to European banks who found the supply of repo-financing largely from US money market funds suddenly drying up should have been on an emergency basis only.

These (European) banks should have been forced at the earliest date feasible to replace these sources from a non-bubble source. Money market funds were a bubble source because they turned on investors in these funds believing irrationally that they could never fall below \$1 in the dollar, and on the fund managers themselves mis-appraising the risk of repo-business with European banks – seeing these as risk-free when in aggregate they could not be repaid on demand (see p. 93). Forcing viable banks back into the markets beyond an immediate emergency period would have been close to the Bagehot principle. It was not the course which the ECB actually followed.

Claim 10: Passing the buck

The main point which could be made in the ECB's defence against the charge that it promoted financial instability is that it lost the battle (due to no fault of its own) early in the decade for any strengthening of its supervisory authority.

Under the Eichel–Brown initiative of July 2002, EU governments and finance ministers, given their greater democratic accountability, were ultimately to be responsible for 'policing' financial institutions and financial markets. The Bundesbank in particular and also the ECB lost out at that time in the political competition as to who was to be responsible for the supposedly growing pan-European regulatory system. None of this means that the ECB or Bundesbank would have done a better job than what actually happened, but at least they have an excuse when it comes to the 'what went wrong with the regulators' discussion!

And on the subject of excuses, the authors have a few of these up their sleeves! They quote for example Otmar Issing:

What is unique for the ECB is the complex environment. [...] The ECB still is a young institution, and the euro area is very complex, not least due to the language and communication problem.

Few would argue with that assertion. But were these problems sufficiently highlighted by the advocates of EMU before its creation and have they shown us the offsetting benefits which have accrued?

The authors also raise the hypothesis (which could in part exonerate the ECB but not EMU) that the euro-area might be a sub-optimal currency area, complicating thereby the conducting of a one-fit-all monetary policy:

Risks remain because potential growth is low, labour markets are relatively rigid, and there is little scope for fiscal burden sharing. Moreover as Vice-president Papademos describes, some countries – including Greece, Italy and Portugal – exhibit divergent trends in the growth of unit labour costs that appear to diminish their competitiveness. [...] The ECB cannot alter its policy rate for the purpose of limiting economic divergence or to boost growth sustainably above potential.

The possibility – or indeed likelihood – that the euro-area is not an optimal currency area may indeed alleviate the blame for sub-optimal outcomes which should be borne by the ECB policymakers, but not by the creators of EMU. And there had been no shortage of warnings ahead of EMU that it might not be an optimal currency area. The authors do not pursue any line of defence against that charge (of EMU being a non-optimal currency area).

Claim 11: Pride and satisfaction in hard effort

The brief concludes with a summary which is highly favourable towards the EMU and ECB:

Our ECB interviewees rightly express pride and satisfaction in their accomplishment. Literally thousands of people worked diligently for years to make monetary union not only a reality, but a success. It is difficult to find major fault with the operational framework or the monetary policy decisions of the first decade of EMU.

[...] The Maastricht Treaty ventured where no vessel had gone before, but it has worked well. That success presumably owes to the design and the crew, not to the lack of turbulence.

The readers of the first three chapters of this book know already the main planks of the counter-case to this glowing summary of the defence arguments.

An additional element (in the counter-case) has to be the sheer smugness of the leading officials in EMU, and their blindness (at least in anything public) to the charges against them. That lack of self-criticism – or of real (as against staged) exposure to vibrant and powerful criticism from outside (some of which might filter emanate from a well-function liberal political system able to seek retribution for mistakes and meaningful remedies, including the occasional ‘killing of the admiral to encourage the others’) – has been a salient feature of the first decade of EMU, especially as the flaws appeared crevasse-deep once the credit bubble burst.

ECB officials are not unique in smugness or in making serious errors of judgement (just take a look at the history of the Federal Reserve!). Much the same criticism can be justifiably levelled at other major central banks as regards the emergence of the financial crisis and their subsequent reactions. But as a new union with lofty ideals, could more not have been expected from Europe? There lies a main disappointment.

Towards buttressing the negative case against EMU as outlined in previous chapters and refuting the positive case put together in the Cecchetti brief, we now turn to direct evidence of what the leading actors had to say. Let us start with President Jean-Claude Trichet.

Introduction to testimony of Jean-Claude Trichet

In an anniversary (tenth) interview with *Börsen Zeitung* on 16 December 2008, President Trichet had the following favourable comments to make:

As a symbol of European unity, the euro is already extremely successful. Since the outbreak of the financial crisis, the euro and the ECB have become, even more visibly, a central anchor for confidence. In this sense, I believe the emotional relationship of citizens to the euro has become stronger.

[...] For me, the greatest success of the euro is that after having promised the citizens that the euro would be equal in terms of

stability and the maintenance of value to the previously most solid currencies we have fulfilled this promise effectively.

Unfortunately the interviewer does not pick up any of the broad indictments against the ECB and EMU made here or elsewhere but does pluck up courage to ask:

Q: Knowing what we do now, was the interest rate increase in July this year (2008) a mistake? And why is it generally so difficult for central bankers to admit to mistakes?

A: Long-term inflation expectations threatened to become unanchored. In addition, wage and salary demands in some euro area countries caused us serious concern that there could be broad-based second-round effects. The interest rate decision enabled us to bring medium to long-term inflation expectations back under control in line with our definition of price stability. And this regained control of expectations was, by the way, the precondition which allowed us to cut rates strongly from October when the crisis worsened. Do not forget: our definition of price stability in the medium term is 'less than, but close to, 2%'. The interest rate increase in July must be related to the 'less than 2%' part. Our recent decrease of rates after the intensification of the crisis in September must be related to 'close to 2%'.

We can realize immediately that M. Trichet gave no answer to the second part of the question and the interviewer did not follow it up!

Let us consider the answer to the first part of the question, which was in any case tame (why ask about an almost meaningless 25 bp hike in rates when the big question should have been why the risk-free rate was then being pegged at 4.5% or higher, rather than zero!).

The straight reply (albeit to the tame question) would have been – yes, if we the ECB had made the correct diagnoses in spring and summer 2008 that the oil market was in a bubble and the euro-area already in recession (from January) with a significant risk ahead of financial panic, there could have been no question of a rate hike in July. And our concerns about wage-pressures were misplaced, still influenced by events in a bygone age when labour markets had been extremely tight and anchor to low inflation expectations set loose well before any oil shock.

Instead M. Trichet provides justifications for the severe monetary tightness of spring and summer 2008 which could not convince even

the most credulous! Who, other than a professor of philology, could really be interested in the exposition about the difference between less than 2% and close to 2%? This is inflation-targeting gone mad, in the worst senses possible as ever imagined by Milton Friedman or the Austrian School! And yet ECB officials continued to repeat the mantra about a monetary pillar to its operating framework which distinguished the ECB from the inflation-targeting central banks.

The most outrageous claim of M. Trichet

Could anyone really believe a subsequent claim made by M. Trichet in Strasbourg on 13 January (2009) at a ceremony of the European Parliament to mark the tenth anniversary of the euro?

M. Trichet:

In recent months we have seen another benefit of the euro: the financial crisis is demonstrating that in turbulent financial waters it is better to be on a large, solid and steady ship rather than on a small vessel.

Would Europe have been able to act as swiftly, decisively and coherently if we did not have the single currency uniting us?

Would we have been able to protect many separate national currencies from the fallout of the financial crisis?

I believe that we can be proud of the reaction of the European authorities, parliaments, government and central banks, Together we have shown that Europe is capable of taking decisions, even in the most difficult circumstances!

It is difficult, in fact impossible, to make sense of this claim.

What was solid about the euro-ship as its members plunged into deep recession and its financial system froze in the aftermath of the Lehman bankruptcy shock? And without the shackles of EMU, some countries could have bailed out into smaller boats (cutting their interest rates and devaluing).

Instead they were all being driven into the storm centre by ECB pilots among whom the most powerful included a president renowned for inflexible toughness in France's long run-in to EMU and Bundesbankers (one ex-Bundesbanker) still convinced in early 2008 that Germany was in boom (a conviction based on the reality that indeed Germany's export bonanza was lagging the world business cycle – see p. 105). Even in summer 2008, these pilots were worried stiff about wage-led inflation.

As a matter of fact, a small non-EU non-euro European country was faring better (in terms of avoiding severity of the downturn) than any euro-area member – Switzerland (whose central bank had to a moderate extent eased policy while the ECB and BoE were still allowing monetary conditions to tighten in 2008H1 and then in late 2008 had moved to a zero rate policy).

And to what swift decisive and coherent action could M. Trichet possibly be referring? The only candidate was the action authorized from (but probably not initiated from – see p. 86) his holiday home in early August 2007 to lend unlimited amounts (collateralized) in the midst of the ‘seizing up’ of inter-bank markets. It has been argued here (see p. 92) that that was totally the wrong decision. (And a similar point has been made in the US context by Taylor, 2009.)

As for the national currencies to which the ECB would have been unable to offer protection, M. Trichet is most probably referring here to the counter-factual world of say Italy and Spain having their own currencies. If these had still existed and they had dropped sharply as the economic and financial climate worsened especially with respect to their own circumstances that (devaluation) would have given a fillip to their economic recovery prospects compared to the alternative prospect which now loomed of Brüning-type policy (cutting back spending within a recession so as to maintain solvency of the state).

M. Trichet’s warnings and the warning which he ignored

Indeed in reviewing other evidence in the form of President Trichet’s spoken comments, a ‘patting on the back’ or self-congratulatory aspect is often there. He told the Fifth ECB Central Banking Conference in mid-November 2008 that he was one of the policymakers to realize early that credit markets had warmed to a dangerous level. He dated his own warnings to 2006 when he was chairman of the Global Economy Meetings of Central Bank Governors:

We knew that a storm was brewing but, admittedly, we did not know exactly where. Neither did we know what would trigger it, or when it would come.

This is an amazing statement.

If M. Trichet and his other central bank colleagues were so aware of the looming dangers why were there no contingency plans to fit different

possible scenarios? And why did the ECB make no effort to identify practices within the European banking field which might be the source of danger (for example, the off-balance sheet vehicles used for getting round the BIS capital requirements, lack of prudence in the inter-bank markets as regards credit exposure, European banks' dependence on overnight funding in the dollar repo markets where the source was primarily US money market funds etc.)? Once identified, these practices should have been the subject of discussions, as initiated by the ECB within the constitutional remit of the Maastricht Treaty, with the relevant authorities in Brussels or with member governments.

Should there not have been more urgent consideration given to a more assertive monetary policy, putting a higher probability on evidence of rapid money and credit growth being symptomatic of serious monetary disequilibrium and less fixation on inflation-targeting (by any other name)?

M. Trichet could not deny that he had been warned early on about the possible consequences of the US residential real estate market bubble. Back in November 2005 at his regular monthly press conference a reporter had posed the following question:

Q: May I put a question in French? I am from Canada. In the communiqué you said that you were looking at the situation and there's a lot of uncertainty at the moment. In this case, I would like to know whether you are worried about the real estate bubble in the US and whether you think that the situation could get even worse and if it were to get worse would you change your position?

Trichet: On this precise point I would only say that I signed the last statement of the G7. We had a consensus [...] that each continent and each major industrialised economy had its own homework to do. As far as Europe is concerned for us the homework is structural reforms. Structural reforms which we all think are absolutely essential. Looking at the US, it is quite clear that their main problem is the fact that savings in the US economy are far too low. So we agree as far as the diagnoses are concerned and we agree that these defects have to be corrected. We also agree that we have to correct them in the most resolute way possible. That is all what I would like to say on that point, but it is quite clear that there are defects that have to be rectified in all the major international economies.

Note that M. Trichet does not answer the question about real estate market bubble at all!

What he does provide is the well-trodden mantras about each country doing its homework, without any mention of the serious monetary errors which were in fact occurring in both Europe and the US and for which central banks were responsible (but they are not responsible for savings behaviour and structural reform!).

At the time of this question the ECB had just made its first tiny rate rise from the absurdly low level of 2%. The official rate (and related market rates) had been stuck since 2003 (see p. 76) in spite of accumulating evidence of rising temperature in European credit and real estate markets and other symptoms of monetary disequilibrium (see Chapter 3). And why was M. Trichet so sure that 'low savings' were the real big problem for the US economy rather just one symptom of a growing and huge monetary disequilibrium created by the Bernanke/Greenspan strategy of breathing inflation back in?

In fact in his pride about having spotted credit market heating at an early stage, M. Trichet told a specially convened meeting of the EU's economic and monetary commission on 11 September 2007 (where he was to explain the massive ECB lending operations undertaken in August 2007) that already in the first issue of the *ECB Financial Stability Review*, published in December 2004:

We had said that a high level of risk appetite was encouraging a search for yield amongst investors across a wide range of markets and asset classes.

The rest of that particular address (of 11 September 2007) was the customary pat on the back for action taken – action which we have argued here was highly damaging both in terms of economic and financial outcome (see p. 100). Suffice it to say that in retrospect at least M. Trichet made the following self-damning comment (with respect to ECB policymaking):

We have considered that our monetary policy stance is still on the accommodative side.

That was just four months before the onset (January 2008) of euro-area recession, in the wake of a giant quake in the credit markets amid all the signs of a credit bubble now bursting (except for the ECB's data on bank lending which continued to grow for some months as bank

intermediation grew in partial offset to rapid shrinkage of shadow banking system) and with money market rates up at 5%!

M. Trichet defends the indefensible separation principle

More of similar misdiagnosis can be found in President Trichet's press conference of September 2007. In particular Trichet introduced to his listeners (or viewers) the erroneous separation principle – whereby the ECB had one set of policies for dealing with illiquidity in the money market and another for price level stability:

Let us not confuse the appropriate functioning of the money market and the monetary policy stance. [...] It is very important to make a clear separation between these two factors. [...] In what is observed today, there are elements of correction that were diagnosed before the correction took place (I could find first pages of financial papers in which I had expressed that opinion) and, as is very often the case in such circumstances there are hectic episodes in this correction, there is a level of volatility that can be quite high and there is also a large deal of overshooting. Again, we have to play a very important role in the central bank constituency, in both having the preoccupation of the medium and long-term solid anchoring of inflation expectations, and having a good understanding of what the pertinent trends are in the medium and long-term, of the global economy and of each particular economy; and on the other hand having to care for the appropriate functioning of the money market.

A journalist did in fact take up the separation principle, albeit only in a fleeting way (this is no criticism of the journalist, given the time and other constraints):

Q: The ECB makes a clear-cut distinction between liquidity help for the money market and monetary policy in the medium term. Some economists argue that it is not really possible to make this distinction and that you have to use monetary policy, let's say the interest rate instrument, to rebuild confidence in the financial markets. What would you say to these people? What is your argument on that?

A: As I said, we have our responsibilities. If we were to tell the market that the short-term considerations are now such that we are hampering our medium-term responsibility, then we would not improve the situation, but make it worse. The dis-anchoring of

inflation expectations would probably be the worst thing that we could do in the present circumstances.

There were two key issues not confronted by M. Trichet (or evidently by his fellow policymakers).

First, the bursting of the credit bubble had surely gone along with a substantial lowering of level of the risk-free interest rate in the euro-area which was consistent with overall equilibrium (even though it was possible that simultaneously the equilibrium cost of risky capital would have risen and it was a matter of debate how far the average interest rate across all risk-categories had fallen).

Second, the choice of the overnight money market and one interest rate there as the appropriate operating target of monetary policy was no longer appropriate. The heterogeneity of credit-risks between banks even with respect to overnight borrowing meant that rates there were now summarized by a fan (if not artificially restricted) rather than by one rate applicable to all.

M. Trichet on the startling misdiagnosis of September 2007

In this September 2007 press conference, M. Trichet assured his audience that sharp US slowdown (or recession) would not have big impact on the euro-area. In his initial briefing he stated that:

Global economic activity is expected to remain robust, as the likely slowdown in the US is expected to be largely offset by the continued strong growth in emerging markets. This will continue to provide support to euro-area exports and investment. In addition, consumption growth in the euro-area should strengthen further over time, in line with developments in real disposable income, as employment conditions improve further.

It seemed like an occupational hazard for the ECB to expect on the eve of recession (whether in late 2000/early 2001 or late 2007) that the euro-area would be on the edge of the storm. Perhaps the hazard stretches back to the run-up to EMU when one main plank of the advocates (of EMU) was that Europe would be more sheltered from US shock (in consequence of monetary union). Already there were grounds in summer 2007 for doubting this hypothesis given the revelation of the extent to which the European banks had become caught up in the global credit bubble including its key US component.

M. Trichet's ignoring of US monetary danger

The fact that the ECB had turned off all alarm bells that might ring in response to US monetary events had already become clear as far back as July 2004 in the course of a press conference given by M. Trichet. Here was revealing question-and-answer for those listening carefully:

Q: Mr. Trichet, does the move of the Federal Reserve yesterday (July 1, 2004, the first rate rise – in effect by a trivial amount – since the ‘breathing in inflation policy’ had been adopted by the Greenspan/Bernanke Fed) to raise interest rates influence or effect the ECB’s decision in any way?

A: We all have responsibility, all over the world. Certainly across the Atlantic the Federal Reserve has a very important responsibility, and it is not my responsibility to elaborate on that. We have our own responsibility: the US is the US and the euro area is the euro area! We are in different universes with different fundamentals and different episodes in the business cycle. Furthermore, we are both responsible for price stability in these different universes. So we are not influenced in any way by what has been decided across the Atlantic or what has been decided across the Channel, or what has been decided elsewhere in the world. Because of our own analysis of the present situation in the euro area, we have not changed our monetary policy stance. Again, on the basis of European judgement and diagnosis, we have no bias and we remain vigilant.

Of course we must be careful about over-interpreting statements in question-and-answer sessions at press conferences.

Perhaps if M. Trichet had had time to reflect and edit he would not have agreed with everything he said on the spur of the moment! Even so one obvious critique of this interchange is that M. Trichet and his ECB colleagues were deluding themselves about their independence or the independence of the euro-area from strong US influence.

Yes, in principle, the ECB could have composed an entirely different framework of monetary policy from the US, but it chose not to do so, and in fact in spring 2003 had mimicked the strategy of seeking to prevent inflation from falling too low. So what could M. Trichet possibly mean by saying ‘we are not influenced by decisions across the Atlantic’. This could be true only in the trivial sense of whether there would be a 25 bp rise in policy rates this month! Given the similarity of monetary framework on both sides of the Atlantic, and the considerable interdependence of credit

market conditions, M. Trichet should have been taking more notice of US monetary actions or non-actions! The likelihood was that if one key segment of the credit market universe was overheating – in this case the US – something similar was happening in the European segment also!

The criticism follows from all of this that EMU had itself bred a complacency of insularity within the ECB, while in fact both the ECB itself and European financial markets had become more intertwined with US developments and fashions than in the pre-EMU decade. And one key factor which had increased the interdependence of US and European credit and monetary developments was the ECB's concern during 2004–5 about the strength of the euro against the dollar.

M. Trichet wears old hat of French currency diplomat

A rise of the euro towards 1.30 against the dollar triggered crisis activity at the head of the ECB, with M. Trichet (appointed president in autumn 2003) revelling in his old role of G7 diplomat, this time seeking to negotiate a fall back of the euro and rise of the East Asian currencies – see p. 34. That alarmist response to the euro's climb against the dollar is perplexing from the perspective of early 2008 when the ECB seemed totally calm about the euro heading for 1.60 despite the euro-area economy already being in recession!

The alarm ringing out loud at the Eurotower (in 2004), triggered by the rise of the euro against the dollar, neutralized any better inclinations policymakers there may have had towards charting an independent course (from the Federal Reserve) amid the evidence of credit and real estate market temperature rising.

M. Trichet had told a questioner at the February 2005 press conference that:

In the euro-area – and it is the euro area as a whole that we have to look at – we have signs that credit dynamism might foster increases in the real estate sector. And this calls for vigilance.

There was, however, no rise in rates – and then only by a trivial 25 bp – until near the end of the year.

At the December 2004 news conference just two months earlier, M. Trichet had told his audience that he considered recent rises of the euro as 'unwelcome' and 'brutal'.

The message – also confirmed in individual discussions by the author with ECB officials – was that the ECB was holding back from tightening

monetary policy because of the strength of the euro. The rationalization was that the strong euro would mean first, lower than otherwise inflation and second, weaker than otherwise aggregate demand (taking account of pressure downwards on profits in some key industrial sectors, perhaps most of all in Germany). Both shifts should translate into a downward adjustment of so-called neutral and natural rate levels for the euro-area as a whole.

The hazard in such a line of analysis was to exaggerate the significance of a likely transitory swing in exchange rates on inflation expectations and equilibrium real interest rates in the euro area. The ECB in responding to the near-term good news on inflation by delaying rate rises could destroy the potential insulation created by monetary independence against European credit markets heating up in response to the fire lit by the Federal Reserve.

ECB officials – at least those who spoke about such matters on the record – just did not see it that way. They diagnosed the euro's rise and the dollar's weakness as symptomatic of 'global imbalances' which had to be corrected.

Testimony of Professor Jürgen Stark

Monetary historians could imagine that Bundesbank officials would be least sympathetic to the concern about global imbalances given the long tradition within that institution during its heydays (1960–89?) of emphasizing potential clashes between external and internal stability (and the importance of keeping the focus on the latter). And indeed the German successor in June 2006 to Otmar Issing on the ECB Board (with more restricted power in that President Trichet used the transition to divide Issing's research and economics empire into two), ex-Bundesbank Vice-Chairman Professor Jürgen Stark, put it like this (10 December 2008, speech):

The mandate of the ECB is to maintain price stability over the medium term. The mandate must be adhered to both in normal times and in times of crisis. The monetary policy stance appropriate to fulfil the ECB's mandate depends exclusively on its assessment of the balance of risks to price stability and nothing else.

In so far as this oblique statement meant not being diverted by stabilizing the exchange rate at the cost of internal stability that was strictly according to long-established Bundesbank principle and practice.

The disturbing element was the implication that Professor Stark, even at this late date, was unready to countenance the possibility that the framework of inflation-targeting or quasi-inflation targeting as designed by the ECB (never adopted by the Bundesbank when sovereign) had been basically flawed, as the Austrian economists had long maintained, and as BIS Chief Economist Bill White had argued during the period of the global credit warming.

Instead Professor Stark came out with the same paper-thin mantra as President Trichet:

We should not forget how Europe would look today without the euro. The euro-area countries would be significantly worse off. Multiple crises would arise simultaneously; currency crises would go hand in hand with banking crises and real economy disruptions at country level, potentially ending up in political tensions between countries. [...] By eliminating the exchange rate channel, the euro has mitigated the risk of contagion stemming from national economic or financial crises. In this sense, the euro has been a very important stabilizing element in difficult times.

Saying something over and over again though is no proof!

As an ex-Bundesbanker, Professor Stark seemed to be surprisingly unaware of the counter-argument which could be put forward by the euro-sceptics, some of which had occupied the highest positions of authority in the Old Bundesbank, about how the euro might well have made the crisis worse (see p. 129).

And Professor Stark was certainly not above repeating the mantra about global imbalances being a scourge in the international economic environment and how this had been an important factor in the generation of the US 'central component' of the global credit bubble. He had done so in comments made a month earlier (18 November to the 11th Euro finance week, 2008) about the role of global imbalances in the crisis. His speech had started with an introductory quote from Goethe:

Error repeats itself endlessly in deeds. Therefore we must repeat the truth tirelessly in words.

To be fair, this quote seemed to be attached to the section of his speech on macro-economic matters rather than the repetition of the mantra about global imbalances.

In the speech, Professor Stark dwelt on the contribution of macro-economic policy to the crisis in Europe, not just in the US, but ostensibly avoided pointing the finger at monetary policy:

Expansionary macroeconomic policies around the globe have contributed to the build-up of macroeconomic imbalances. These policies have facilitated the strong credit expansion, excessive house price increases and the build-up of large current account imbalances, in particular in the US but also in other regions including some euro-area countries.

Testimony of Christian Noyer

Banque de France Governor and ex-vice chair of the ECB, Christian Noyer, displayed no such inner pangs of conscience when he added his voice to the anniversary chorus of self-acclamation in a speech in early autumn 2008 (10 October) under the title of *A Founder's Perspective on the Euro as a Global Currency* (before the Peterson Institute for International Economics in Washington). Here are snippets of his self-congratulatory remarks:

Actually, one of the main gratifications of the job during the crisis has been the quality of our collective interaction and deliberation in the Governing Council, based on our willingness, in very challenging circumstances, to share judgements and exchange views in a spirit of friendship and mutual respect. (Author's comment: if so proud, why the obsessive secrecy which blocks all record of the discussions from ever seeing the light of day!). I am very proud to be part of such a group. [...] Overall, it is fair to say that the euro has passed the test and comes strengthened out of the current difficulties. The Eurosystem will keep fulfilling its priority mandate of price stability while also contributing to the broader objective of financial stability. [...] So the eurozone has shown it is well-equipped to live up to its responsibilities as a truly global player in the international monetary system of the 21st century.

Did ECB and Fed throw a monkey wrench?

Let us step back from these self-congratulatory exclamations to one of the biggest underlying issues in appraising central bank performance in the euro-area through the middle years of its first decade.

Was the global credit bubble which formed at this time stimulated in large part by policies of monetary disequilibrium in the US and Europe?

Or are the apologists for the US and European central banks correct in claiming that the fundamental source of disequilibrium lay outside the monetary arena and in fact stemmed from ‘unsustainable global imbalances’ (code word for excess saving in East Asia and in some accounts undersaving in the US)?

In assessing the role of the ECB in creating monetary disequilibrium and the contribution of that to bubbles in credit markets and real estate markets there is no realistic alternative to constructing a joint test for the ECB and Federal Reserve.

Did both central banks, together following similar policies, play a key role in global credit market warm-up? If yes, then we can consider the follow-up counter-factual question of whether the ECB, following a quite different policy stance from the Federal Reserve, could have exerted a cooling influence on global credit markets, most of all within Europe.

Alan Greenspan denies Fed (or ECB) to blame

The most eloquent defender of the view that central banks do not share responsibility (via their monetary stance) for the global credit bubble comes from ex-Federal Reserve Chairman Alan Greenspan. That is surprising in one respect.

If Greenspan could bring himself to concede that central bank monetary error played a large role – that to use J. S. Mill’s metaphor they (the central bankers) threw a giant money wrench into the machinery of the economy – then that would remove the floor from below those critics who argue that a more fundamental flaw of free market economics was to blame (such as essential inefficiencies in global capital markets or the impossibility of the market ‘matching’ high savings propensities in East Asia with investment opportunity in the wider world).

Yet to provide that rescue for liberalism such as would be consistent with the Ayn Rand idealism which he long ago espoused, Greenspan would have to admit his policy was at fault – or at very least that he had unwisely allowed his better judgement to be swayed in 2003 by the bad advice from Professor Ben Bernanke, then the new Governor just arrived from Princeton University. There is absolutely no evidence on public record that Greenspan has made such admission even to himself.

Greenspan rejects the view that over-easy money policy was to blame by pointing to the fact that long-term interest rates remained at a modest level even once the Federal Reserve started to raise its key overnight

rate from late-mid 2004 onwards. He attributes this (lack of long-term rate response) to the huge surplus of savings in East Asia. To quote from his *Wall Street Journal* article of 11 March 2009 ('The Fed Didn't Cause the Housing Bubble'):

There are at least two broad and competing explanations of the origins of the crisis. The first is that 'easy money' policies of the Federal Reserve produced the US housing bubble. The second, and far more credible, explanation agrees that it was indeed lower interest rates that spawned the speculative euphoria. However, the interest rate that mattered was not the federal-funds rate, but the rate on long-term, fixed-rate mortgages. Between 2002 and 2005, home mortgage rates led US home price change by 11 months. This correlation between home prices and mortgage rates was highly significant and a far better indicator of rising home prices than the fed-funds rate. This should not come as a surprise. After all, the prices of long-lived assets have always been determined by discounting the flow of income by interest rates of the same maturities as the assets. No-one to my knowledge employs overnight interest rates to determine the capitalization rate of real estate.

The Federal Reserve became acutely aware of the disconnect between monetary policy and mortgage rates when the latter failed to respond as expected to the Fed tightening in mid-2004. Moreover, the data show that home mortgage rates had become gradually decoupled from monetary policy even earlier – in the wake of the emergence around the turn of this century of a well arbitrated global market for long-term debt instruments. [...] Between 1971 and 2002 the fed funds rate and the mortgage rate moved in lockstep. The correlation between them was a tight 0.85. Between 2002 and 2005, however, the correlation diminished to insignificance.

The presumptive cause of the world-wide decline in long-term rates was the tectonic shift in the early 1990s by much of the developing world from heavy emphasis on central planning to increasingly dynamic, export-led market competition. The result was a surge in growth in China and a large number of other emerging market economies that led to an excess of global intended savings related to intended capital investment. That ex ante excess of savings propelled global long-term interest rates progressively lower between early 2000 and 2005. That decline in long-term interest rates across a wide spectrum of countries statistically explains and is the most likely major cause of real estate capitalization rates that declined

and converged across the globe resulting in the global housing price bubble.

Before taking issue with this defence claim by Alan Greenspan, let's join it with the claims of his successor to the chair of the Federal Reserve.

Ben Bernanke adamant that central banks did not create bubble

Greenspan's successor at the top of the Federal Reserve, Professor Ben Bernanke, expanded on the same line of explanation, notably in a speech in spring 2009 (Morehouse College, Atlanta, Georgia). Modelling his enquiry on the 'four questions' of the Passover Haggadah, he asked the key opening question:

How did we get here? What caused our financial and economic system to break down to the extent it has?

Then simplicity gives way to complexity, always a dangerous sign! Bernanke continues:

The answer to this question is complex. Experts disagree on how much weight to give various explanations. In my view, we need to consider how global patterns of saving and investment have evolved over the past decade or more, and how those changes affected credit markets in the US and some other countries. [...] In the past 10 to 15 years, the US and some other industrial countries have been the recipients of a great deal of foreign saving. Much of this foreign saving came from fast-growing emerging market countries in Asia and other places where consumption has lagged behind rising incomes, as well as from oil exporting countries that could not profitably invest all their revenue at home. The net inflow of foreign saving to the US, which was about 1.5% of GDP in 1995 reached about 6% of national output in 2006, an amount equal to about \$825bn in today's dollars. Saving inflows from abroad can be beneficial if the country that receives those inflows invests them well. Unfortunately that was not always the case in the United States and some other countries. Financial institutions reacted to the surplus of available funds by competing aggressively for borrowers and in the years leading up to the crisis credit to both households and businesses became relatively cheap and easy to obtain.

Refuting the evidence of Messrs Greenspan and Bernanke

Let us step back to Greenspan's alleged disconnect between long-term and short-term interest rates before returning on the further elaboration by Bernanke. A first general point is that the lack of close correlation between long-term and short-term rates in the years 2002–5 is not quite a conundrum.

Long-term rates already discounted some scepticism or even rejection by late 2003 of the deflation risk story put out by the IMF and central bankers. (The discounting was evident in the steep yield curve, illustrated by long-maturity yields being far above short. Long maturity yields had jumped through the second half of 2003 on growing evidence of a growth cycle upturn in the US economy and a fading of deflation concerns in the marketplace if not in the Federal Reserve.) The historically unique policy of deliberately breathing inflation back into the US economy (especially in the context of such scepticism as to its appropriateness) was likely to bring some perturbations of the normal relationship between short- and long-term rates. The fact that long-maturity yields did not climb further in 2004–5 as the Federal Reserve eventually proceeded with its long series of micro-adjustments upwards of the Federal Funds rate is consistent with the simple hypothesis that this policy had long since been discounted.

Moreover, central bank policy explanations can themselves influence the expectations formation process that determines far out interest rates in the term structure of rates. The broadcasting of the 'Asian savings glut' and its hypothesized downward influence on equilibrium interest rates – emphasized by the central bankers themselves in many of their speeches and commentaries, especially Governor Bernanke – surely played some role in containing any rise of long-term rates as the economic expansion built up through 2004–5 (even though the hypothesis, as we shall see, was highly dubious).

The pegging of money rates at well below equilibrium rates may have contributed towards a general lowering of risk premiums (see below) including a gradual downward movement of the inflation risk premium implicit in long-maturity conventional government bond yields.

Finally, a brake on the rise of long-maturity US government bond yields, as the temperature continued to rise in real estate and credit markets and the economy boomed might have been a growing concern in some segments of market opinion that there would be an eventual serious recession and financial crisis when the bubbles eventually burst! If the long-maturity yields were compared with likely much lower rates

of price level increase (or even decrease) into the post-bubble aftermath, they were already remarkably high in real terms.

In sum, it is totally implausible that the lack of close correlation between long- and short-maturity interest rates proves that Federal Reserve actions had little or nothing to do with the level of long-term interest rates during 2003–5. The links between the two were as vibrant as ever, but in combination they produced the statistical appearance of non-correlation for some extended period of time as mentioned by Alan Greenspan. Also implausible is the view that East Asian savings surpluses in any case could have shifted the global equilibrium level of interest rates (neutral or natural) down by a large margin.

Numerical proofs are full of holes here. The estimates put together by the balance of payments statisticians on the Asian surpluses relate to observed magnitudes and these might (in a situation of economic disequilibrium) be quite different from the underlying surpluses. And there are giant measurement problems even with respect to the estimation process.

In particular, it is quite possible that though China's recorded savings and current account surpluses at their peak were running at \$400–500 bn p.a., the underlying surplus was less than half of this.

Over 50% of China's savings surplus was in its business sector, where largely state-controlled corporations were building up mountains of retained profits (with no distribution of dividends to shareholders) out of an export bonanza to the US fuelled by (among other things) excessive monetary ease there. Indeed there was some rationality to this behaviour. The Communist Party-appointed managers realized earlier than many US managers (in Detroit especially!) that the bonanza could not last, and that they should behave like the ant rather than the grasshopper. And into the subsequent recession, the ability of the ants to spend exerted a stabilizing influence on the global economy!

And there is a purely statistical point to note in the downplaying of the mega-Chinese trade surplus in the mid-2000s. The officially recorded trade and savings surpluses of China were an overstatement of reality due to the widespread use of trade invoicing techniques (under-recording imports, over-recording exports) by Chinese corporations to circumvent restrictions on borrowing funds abroad (mainly in US dollars) so as to speculate on continued appreciation of the yuan.

So as illustration let us assume that no more than a \$200 bn increase in the underlying Chinese savings and current account surplus took place between 2001 and 2005. Can we really believe that this would have put significant downward pressure on the global equilibrium level

of interest rates especially when we take account of opposing upward pressure from such factors as the Bush tax cuts of 2001 and subsequent loosening of the reins on public spending or of credit market innovations (not all of them bubble-like!) which allowed a wider span of households to tap the credit markets?

Moreover, the successful assault on the Asian Dollar Zone by an Unholy Alliance of Washington, Paris and Frankfurt in 2003 (Dubai Summit, see p. 34) would surely have as one consequence an emerging risk premium on the transfer of capital into the US from the once Asian dollar bloc countries. This new risk premium should have gone along with an upward revision of the neutral/natural level of the US interest rates (and downward revision of the East Asian level).

In sum, central bank policies considered in their widest sense were very much part of the explanation as to why long-term rates were most likely well below equilibrium rates during 2003–6, both in the US and Europe. But that is not where the rebuttal of the central bank apologists ends. A key further part of the rebuttal is the denial of Greenspan's claim that long-term rates rather than money market rates (with the latter most under the control of the central bank) or any other measure of monetary conditions were critical for the heating up of the credit and real estate markets.

In fact it was arguably the very low level of short-term rates and the expectation that central banks would indeed keep those down for an extended period (as reflected in short/medium-maturity fixed rates) that spurred the perception among investors of 'income famine'. Towards maintaining or sustaining income, they became willing to assume a greater degree of credit risk exposure in their portfolios and at a lowered level of risk premium. And by the same token they may have become more ready to search out for human talent that supposedly could bolster rates of return above the thin levels available in an otherwise efficient market.

With market rates of interest so far below the neutral or natural level and for such an extended period, the supply of apparently suitable assets (including human talent) to meet the income famine-induced demand became self-generating. The irrational exuberance which is generated under such a situation of monetary disequilibrium grew and grew.

Prices of risk-credit paper and real estate rose under the influence of interest rates far below the path consistent with a stable (non-heated) return of the US economy to prosperity. In turn many market participants perhaps wearing rose-coloured spectacles came to interpret those rises as due to some real factor (or 'speculative displacement', see Aliber and Kindleberger, 2005) – for example, in the case of real estate

the dawning of universal home-ownership or societal shifts powering demand for residential space – which in turn lead to expectations of further rises. A booming construction industry and finance industry drew in (directly or indirectly) savings from around the globe which otherwise would have eventually pressed down the cost of capital (and critically the equity cost of capital) to other sectors of the US economy, raising the level of investment there. (It would have taken time for this channelling of global savings into alternative investment opportunities in the US to become fully operative. The process of creative destruction including the emergence of sound investment opportunity does not occur quickly. In the interim, the Asian savings surpluses would have been constrained well below their equilibrium level due to the slow pace at first of US economic recovery).

The credit assets manufactured in the US residential real estate market were largely swapped into floating rate form in which they were absorbed by the rapidly growing credit hedge funds (themselves highly geared) or by the off-balance sheet vehicles of the banks (these in turn issued asset-backed paper). The depth of the market (for investors) for the mortgage credit bubble assets was hence a function of the investor demand for a higher yield on floating rate paper. This is a point which Greenspan's focus on the long-term mortgage rate pure and simple fails to pick up. The availability of mortgage finance at growing levels of risk was a function of below-equilibrium floating short-maturity rates.

Implications of verdict on Federal Reserve for euro-trial

All of the above discussion can be cast also in terms of the euro-area. Below-equilibrium levels of interest rates in Europe in the context of growing income famine generated demand for and supply of a rapidly expanding array of credit paper.

In the European context, this included the new phenomenon of residential mortgage asset-backed paper, much of which was based on real estate bubble markets in Spain and the UK in particular. There was also the leveraged corporate loan market and high-risk European corporate bonds much of which was lapped up either by hedge funds or bank off-balance sheet vehicles.

Given the full scope of financial engineering which utilizes currency swap markets, supply and demand of high-risk debts in Europe would have been bolstered to some extent by monetary disequilibrium confined just to the US. In fact, accompanying European monetary disequilibrium magnified the euro-area source supply of and global demand for

euro-denominated credit paper while stimulating US source supply of and global demand for dollar credit paper.

The effect of monetary disequilibrium did not stop at the credit markets. In principle there are risk-arbitrage flows between the credit markets and equity markets. Risk premiums most probably fell generally. (There can be no precision when it comes to the measurement of risk premiums in the equity market – or indeed any other market – as the multi-period expectations of return are unobservable. Moreover risk premiums are in the eye of the beholder, and in some market situations, especially related to ‘speculative displacements’, vision is highly heterogeneous.)

It is plausible that the biggest fall in risk premiums came in respect of any sober measurement of returns and risk in the growingly leveraged (off-balance sheet) banking sectors in Europe and the US. In principle and in practice, risk-arbitrage between credit markets and equity markets is quite inelastic at times. Such inelasticity would have been an important barrier to equalisation of risk-adjusted rates of return across asset categories (for example, corporate debt and equity) in the climate of the mid-2000s so soon after the bursting of the NASDAQ bubble and given the shift of many investors away from equity risk (at the margins of their portfolios).

Suppose in all of this, the ECB had stood out by not adopting a ‘breathing in inflation’ policy and of resolutely seeking to prevent money rates from remaining for long far below neutral or natural level. How different would have been the rise of temperature in credit and real estate markets around the world?

A first point to consider is the interdependency between euro and US rates. If the ECB had indeed resisted the siren-calls of the inflation breathers-in, then the US dollar might well have fallen precipitously in 2003–4 (most of all against the euro), in reaction to which even the Bernanke/Greenspan Fed would have had to accelerate their glacial pace of rate rises. And so the monetary disequilibrium in the US might well have been curtailed by exchange rate shock – a slump of the US dollar (and its knock-on implications for inflation expectations in the US).

Secondly, in the universe of floating rate assets across all currencies a substantial sector, that in euro-denomination, would have been generating a good income, relieving any potential income famine generally and making investors globally less ready to take on extra risk at below normal levels of return. Even so, the euro would have been bidden up to such a high level that the real rate of return on euros from the viewpoint of investors whose shopping basket was concentrated on items outside

the euro-area would have been partially eroded by the prospect of subsequent decline (once US rates rose back to neutral level). But similarly the real rate of return on dollars from the perspective of investors who intended to spend much of their wealth in non-dollar countries would have been boosted from ultra-feeble levels by the prospect of exchange rate gain once the ultra-easy US monetary policy came to an end.

The ECB could not single-handedly have totally relieved the income famine resulting from the Federal Reserve's breathing in inflation policy but there would have been some partial offset for many international-minded investors. In effect some of the higher income in the euro-sector would have been funnelled into the dollar sector as seen by international investors there (not US domestic investors).

Thirdly, in the euro-area there would have been less heating up of domestic credit markets. With the ECB steering rates at a faster pace towards neutral, the mortgage and real estate markets would have remained cooler throughout. And the banks in the once-high-interest rate countries (Spain, Italy) for example would have enjoyed less of a sudden bonanza of profit which set the market for their equity on fire, meaning their management teams would have been less inclined to continue along aggressive expansion courses.

Nonetheless, European banks could not have escaped the influence of US monetary led credit warming, even though that (US warming) would have been less than otherwise (due to knock-on effect of exchange rate to US monetary policy). The warm market in US banking shares would have had a contagious influence on the European banking industry.

European banks which had expanded their businesses into the US bubbly credit markets might well have found their share prices outperforming those that did not (join the dance), especially if the implicit leverage was camouflaged from view via off-balance sheet vehicles. Those 'aggressive' European banks would have been thereby in a position to take over European banks which remained more conservative. And similarly European banks which sought to match the rapidly growing earnings of their US peers by gearing up in the overnight dollar repo markets (using the proceeds to lend into the emerging market economies or to buy US credit paper) or in the Swiss franc inter-bank markets for lending into Eastern Europe (or into the Spanish mortgage market) might have been rewarded accordingly.

There may still have been some degree of imprudent lending from banks in savings surplus areas via the new overnight inter-bank euro market into banks in savings deficit areas (within the euro-zone), without due concern for the total risk of the inter-bank exposures created.

But looking at the total picture, the temperature rise in European credit markets would have been less under a distinct and harder European monetary policy, the risks built up less, albeit that the overall performance of European banking shares would have been less gratifying than otherwise during the years 2003–2007H1.

Could there still have been a Panic of 2008 unleashed by the post-Lehman freeze-up which would have sent the euro-area into deep recession?

Panics are not pre-determined. They are a risk along the path of credit and asset market temperature decline from hot levels. The risk would have been less if the temperature had reached less hot peaks (as would have been the case if the ECB had not mimicked Federal Reserve policies throughout the first decade of the twenty-first century).

The extent to which European banks were caught up in the Panic (themselves coming under deep suspicion) would have been that much less, with calming implications both within Europe and for knock-on-effects to the rest of the world. European asset markets themselves would have been less vulnerable to the panic (if indeed starting from a less heated position). Beyond these measured counter-factual statements, the compass becomes totally unreliable!

Why do ECB and EMU continue to escape indictment?

As the first decade of the twenty-first century draws to a close and the observed costs of the 2008 Global Panic accumulate, European central bankers and EMU have escaped virtually all reproach at the level of mainstream political debate. Indeed many US-centric economists, including those who have walked the corridors of power, remain blithely unaware of the European dimension to the monetary disequilibrium behind the global credit bubble and burst.

For example, Professor Taylor in his attack on the Federal Reserve for its role in the credit bubble and burst makes no international connection with events in Europe (see Taylor, 2009) And San Francisco Fed President Janet Yellen, who was bold enough in a speech in March 2009 to express soft criticism of the role of the Federal Reserve in promoting the credit bubble via ultra-easy monetary policy, qualified her remarks by an erroneous observation:

Fed monetary policy may also have contributed to the US credit boom and the associated house price bubble by maintaining a highly accommodative stance from 2002 to 2004. [...] But it clearly was not

the only factor, since such bubble appeared in many countries that did not have highly accommodative monetary policies.

But was Professor Yellen really unaware of the simultaneous disequilibrium nature of European monetary policy during those years or, for that matter, of the disequilibrium policy in Japan (where the BoJ was keeping rates below equilibrium level and thereby contributing to the bubble in the yen carry trade – see p. 35)?

In the following chapter we look at the possible remedies which might well lead to a better monetary outcome in Europe, but these will remain only remedies in principle until there is a recasting of the political debate. And essential to a constructive political debate is historical analysis rather than mythology. That applies as much as to the recent past – especially the conduct of monetary policy during the Great Credit Bubble of 2003–7 – as to the more distant past especially the Great Credit Bubble of the 1920s and its sequel in the Great Depression. The difference is that the mythology of the latest great bubble has not yet formed in any fullness and one challenge for economic analysts especially with a focus on Europe is to prevent the negative role of EMU and its central bank being omitted from the emerging mainstream account.

5

What Remedies?

Suppose the jury were to decide at the end of the trial that it would have been better if EMU had never existed. Even that stern verdict, together with an enumeration of all the faults in its first decade, would not automatically cause the judges to decide on the most radical remedy of all – to bring the EMU to an end.

Whether that remedy is an improvement would turn critically on what monetary regime would be followed and the costs of dismantling. There would inevitably be many losers and many gainers from EMU's termination. The distribution of losses and gains (between different groups) and the size of net benefit (in a positive or negative direction) could vary considerably across the present member countries.

Almost certainly EMU will not collapse due to any such hypothetical reckoning at the level of the euro-area as a whole. The forces of downfall or disintegration are more brutal and would involve most probably one or more countries taking unilateral action to suit the interests of groups in the political ascendant that would gain thereby.

Alternative remedies (to the most radical of bringing EMU to an end) include sets of reform proposals designed to lessen the faults and so reduce the potential economic and political damage which might result from EMU's its continuing existence. It is beyond the scope of this book to speculate on the political forces which might combine to translate various possible remedies into reality. Instead the more limited aim is to explain what these remedies might include.

Boldest remedy – A second Treaty of Maastricht!

The boldest remedy (excluding the radical option of monetary divorce) would involve a second Maastricht Treaty. There would be a

comprehensive re-drafting of the clauses in the first treaty concerning monetary union together with a new chapter providing for a two-track process of European Political Union. In the first track would be most of the countries (including critically France and Germany) belonging to the monetary union. They would move ahead on a new programme for political union designed in particular so as to improve the functioning of the monetary union. The countries in the second track might in broad terms remain within the present boundaries of political integration with some token projected changes.

Such political union would be essential to ending the privileged 'ivory tower' status of the present ECB (largely outside the 'rough and tumble' of a liberal political order as defined by the 'classical' concepts as written about by Adam Smith – see p. 190). This status has become a general licence for monetary incompetence. The conduct of monetary policy, though, would continue crucially to be bound by constitutional principles which would not be easily revised (say via simple majorities) by any political legislature.

The journey to political union would hardly be fast even with great energy on the part of the visionaries. More generally, any serious remedial programme to address the flaws of EMU, including a whole range of reforms falling short of requiring political union, is likely to encounter many powerful barriers – not least Berlin's resistance to anything which smacks of curtailing the independence of the ECB.

The lesson of history, though, is that when economic and political pressures become great, institutions change. Indictment in the court of public opinion against the offenders is integral to the process of change.

The indictments against EMU have included (among others) failures in monetary policymaking and in the design of monetary framework. Such failures have been widespread across the globe, including crucially the US. As of the time of writing this book, the recognition of monetary failure is more evident in US than European political debate but any hope of redress or remedy is equally faint everywhere.

Monetary instability outside the Garden of Eden

It would not be stretching historical analysis to cite the most recent episode of monetary failure, whether in the US or Europe, as demonstrating the conundrum recognized by J. S. Mill two centuries ago – how to prevent the machinery of money from periodically getting out of control and becoming the monkey wrench in all the other machinery in the economy (see Friedman, 2006).

For a century or more there was a consensus view that an international gold standard regime was the best way – albeit far from perfect – of limiting potential monetary disequilibrium and the economic damage which came in its wake. That regime collapsed with the outbreak of the First World War and all attempts to resuscitate it in imitation form during the 1920s failed miserably.

That failure was one of the threads weaving the monetary, economic and geopolitical catastrophe now described as the Great Depression. Some writers maintain that the Great Depression could not have occurred without the Great War (see Kindleberger, 1973). In particular, lack of trust in any partial reconstruction of the international gold standard, the Federal Reserve's misuse of its new-found global hegemony in creating huge monetary disequilibrium (via effectively stabilizing the price level during a remarkable period of technological progress when a 'good deflation' should have emerged – and would have done so if the international gold standard had still been operating fully) and the fantastic sequences of monetary instability in the Weimar Republic all stemmed from the War and its transformation of the pre-1914 world.

After World War II, a new order (Bretton Woods) built on the US dollar and gold was constructed and signed into international law by treaty. This was no gold standard with its finely tuned mechanisms for limiting the extent of monetary instability together with its firm anchoring of long-run expectations regarding the price level at around zero (inflation). For most of its life, the Bretton Woods order was riddled with exchange restrictions regimes. Capital did not flow freely across the globe. The intellectual basis of Bretton Woods was a disbelief in and discrediting of automatic equilibrating processes in the international economy. And the commitment of the US to a limited form of convertibility of the dollar into gold (in the context of no legal private holding of gold in the US) was in effect no basis for a firm anchoring of the US price level over the very long run (unlike in the international gold standard).

The collapse of the Bretton Woods order, in which currencies were pegged to the US dollar on the implicit understanding that the US would pursue the aim of price level stability in the long run and avoid episodes of acute monetary (the understanding was in part based on the US promise to keep open the gold window), followed directly from the lack of resolute US action to cool down inflationary pressures in the late 1960s. These inflation pressures rose at first from the embracing by the Kennedy and Johnson administrations of the New Age Keynesian economists who promised to banish the business cycle (and there had

been two nasty recessions under the prior Eisenhower Administration) and permanently lower unemployment by ‘running the US economy closer to its productive potential’. The Philips curve – and the illusion of a trade-off between lower unemployment and inflation – was in vogue. Subsequently the Nixon Administration in its determination to win re-election (in 1972) threw off all monetary constraints.

Lessons from the brief ‘monetarist renaissance’ of 1973–86

Germany delivered the death-blow to Bretton Woods by floating the mark in May 1971. The Deutsche Bundesbank followed through eventually (in 1973–4) with the construction of a new monetary framework based on the firm control of monetary base and a rejection of the Keynesian trade-off between unemployment and inflation. This pivotal role for monetary base and parallel floating of short-term money rates (within bounds!) was a re-incarnation in part of the automatic monetary control mechanisms which operated at a global level under the pre-1914 gold standard (with new gold production a big factor determining the increase in the monetary base). The big difference from the pre-1914 system was that monetary base was set nationally and exchange rates between the biggest monies were now freely floating (rather than floating within tight margins as determined by gold export and import points).

The Bundesbank’s monetary revamp and similar revamps five years later by the Volcker Federal Reserve and the Thatcher-led Bank of England did not survive. (Indeed, also the Bank of Japan pursued a version of monetary targeting between the mid-1970s and mid-1980s.) Once the inflation dragon had been killed, central banks around the globe abandoned monetary base (or money supply) control in favour of cosy committees tightly manipulating short-term interest rates such as to be consistent with the aim of continuing low inflation and ‘economic stability’. Why go on with big short-term interest rate volatility now that inflation danger had faded? Fine-tuning the economy came back into vogue albeit not in the crude form of the now discredited Philips curve trade-off.

All seemed to go well.

This was the Age of Great Moderation, even if the huge credit-and-asset bubble in Japan at the end of the 1980s, shadowed to some extent in US and European developments (e.g. the S&L-related boom and bust in the US or the credit and real estate bubbles in the UK and Scandinavia) surely indicated that all was not well in terms of monetary stability.

In (Continental) Europe through the late 1980s and into the 1990s the monetary order was anchored on the Deutsche mark. A group of small countries (Holland, Belgium-Luxembourg, Austria) had for many years already decided to turn themselves into DM-satellites. France under President Mitterrand determined to pursue the course of EMU and this required accepting Bundesbank dominance during the long train journey to that destination.

In this DM-based order, all trusted the Bundesbank to deliver stability. In reality the power behind the Bundesbank's magic had faded except for the history of past wonders. The monetary order in Germany was less and less based on strict money supply targeting linked to substantial reserve requirements. And its leadership was growingly subject to huge political pressure related to the greater purpose of German monetary union and subsequently EMU as set by the government of Chancellor Helmut Kohl.

The boom and bust in the German economy related to the unification of East and West in 1990 was accompanied by serious monetary instability. That was not directly the fault of the Bundesbank. How could there not be monetary instability from the sudden merger at 1:1 of the Ostmark with the D-mark? The effects of that instability rippled throughout the DM-zone and provided a tail-wind of support both among business and popular opinion for constructing a less German-centric monetary order in Europe.

That was a perverse message. After all the other countries in the DM-zone could have insulated themselves from the monetary storms related to German unification by temporarily suspending the link of their currencies to the DM. And in any event the monetary instability would be limited in time.

Whatever the reasons (these can be found in an array of books including Marsh, 2009), including the perverse message to which reference has just been made, the train to monetary union in Europe accelerated in the early 1990s. There was no ready-made blueprint for the new European monetary order to replace the Bundesbank-led order. The negotiators of EMU took the quick route to consummating a treaty – leave it all to the central bankers who have had such success in bringing inflation down and who now currently enjoy such respect from the general populations!

The diplomats could agree on the aim – continued success in maintaining very low inflation as had been reached throughout Europe by the late-1990s. There was a widespread willingness to follow the 'Bundesbank model' and in particular to grant a special status to

the new central bank outside the political process, not so difficult given that there was no European-level political democracy in any case. In France President Mitterrand told the voters who had qualms on this point that the Council of EU ministers would have ultimate control over the ECB (see Brown, 2004).

In reality there was no well-functioning Bundesbank model at this stage let alone one which could be a good guide to the creation of a new monetary union in Europe. Any quasi-mechanisms such as had existed under the gold standard (monetary base targeting, market determination of interest rates across the maturity spectrum with no tight rate pegging by the authorities) acting as brakes on the amount of monetary instability had become grievously impaired in Germany as much as in the US or Japan. Everywhere the new order was one of highly discretionary monetary piloting by rate-pegging central bankers who operated without any reliable compass.

Any serious reform proposal for EMU should address the problem of how to design a better framework for monetary policy than has so far been implemented anywhere in the century since the gold standard collapsed. Lessons can be learnt from the brief renaissance of monetary base targeting in Germany and later the US in the years from 1973 to 1986 (see above). There is no reason why Europe should wait for the way forward to be pioneered – if it ever is – by the US. After all, one claim of EMU has been that it would free Europe of US monetary bad influence, so why not lead the way in developing new standards of monetary excellence, rather than waiting for the Federal Reserve to renounce the Bernanke ‘ten principles of inflation targeting’ (see Brown, 2008). This could be a long wait given Professor Bernanke’s reappointment as chair of the Federal Reserve in January 2010!

Existential remedies for EMU

Before proceeding, however, to such wider aspects of the monetary reform agenda within the particular context of Europe let us turn back first to the radical remedy of bringing the euro to an end. We consider the existential question of what life after death would be like for EMU. In all realms of human activity the meaning of the positive is derived from contemplation of the negative, and monetary systems are no exception, even if the functionaries of EMU, including officials at the ECB, have claimed that in this case there is no negative. The euro could never be unscrambled, in part (with one or more countries leaving union) or in whole (no union left)!

For example, in a TV interview, ECB Board Member Bini-Smaghi commented (5 March 2009) that talk of a euro-zone break-up was 'nonsense' and of euro-zone countries defaulting on debt was merely a 'journalistic hypothesis'.

In academic literature there has been some rare willingness to contemplate the possibility of exit or break-up. Yet Barry Eichengreen in a paper for the NBER delivered on the eve of the Great Credit Quake of July/August 2007 summarized a dominating consensus (Eichengreen, 2009):

It is unlikely that one or more members of the euro area will leave in the next ten years and that total disintegration of the euro area is more unlikely still. The technical details of reintroducing a national currency should not be minimized.

He repeated the same point even more dramatically in spring 2009 (Eichengreen, 2009), claiming that for a country to contemplate leaving EMU would trigger 'the mother of all financial crises'. He continued 'what sensible government, invested in its own survival, would willingly court this danger?'

Martin Feldstein, invited to comment on the Eichengreen paper, was unconvinced, focussing on why a country might indeed decide to leave the EMU:

Of course countries don't decide. Political leaders decide. – Political support for EMU is weak at best. A political leader or political party could use this weak support to promote its political power by promising to withdraw the country from the EMU or by saying that they will threaten to withdraw the country from EMU if the other member countries do not agree to their proposed policy changes.

In fact the technicalities of EMU exit are far from conclusive in any debate about feasibility (of exit or break-up). Yes, there are fixed technical costs to the exit or break-up. But these have to be compared with the perceived long-run economic and political disadvantages of staying in. It is not obvious that these technical costs are at such a high level as to always rule out an exit or a break-up.

After all, EMU came in with a big technical cost bang, not to mention big economic sacrifice among many of the joining countries in the years leading up to entry. The technical costs (including the printing, distribution of new notes, withdrawal of old, re-calibration of payments

technology and so on) were considered by those in political authority as worth the candle.

Why could the reverse not be the case at some stage, with the technical costs of monetary divorce or break-up justifiable? Technical costs, even when impressive, have not been an absolute barrier to monetary evolution (whether in forward or backward direction!) in the many centuries of monetary history. They did not prevent the falling apart of inter-war patchwork gold exchange standards.

It took the Great War to dismantle the international gold standard. That was an inherently popular system (unlike EMU, which by and large has been unloved according to many opinion poll measures, even in traditionally Europhile countries). Yet when it came to severe economic or political tests, the gold standard was suspended or abolished. And yes there were considerable technical costs attached, including the legal sorting out of gold clauses in private contracts, suspension for days, weeks or even months, in one-to-one convertibility of banknotes into bank deposits.

In the present author's previous book on the euro (Brown, 2004), there were two technical types of EMU exit or break-up discussed – the first being slow form, and the second quick or 'forced'.

The slow form was like the reverse of creation – with the new sovereign money being introduced gradually through three stages. In the first, the new money would be convertible into the euro at 1:1 and then followed by a second stage in which there would be a fixed exchange rate within bands. The final stage would be when the new sovereign money or monies (depending on how many countries were exiting EMU) displaced the euro (which might continue in existence in truncated form).

The success and smoothness of the slow stage exit depends on there being no strong expectations at large about how the new money to be created will perform vis-à-vis the euro (whether to rise or fall).

In practical terms, the forced exit from EMU, perhaps triggered by speculation that a particular government might be considering a gentle exit (with present holders inclined to think that gentle will turn into violent), is surely of higher probability (however small).

The mechanism of a 'forced exit' – in some respects similar to an exit from the gold standard – is where the government in the given member country suspends the 1:1 convertibility of resident euro-denominated deposits (in some hypothetical models also non-resident) at domestic banks into monetary base of the union from which it has just split (in this case funds which can be cleared in the inter-bank clearing system of EMU).

All resident euro deposits are re-labelled as national euros, let us say Spanish euros (re-labelled pesetas at the end of the exit process). Simultaneously all loans outstanding from Spanish banks to resident borrowers up until this point denominated in euros would be re-labelled as in Spanish euros (meaning that borrowers can service these loans by payment of Spanish euro deposits on a 1:1 basis). All borrowing and lending between Spanish borrowers and lenders (bank or non-bank) would in effect be re-denominated in Spanish pesetas.

Spanish banks would cease effecting transfers of Spanish euro deposits via the euro-clearing system into other euro-area banks on a 1:1 basis.

Most plausibly Spanish government debt would be converted (forcibly) into Spanish pesetas. All wage and non-wage contracts (e.g. rents, public utility charges) would be re-denominated 1:1 in Spanish pesetas.

How contracts between Spaniards and non-residents (loans, wages, rents) and so on would be treated would be an important detail to be determined. In the case of the US leaving the gold standard in 1933, non-residents were treated equally with residents. Another important detail would be any public compensation for banks suffering large capital loss due to the process of conversion (this would arise if a given bank had many more loans being converted into Spanish euros than deposits).

Spanish euros would not be convertible 1:1 into euro-banknotes. On the assumption that the Spanish euro bank deposits would trade at a discount to international euro deposits (meaning that the exchange rate of Spanish euros/international euro was well above 1.00), then euro-banknotes would sell at a similar premium. Customers wanting to withdraw euro-banknotes against their euro-deposits would correspondingly obtain less than 1:1.

In principle retailers would grant corresponding discounts where payment is made in euro-banknote cash compared to euro-deposits. (ATM machines would have to be recalibrated correspondingly, paying out an amount in euro cash which was less than the Spanish euro amount debited from the underlying account.) Customers paying large amounts of euro-banknotes into Spanish euro deposits should expect to obtain a premium (related to the exchange rate).

In time (perhaps as little as six months), new Spanish banknotes (perhaps a resuscitated peseta) would be rolling off the printing press. As the Spanish demand for euro-banknotes receded (as many converted these into the new local money), the Spanish government (or central bank) would make simultaneous purchases (for destruction) of euro-banknotes against its euro deposits at the ECB – as part of a negotiated withdrawal

which would not leave the rest of the euro-area otherwise worse off as accepting a liability for that part of the banknote circulation which was originally implicitly a Spanish liability.

Mechanism to suspend 1:1 convertibility of deposits into banknotes

'Practical policymakers' exaggerate the technical costs of monetary radicalism. That exaggeration has been a key element in the refusal of economic policymakers to embrace any suggestions (of which there have been a widening range in the last two decades starting with the bursting of Japan's bubble economy from 1990 onwards) of pre-empting monetary disequilibrium in severe recessionary episodes by removing barriers in the way of risk-free nominal interest rates falling far into negative territory.

As we shall see below (see p. 172) removing barriers to market interest rates falling to negative levels during deep recession involves a forced banknote conversion at a future date coupled with an immediate temporary suspension of the 1:1 exchange rate between banknotes into bank deposits. The ECB (in common with other leading central banks) has made no sober-rational comparison – at least according to any public record – of the technical costs involved in such suspension compared with the huge deadweight costs of the alternative stimulatory policy actions, including quantitative easing (QE) (which as we shall see is most probably much less effective as stimulus than removing the zero rate barrier). That is running ahead of the narrative!

There is a link, however, between that next discussion and EMU exit, in that both require a study of the cost of a temporary suspension of 1:1 convertibility between banknotes and deposits. (And as a historical footnote, during the decades before the creation of the Federal Reserve in 1913 it was commonplace for banks during episodes of financial panic to suspend convertibility of deposits into currency, meaning that the exchange rate between the two temporarily floated – see Friedman and Schwartz, 1963.)

The history of EMU got off to such a good early start with a massive logistical exercise in a different type of banknote conversion (the replacement of the legacy banknotes with the euro-banknotes) that it might have been thought that euro-officials in Frankfurt would be open-minded about related types of conversion in potentially extreme economic and financial circumstances. It is therefore all the more regrettable that the mandarins of EMU have shared in the deep prejudices of

US or Japanese central bankers against the use of banknote conversion as a monetary expedient in deep recessions accompanied by financial system distress.

Before demonstrating how this expedient would operate, let us first look more fully at the role which banknote conversion plays in EMU exit, continuing with our earlier illustration in the context of Spain.

ECB should draft contingency plan for EMU exit

Suppose markets were to suddenly put a much higher probability on the likelihood of an eventual partial default by the Spanish government on its debt. Partial default could include a compulsory extension of maturities and/or revision down of coupon levels on existing debt with Spain remaining in EMU, or an exit from EMU in which the government debt would be re-denominated from euros into a re-incarnated peseta.

The trigger to such a revision upwards in the assessed risk of a default by Spain could be alarming new evidence on the state of Spanish public finances, based perhaps on revision down of economic prospects and upwards of extent of government support required for Spanish banks (to prevent financial system meltdown). A simultaneous sharp decline in some other weak euro-area government bond markets might also play a role (in inflaming perceptions of Spanish default risks) via contagion effects. Also possible as part of the story might be dashing of expectations that Spain would receive a big bail-out loan from the stronger euro-area governments (especially France, Germany and the Netherlands).

The sharp decline in Spanish government bonds would in turn add to the fears about the solvency of the Spanish banking system, given that this would be a big holder of these. Moreover there would be doubts about how much further aid could be provided to the banks by the government (as more aid would increase the default risk of government debt). Those doubts could be enough to trigger an exodus of funds out of Spanish banks. And adding momentum to that flight of capital could be concern that the Spanish government in the ultimate would exit EMU so as to have recourse to a national money printing press.

Indeed there may be no other way out – except for massive aid (untied to demands for draconian policy changes) from other European governments. Otherwise, with the Spanish government not realistically able to obtain new funds and the banks near collapse, the prospects in Spain could be without hope (for a continuing liberal economic order and for a return to economic prosperity from the present of dire crisis and growing hardship).

The Spanish government under such circumstances might well take the steps outlined earlier for arranging an immediate exit from EMU which would in turn be accompanied by a sharp opening devaluation of the 'Spanish euro' versus the international euro. Perhaps the Spanish government would be successful in arranging a multi-government foreign loan (with other EMU members the main source) to help calm fears which could mean a collapse for the new currency. And in principle such a loan would have a better prospect of helping to pave the road back to prosperity than one made before EMU exit to help shore up a Brüning style deflation policy which would be doomed to failure.

On the view that all rational market participants know that there is a scenario under which EMU exit could occur, would it not be calming (in terms of reducing the dangers of national collapse) for the authorities in monetary union (at EU Commission or ECB) to publish an emergency plan (hopefully never to be used) about how an order withdrawal could be facilitated? In particular, any mention in the plan of a mechanism for the remaining EMU members to provide loans to tide over the re-incarnation of sovereign money (in our example the peseta) would be especially helpful.

Now it could be argued that the existence of such a plan and its widespread circulation might increase the probability which market-participants put on an exit scenario compared to a situation where the official line on such an exit remained that it was impossible or that it would be so frightful in its consequences as not to be feasible at all. But more likely in a climate of opinion where the possibility of exit is indeed regarded as significant, some advance planning and transparency concerning this could help modify the worst fears out there in the market place (including decision-makers in non-financial business corporations) about possible economic and political chaos ahead, including the depth of depression which would be tolerated in efforts to preserve the monetary union in its present form.

Also a contingency plan for deep recession!

The general critique that the functioning of monetary union would be improved by more transparent contingency planning on the part of the authorities (whether in Brussels or Frankfurt) can be extended beyond possible EMU exits to the relief of intense monetary disequilibrium such as can form under conditions of financial system crisis and severe recession. The normally present barrier to risk-free rates falling below zero, which is no problem most of the time, suddenly becomes a big

problem. Comprehensive contingency planning for severe monetary disequilibrium should ideally go beyond this important issue of barrier removal. And in drawing up such contingency plans there is much to be learnt from 2007–8.

The quake of August 2007 might not have come as a total surprise (we have seen how President Trichet later laid claim to having recognized the risks in advance, see p. 141). Yet there was absolutely no evidence of any contingency planning – emergency plans ready to swing into action.

Instead the response smacked of panic on the part of the authorities – blanket provision of liquidity at a fixed price to all on demand as secured against any dodgy collateral which met the pre-crisis definitions of eligibility now totally outmoded.

What would be the elements of a contingency plan for deep recession and financial panic, including where appropriate the removal of the zero-rate barrier? The plan would surely include an improved specification of the lender of last resort role and greater scope for recuperative forces in the marketplace to forge a solution.

We have outlined already how those elements of a contingency plan would have swung into operation in August 2007 (see p. 90). There would have been an immediate fall of risk-free rates to zero. Less weak banks would have been able to tap equity markets on the basis of enhanced prospective profit margins (the difference between interest rates paid on their deposits, either insured or as buffered with newly issued equity, and raised rates on risky loans). An essential part of this contingency plan is that the central bank suspends rate pegging in the overnight money markets.

One potential obstacle within the banking system which might block success for the contingency plan is the so-called ‘debt overhang problem’. In issuing equity to shore up the safety of its deposits, a bank hands a windfall gain to bondholders, whose debt would otherwise be languishing well below par, paid for by the present shareholders.

In the non-financial sector, capital re-arrangement takes place despite the debt overhang problem because it can readily be circumvented. (The equity holders have a stronger hand to play in the negotiations, implicitly playing openly with the possibility of bankruptcy.) In the case of a business (or household) with bank borrowings outstanding, its bank lenders might agree to effectively reduce loan principle and swap the remaining loan into equity (that is what happens under loan modifications, where current loan servicing obligations are reduced but if the borrower’s situation improves, then they resume sometimes with catch-up payments). With respect to bonds outstanding, the equity

shareholders might make a direct swap proposal to bondholders or sometimes buy the bonds at a discount in the market before issuing new equity. By contrast, in the financial sector, were a bank to intimate to bondholders any such proposal it might set off a run of deposits.

In practice there are only two ways in which banks can avoid being trapped by debt overhang problems and thereby approaching the zone of crisis in such stressed circumstances (in which their existing equity cushion has thinned). First, they might deem that the windfall gains paid out to bondholders will not be at the cost of any significant gain to present shareholders. The latter make offsetting gain from halting the haemorrhaging of business profits which would otherwise occur from perceived erosion in the safety of their deposits (and the widened margins made possible in the above situation by the spread increasing between risk-free rates and risky loan rates would help to make that case). Second, they might as a rule avoid issuing bank debt at all (other than deposits), making all their capital funding in the form of equity issuance at all times.

Also in the contingency plan should be the outlines of how a negative interest rate regime could be introduced. In the context of low or no inflation (or deflation) it may well be that the optimal path of the market-clearing risk-free rate of interest during a period of severe recessionary disequilibrium of the overall economy, especially in the aftermath of financial crisis or panic, passes through deeply negative territory.

Market-clearing risk-free rate here is a distinct concept from the neutral or natural interest rate which matches full overall economic equilibrium. When there is economic disequilibrium, a well-functioning capitalist economy with market-clearing can produce potentially a level of interest rates well below neutral as a result of the in-built mechanisms (many of which involve expectations formation about the future) generating an optimal (in terms of time and gradient) path back to equilibrium. If the zero-rate barrier remains firmly in place, then interest rates might play only a very constrained role in engineering the path. Inter-temporal wage and price changes become correspondingly more important – especially the prices of highly cyclical goods and services falling to a level well below that expected in the next business upturn. But if there are substantial wage-price rigidities then the engineering of that path could be much more costly than if sub-zero rates had been possible.

The obstacles (see below) to interest rates falling below zero under a conventional monetary system have unfortunate macro-economic consequences. Private market forces of recovery are slowed and banking system problems are intensified.

A fall of risk-free rates into probably deep negative territory would help underpin present spending not just through lowering the price of present consumption in terms of future consumption foregone during the period of negative rates but also by raising the level of equity prices. The equity market plays a critical role in stabilizing the economy in the aftermath of a recessionary shock and inducing recovery.

The bold speculative investors who are willing to continue holding or to buy equities at a level which discounts a bright economic future beyond the present recession make it possible for business capital spending plans with a gestation period stretching over many years to get the thumbs up in the capital markets even when the present is dark. (In practice this means that a firm announcing new investment plans stretching over many years taking advantage of identified opportunities should find its equity share price jumping.) They are the ultimately stabilizing speculators – arguably much more important than the illustrative speculators which Milton Friedman identified in his description of stabilizing speculators in the commodity markets (see Friedman, 1966).

The role of negative interest rates in stabilizing the financial system under stress can be shown in the following example.

Suppose in the depths of a post-panic recession, with the zero-rate barrier removed far below zero (say to -10% p.a.) that market-clearing short-maturity risk-free interest rate (in nominal terms) are at around -5% p.a., with market-clearing rates on many categories of risky loans at say $0-10\%$. (The market-clearing risk-free rate is determined by forces emanating from expectations about the long-run economic future and the nature of the road back to overall equilibrium, as influenced by the publicly announced target growth-rate for the supply of monetary base.) The spread between observed risk-free and risky loan rates would be above normal levels due to first the general increase in risk and second the raised level of aversion to taking risks. (Optimal maximum loan to equity ratios in accordance with normal bank prudence would fall to abnormally low levels, reflecting the high costs of any bankruptcy proceedings for all involved.) Banks would continue to expand their loan books in line with new opportunities and they would still be able to raise equity capital (subject to the potential obstacle of the debt overhang already mentioned – see p. 93).

Now compare that situation with the real world where the zero-rate barrier (which consists of banknotes paying effectively zero interest and bank reserves also paying zero) prevents risk-free rates falling below zero. The market level of interest rates on risky loans might still not be much higher than say $5-10\%$ p.a., meaning that risk-premiums

are constrained below the levels which would prevail in equilibrium. (If instead, risky loan rates ballooned out to 10–15%, there may be such feeble demand – given the depressed environment – as to mean supply greater than demand of such loans.) In turn the ability of the banks to go out and raise equity to back any new lending is curtailed. And non-banks have less incentive (than under equilibrium conditions) to hold risky loans in their portfolios (meaning that they have a lower share allocated to these than under equilibrium conditions).

In sum, if the obstacle to negative interest rates coming about as a result of market clearing in potentially bad recessionary environments could be removed, the outcome would be so much better.

How to demolish the barrier to sub-zero interest rates?

It is profoundly disappointing that despite the possibility of negative interest rates having been a topic in the academic literature for almost 100 years, starting with Gesell (1958), moving on to Irving Fisher (see Dimand and Geanakoplos, 2005), and then a flurry of papers in the 1990s and beyond triggered by Japanese experience with deflation and bubble economy crashing (see, for example, Brown (2002, 2008, 2009), Buiters (2003), Mankiw (2009)) when it came to the Financial Panic of 2008 no central bank had any plans at the ready for introducing a negative interest rate regime. Instead by implication their working assumption was that any such set of plans was too complicated for practical purpose and that better substitutes could be implemented.

In an erudite keynote lecture on ‘Unconventional Monetary Policy’ at the Geneva-based International Centre for Monetary and Banking Studies, ECB Board member Bini-Smaghi (28 April 2009) did not make one mention of a negative interest rate regime!

Yet surely this is an area where the ECB could have given a lead, not least in view of its own successful experience in the banknote exchange which was effected in early 2002 (old sovereign banknotes replaced by euro-banknotes)?

After all the most practical way in which to displace the zero-rate barrier which stands in the way of risk-free rates falling significantly below zero is the announcing of a banknote exchange (old into new at a penalty rate – e.g. 110 old euros equal 100 new euros) to take place at some point in the future, together with an immediate levying of a fixed charge – equivalent to the setting of a negative interest rate – on bank reserves held at the central banks. (For details of how this fixed charge should be set, see p. 177.)

The conversion (undertaken in a way such as to preserve anonymity) becomes the instrument of imposing a tax on banknote hoarding which otherwise would prevent nominal interest rates falling into substantial negative territory. For in the situation of say bank deposit rates descending to say, *minus* 5% p.a., with no banknote tax in place, bank clients would simply withdraw funds in notes and hold them in vaults. The run on bank deposits would just make the crisis – economic and financial – worse.

One writer, Mankiw (2009), has suggested that an alternative to a banknote exchange would be the simple cancellation by lottery of $x\%$ of banknote issuance outstanding at a given date. The authorities would announce which banknote issues (by number) were no longer worth anything at a stipulated date in the future. The problem with that proposal is it involves the retail public scrutinizing every note with which they are presented to make sure it is not one of the duds. Moreover in the period up until the lottery announcement (of losers), holders of banknotes are at considerable risk (unless they are owners of a massive hoard and can count on the loss being close to the given percentage of total note supply to be made invalid).

Under the forced conversion scheme for banknotes, as soon as this is announced the normal 1:1 rate between banknotes and bank deposits would be suspended, and the authorities would announce a declining exchange rate path between the two over the period between the announcement date and the conversion date. At the start 100-euro deposits would equal 100 euro-banknotes. If the conversion date is two years ahead and at a 20% discount, then after one year say, 110 euro (old banknotes) would equal 100 euro deposits. The rate paid by the central bank on reserves would be set equal to the rate of depreciation of banknote value (–10% p.a. in this example). In this way, equality between the rate of return on both components of monetary base – currency and reserves – would be maintained, now at a negative level as against at zero as in normal times.

In principle, at some point during the two-year period, the government and central bank could postpone the conversion date, for example by a further year. They might do this if economic conditions remain severe. For example, at the end of the first year they could announce that the conversion date is to be at the end of year three, with the forced conversion rate then amounting to a cumulative discount of 25% – 75 new euro-banknotes equals 100 old euro-banknotes.

In effect, depositors withdrawing cash from the banks should expect to receive gradually more and more banknotes over time relative to face value of their bank deposit amount. And they would have to pay more

and more in to obtain the equivalent face value. In the retail economy, payers in cash would be charged a premium compared to the price in terms of deposits, and this premium would increase as C-day approached. The rate of decline in banknote value would set a floor to the extent to which interest rates could fall to negative levels. For example, if the penalty on conversion is 20% two years from now, then interest rates could not in the interim fall significantly below *minus* 10% p.a. But they would be free to move well above that (e.g. -5% p.a.).

In principle the central bank could steer policy as during normal times (see description on p. 184) by setting a path for the growth of reserves in the banking system. Money rates would be determined in the market, with overnight rates on reserves set by supply and demand for high-powered money. The change of effective interest rate on reserves and currency, however, from the normal zero to a fixed negative amount would create some considerable uncertainty about the path of demand for high-powered money during the emergency period and into the early stages of restored normality. And so short-maturity interest rate fluctuations in line with a given fairly constant growth of monetary base might be abnormally volatile (justifying some smoothing operations). Under highly depressed conditions, market rates could well move far into negative territory (where the boundary would be set by the conversional plan as detailed above).

Ban the 'Quantitative Easing' time-bomb!

Some practical policymakers in central banks and ministries of finance while balking at any proposal to enable negative interest rates to emerge as 'infeasible' have in some cases been enthusiastic about one or more of the very imperfect substitutes (for empowering monetary policy under a situation where the market-clearing rate of interest has most probably fallen into substantially negative territory). One possibility in the text book has been the distribution of massive supplies of banknotes by helicopter (or more prosaically by tax rebates mailed to each household) where it is made totally clear to all that there will be no mopping up of the banknotes (or monetary base so created) in the future (government selling bonds to shrink the monetary base and raising tax rates in the long run to service these).

A massive increase in banknotes (and other components of high-powered money supply) with a guarantee of no subsequent mopping up in itself would mean a certain jump of the price level over the long run. The operation would induce spending in an attempt (by individuals)

to “beat” the rise in prices (given zero nominal interest rates) albeit with no obvious urgency. The prospect of an immediate increase in spending might be enhanced by an element of (illusorily perceived) wealth gain related to the distribution of notes (or its equivalent in tax re-bates together with the promise of no subsequent re-collection and thereby no Ricardo effect). The wealth gain is illusory in so far as rational recipients realize that as all recipients step up their spending the price level would rise, meaning an erosion of the apparent initial real (wealth) gain.

In any case there is no certainty as to when the spending to beat the feared price level will kick in. The recipients of the windfall can take their time unless they get worried that other consumers will swing into action first and by the time they make their purchases the price level will have increased. By contrast, negative interest rates gnaw continuously on the non-spender and may thereby be more reliable as a means of stimulating spending in the immediate and short-run.

It is unlikely that the US Federal Reserve and Treasury Department in late 2008 and early 2009, when they embarked among much fanfare on ‘quantitative easing’, were acting aggressively on the explicit basis of generating expectations of higher prices and of encouraging popular perceptions that there would be no clawing back of present fiscal hand-outs. Professor Bernanke continued to stress the determination with which the inflation target would be met over the medium-term and the Obama Administration published long-term budget projections according to which the deficit-to-GDP ratio would fall back to around 3% by 2013 (remaining stable thereafter). The Federal government debt to GDP ratio would remain steady at below 70% of GDP from 2013 onwards.

Even so, it would have been entirely rational for US households and businesses to put at least some probability on the Federal Reserve’s determination being less real than apparent, or in intentions evolving in the direction of deliberately created inflation, or in best intentions (not to create inflation) failing to be matched by the best operating plans. And it might well be that Professor Bernanke was playing a game (like the cat) with his potential victims of inflation. While not intending to catch them, he was happy to frighten them into spending. It was possible that the game might become real – as Pagliacci’s clown announces at the end of the show, ‘La Comedia E’ Finita!’. Would the economics professor who had designed an intricate inflation time bomb wait too long to destroy his creation, especially if it were proving so successful in driving down the US dollar in global currency markets? After all for Ben Bernanke devaluation was the cutting edge of anti-depression policy.

In sum, it could be that the so-called QE policy combined with the Treasury bond purchase programme which Professor Bernanke and his colleagues introduced in early 2009 would have some stimulatory potential through the inflation scare story. The immediate counter-evidence to any such possibility came from the market for inflation-protected Treasury bonds (TIPS), where real 10-year yields remained at 1.5–2% (in real terms) suggesting no deep anxiety about an inflation bombshell further ahead. Great fear would have led to the real yield quoted on TIPS falling towards zero or below. There was also counter-evidence from consumer surveys which showed long-run inflation expectations remaining stable. By late 2009, however, the TIPS indicator, sky-high gold and a weak dollar, were all suggesting an increased anxiety (albeit not general amongst all investors) about US inflation danger.

It may be too early to relax about the potential damage from the Bernanke Federal Reserve's launch of the QE time-bomb. A benign cyclical rise in the price level during the first year of strong recovery (driven by firms in the most cyclical sectors of the economy restoring profit margins which had been slashed during the severe recession) accentuated by a weak dollar could raise the public anxiety level about the danger ahead of monetary inflation and in particular of a new Great Inflation starting say in 2012/13. A rise in inflation expectations could fuel present wage and price increases. The existence of huge excess reserves in the banking system and the wholly rational lack of confidence in their being pulled out without the Federal Reserve having first set loose the proverbial monkey wrench could be the ingredients of a powerful cocktail of monetary policy disasters ahead!

As we have seen in the euro-area, the ECB was very cautious in its approach to QE, ruling this out at first in early 2009 when in any case it was still setting the floor for risk-free rates at significantly above zero (with say three-month German and French government paper at close to 1% p.a. even in early spring). Board member Lorenzo Bini-Smaghi explained the grounds for caution in his keynote Geneva speech (Bini-Smaghi, 2009). In so far as QE depends for its success in generating some expectation of inflation and a related sustained period of very negative risk-free real interest rates in the early part of the next economic recovery, that would not work in the euro-area given the strict constitutional requirements observed by the ECB with respect to price stability.

In May 2009, the ECB announced a very small step of QE – with the declared intention of buying covered bonds (top quality bank bonds secured by mortgages) up to an amount of around 0.5% of euro-area

GDP to be matched by an expansion of excess reserves. According to some ECB watchers the Bundesbank (seen as opposed to excess reserves) had lost a small battle against the QE advocates within the policymaking council but had probably won the war in terms of blocking any bigger experimentation on anything near the scale of the US or UK experiments (where excess reserves by this stage were around 7% and 10% of GDP respectively). (As we have seen it was not just the Bundesbank which was opposed.)

Implicitly (there is no explicit evidence on this point!) the Bundesbank was rejecting the view that QE policy – defined as the creation of massive excess reserves in the banking system and so multiplying the size of the monetary base – can stimulate the economy without creating serious danger of monetary disequilibrium in the process. There was no realisation in Frankfurt as yet that QE, as pursued by the Bernanke Federal Reserve, was to be a weapon of non-declared currency war.

The original advocacy of QE can be found in ‘The Monetary History of the United States’ (Friedman and Schwartz, 1963) where the authors blame the Federal Reserve for having allowed the money supply to contract by more than 30% during the Great Depression. They imply that action could have been taken – aggressive expansion of the monetary base – to prevent this outcome and indeed praise the short-lived ‘massive’ open market operations which took place in spring 1932 (attributing a short-lived subsequent brightening of the economic skies to that incident).

The authors imply (and indeed quote from earlier empirical evidence) that there is a multiplier significantly above one between monetary base expansion and overall money supply expansion. That positive (above unity) multiplier depends on a process whereby banks finding themselves with a build-up of deposits matched by excess reserves will look for profitable lending opportunities and so drive forward wider monetary growth (the money multiplier) and credit expansion. The problem is that none of that is plausible in the situation of severe disequilibrium characterized by market-clearing risk-free interest rates being very negative were the zero-rate barrier to be dismantled.

In the counter-factual case of the Federal Reserve having massively pumped up the monetary base from summer 1931 in the midst of global financial panic (which had started that spring with the German and Austrian banking crises) it is arguable that all of this would simply have accumulated as excess reserves in the US banks or as cash hoards under the mattresses. There was really no alternative to a full-fledged negative interest rate regime in terms of potential effectiveness

(and of incidentally halting the monetary contraction) in jump-starting the money multiplier mechanism.

Anna Schwartz, in her criticism of the Bernanke Federal Reserve in 2007 – see *Wall Street Journal* – suggested that in late 1930 the monetary multiplier might indeed have been quite powerful given that at this stage the US banking system was beset principally by a illiquidity problem rather than a solvency crisis. Already in autumn 2007, by contrast, there was a solvency crisis which Professor Bernanke tackled mistakenly as if it were a liquidity crisis.

In a full transcript published in May 2009 of Federal Reserve policy meetings in 2003, Professor Bernanke is recorded as arguing that unconventional policy tools in the form of un-sterilized purchases of T-bonds could be stimulatory by driving down long-term interest rates (by lowering expected future rates in the term-structure). But recent actual history does not suggest that this transmission mechanism for QE is at all robust. In the two months from the Federal Reserve first announcing QE (mid-March 2009), the ten-year T-bond yield rose by almost 100 bp to 3.4%. If there is indeed no magic wand effect of QE on long-run yields, is the emperor left altogether unclothed?

One piece of magic left in the monetary policy black box could be a pre-announced period of negative real rates into the early years of recovery. The central bank could announce that it will keep rates at zero right up until that stage where inflation reaches 2% p.a., even though the neutral rate would have risen considerably higher. Then in anticipation of those negative real rates in the future some spending might be undertaken in the present by those stronger households un-strapped by the cash-constraints of recession and de-leverage. This possibility does not turn on QE, although the existence of a big cushion of excess reserves might make it more plausible as a scenario. The Bernanke Federal Reserve, by making clear in a chorus of official speeches during autumn 2009 that the market ‘had it wrong’ in pricing in a series of rate rises already through the first half of 2010, even though the price level was again rising, had evidently resorted to this particular black-box tool.

That tool can hardly be effective during the panic stage when despair is prevalent. Moreover, so long as the zero-rate barrier remains firmly in place in the depressed economic situation such as existed in the wake of the autumn 2008 financial panic, the available risk premium for the banks is compressed to well below full equilibrium level (which is in any case higher than normal given the elevated amount of uncertainty), curbing their enthusiasm (if any) to take on risky loans, even though fees and other ancillary income may be gained. Also restricting loan

business could be an issue of thin or eroded equity cushion for depositors and the difficulty of issuing new equity capital especially if prospective rates of return are compressed and so meaning that net present value of expanded loan business could be negative.

As the severity of the recession lessens and recovery gets under way (this happens due to monetary forces operating) the equilibrium risk-free rate starts to rise moving closer to zero from its very negative level. As that happens obtainable risk premiums on bank lending (the difference between the rate obtainable on risky loans which should rise is risk-adjusted terms and that paid on very low-risk bank deposits – where that very low risk is due to equity cushioning or government insurance) rise. Banks begin to respond to the excess reserves by lending and if need be they can raise corresponding amounts of equity capital.

Hence QE begins to suddenly kick in and loan momentum increase correspondingly well past the recession trough and into the expansion phase. A danger looms that if the central bank seeks to restore positive interest rates by withdrawing most of the excess reserves all in one go it would have a dampening influence on the economy well beyond what the likely small rate rise would suggest. The withdrawal brings the kicking-in mechanism to a sudden halt. That is what some historians argue happened when the Federal Reserve in 1937 suddenly doubled reserve requirements, playing a big role in plunging the economy into a new severe recession (see Friedman and Schwartz). (There is an alternative hypothesis here. The plunge of the US equity market in spring 1937 reflected profits disappointment, concern at 'soak the rich taxation', and at the rapid rise of the dollar against the now defunct gold bloc currencies in Europe, as well as at the deteriorating geopolitical climate including the Japanese-China War and German aggression.)

Alternatively the central bank could seek to trim back excess reserves gradually while short-maturity risk-free rates remain at around zero. There is the reverse danger in this strategy that the central bank underestimates the inflationary dangers. And in any event the earlier flooding of the banking system with excess reserves and the long period during which short rates are stuck at zero mean that neither the money nor short-maturity bond markets are at all robust as potential signallers of a rise in the neutral level of interest rates.

A problem both for market and central bank recognition of the onset of monetary deflation or inflation is that the behaviour of the price level is itself cyclical. During the recession, across a wide swathe of enterprises, labour may accept some degree of wage-cuts as part of a deal to keep these in business until better times arrive.

The simple Keynesian notion that wage-cuts are counter-productive during recession because they lead to less aggregate demand is totally fallacious; if the alternative to wage-cuts and the equity owners agreeing to tide over a period of recessionary loss – mooted by the wage reductions – in the hope of avoiding costs of full wind-down and then wind-up is widespread shut-downs, income and demand in the economy would surely be less. And similarly, prices may be cut during the recession to well below normal level as businesses seek to stimulate demand in a very weak environment.

In effect enterprises may settle for a period of expected loss during the recession so long as they (and their equity holders) see the present value of profits over the long run as positive and more positive than would be the case if radical winding down and subsequent winding up of enterprise activity were to take place.

In principle the central bank by luck or skill might get the balance just right, but the critics of QE could still argue that the added risk of big monetary error which it causes in the recovery phase – either in a deflationary or inflationary direction – is not worth the candle. A better option might have been to remove the zero-rate barrier to negative risk-free rates during the depths of the recession and then leave it to market forces to bring about a gradual rise of money rates with (starting from very negative and later into positive territory again) within the context of a long-run stable rule for high-powered money creation (rather than a monetary binge followed by withdrawal). Or alternatively, the central bank might have left the zero-rate barrier in place but drawn attention of market participants to how a pro-cyclical path of the price level (starting with a fall) would provide stimulus (see pp. 20-1).

Adopt monetary base control and a very long-run aim for price level

The creation of a monetary framework in which even the overnight and very short interest rates are determined flexibly by market forces rather than being pegged by the central bank (with changes in the peg wholly a matter of discretion) is one element in the set of remedies to the flaws of framework design which have so bedevilled the first decade of EMU. Instead of interminable press conference discussions about the next 25 bp move in the peg, the ECB would set a path for monetary base growth over time, making this the key nominal anchor to the economy. Markets, pooling information from widespread heterogeneous sources, can do a better job of discovering the (non-stationary) neutral rate of

interest and in steering actual rates along an optimal path (not always equal to neutral given extended periods of economic disequilibrium) than can a monetary bureaucracy.

In order for monetary base to become a tolerably stable anchor, some wider reforms are needed. These would be designed in considerable part to reduce uncertainty concerning the growth in demand for reserves and making this as much as possible a well-behaved function of a few key variables and of the evolving price level in particular. And it would also be important that demand for reserves over short periods of time were elastic with respect to changes in interest rates. Otherwise in the absence of strict rate pegging, the level of rates in the overnight markets might fluctuate violently. (In fact in the pre-World War I gold standard, in which monetary base was indeed the pivot, fluctuations in overnight rates were very sharp, but not violent, while the longer-maturity rates tended to be based on factors which transcended these. See for example, Eichengreen, 1997.)

The needed reforms would include the imposition of modestly high reserve requirements on all deposits with regulated financial intermediaries and the stipulation that reserves would normally pay no interest. (In the extreme case of the contingency plan for negative interest rates coming into effect in a severe recession, the central bank would charge interest on reserves, setting the negative interest rate close to the set depreciation rate of banknotes against deposits as the conversion date applies.)

If by contrast the ECB continues with the present practice of paying interest on reserves at a modest fixed margin below its official rate, where in addition that fixed margin is subject to occasional arbitrary change, then there is no flexibility for demand and supply to come into balance in the market for reserves. Instead the central bank has to virtually supply all reserves demanded at the level of overnight rates as determined solely by itself. Supply cannot be managed independently of demand. And demand in any case would change in a highly discontinuous fashion every time an arbitrary change was made in the margin between the rate of interest on reserves and the official rate.

Moreover the ECB practice of pegging the rate on reserves at only a little below official rates (and the rates in the overnight money market) means that there is little scope for flexibility in the spread between overnight money market rates and the rate on risk-free assets such as T-bills or short-maturity bonds. (If T-bill rates fall far below the rate the ECB pays on reserves, then the banks would dump their holdings of short-maturity bonds and bills and seek to increase their reserve holdings.) And so the spread between risk-free rates on near-money assets

(such as T-bills) and in the money market does not perform a signalling role in the run-up to a financial crisis. As a counter-example in the US, before the Bernanke Fed made its bizarre decision in late 2008 to start paying interest on reserves, the so-called TED spread (the shortfall of T-bill rates below same-maturity money market rates) was a widely watched indicator of stress.

Yes, zero rates on reserves may penalize transaction deposits when interest rates are high and lead to market distortions (such as flourishing off-shore business free of reserve requirements). Little of this, however, would occur in the context of no persistent inflation and fairly low average nominal money rates (say in a 0–4% range). In any case, offshore centres could be drawn by diplomacy into enforcing similar reserve requirements as onshore. And one important offshore centre, Luxembourg, is within the monetary union and now automatically subject to any reserve requirements.

In effect the strict pegging of overnight rates with adjustments to the peg based on the policymaking committee's judgement as to the optimal path for short-term rates so as to achieve the ECB's aims (uppermost of which is 'price level stability' – defined at present as a medium-term target for inflation) would be displaced by a target path for monetary base growth (together, as we shall see below, with the aim of the price level over the very long run remaining on a flat trend).

There would be safeguards (double-checks) in the form of wide corridors for overnight rate fluctuations and monitoring ranges for wider money supply aggregates. The aim for long-run price level stability would be expressed in terms of decades. For example, the ECB might specify that the ten-year average of the price level should be around 0–10% higher than the average in the previous ten years. Over-shoots or under-shoots should feed back to tweaking of the target path for monetary base growth over a sustained period of several years.

The principles of how a new more stable monetary order could be constructed to replace inflation-targeting were already laid out in the author's previous book (Brown, 2008). These were expressed in general terms without specific reference to Europe.

Long-run price level stability should not mean 2% p.a. inflation!

In tailoring the hypothetical stable order to the euro-area (and indeed to any other monetary zone), a serious question is whether indeed the long-run aim should be expressed as price stability or a stable but moderate

rate of inflation – say around 1–2% p.a. (as an annual average but with considerable variation over the short- and medium-term).

Two arguments are prominent in the literature (including ECB official reports) for choosing the higher figure.

The first is that a high figure would allow considerable relative price level adjustment to take place within the euro-area consistent with no actual persistent price level decline being required in one or more member countries (see p.62). That is an important consideration given the extent to which equilibrium relative price levels may indeed shift within the euro-area – much more than within say the US (between member states of the union).

The second argument is that the lack of dynamism generally in economic development and especially the tendency to huge savings surplus in Germany means that the equilibrium risk-free real rate of interest in the euro-area is especially prone to falling into a negative zone. (In a global context, though, this would not be the case if capital were highly mobile internationally). If the costs of introducing a negative interest rate regime are regarded as very large in transaction and political terms, then an alternative to removing the potential obstacle of a zero rate trap is to have a moderately high normal rate of inflation (meaning that the risk-free rate of interest in real terms can become quite negative even with nominal rates above zero).

Such thinking in part was of course behind the decision in 2003 to clarify the symmetry in the 2% inflation aim – a sustained fall of inflation below the aimed-for path is as troublesome as above-target (see p.64).

The critic would say that the amount of extra flexibility achieved by that tweaking of the inflation aim was so small. And it occurred at a time when the inflation rate was coming under some downward pressure from real forces (increasing productivity and terms of trade improvement) and so the timing could not have been more unfortunate in terms of inducing monetary disequilibrium with the symptoms of credit and asset bubbles.

Should the aim for the price level path in the long run (over decades) be reduced to flat, or 0–1% p.a., rather than the 2% p.a. so far adopted by the ECB? There are several arguments for doing so.

First, anchoring inflation expectations to zero may be inherently easier than to a small positive number. Once inflation is in the air, households and businesses can imagine that it could rise from the steady state level. By contrast, a commitment to zero over the long run might well have stronger resonance in terms of expectations formation.

Second, the amount of extra 'flexibility' gained for real interest rates (by raising the very long price level aim to an annual average rise of 2% p.a. from 1% p.a.) without removing the zero-rate barrier is quite small. And in any case, with long-run price level expectations firmly anchored at no change there should be more scope for the pro-cyclical swing in prices to play a stabilizing role for real economic activity (see p. 20). Households and businesses can recognize a bargain more clearly during recession when its price has been cut and is below the likely price in better economic times ahead than when its rate of price increase has been abnormally low and likely to be followed by a transitory acceleration to above normal during the recovery phase. And a regime of long-run stable prices might in fact induce greater flexibility (down and up) of wages and prices through the cycle as economic agents (households and businesses) realize their new effectiveness.

Third, a firm anchor at zero for long-run changes in the price level should make it easier for the ECB to stay away from the panic button (if pressed this triggers a tightening of monetary policy) when an oil price shock or other type of real shock drives the price level higher. Also the zero anchor should allow the ECB to remain calm about a benign cyclical jump in prices during the early stages of an economic recovery. A cyclically led upturn of the rate of price level change to say 3% p.a. (compared to an anchor set at 2% p.a. in the long run) could trigger the alarm bells about monetary inflation, whereas an upturn to say, 1–2% with the anchor set at a long-run rate of zero would have no such effect.

Fourth, with the euro-area now emerging from the Great Recession of 2008–9, there are strong grounds for imagining that the near-term path of the euro-area CPI over the next two years will be flat or even falling. The German price level may be rising at 0–1% p.a., but the forces of relative absolute price level adjustment could well lower the absolute price level in the countries where real estate bubbles were deflating – including Spain in particular, but also potentially France and Holland. And the tentative evidence so far is that some prices and wages are indeed flexible downwards. Under these circumstances for the ECB to continue to aim at a price level path of 2% p.a. increase would imply a sustained period in the distant future of considerably higher inflation.

And as suggested here, the ECB would have a contingency plan for negative interest rates on the shelf. In effect negative interest rates are a supplement to the forces generating recovery via driving down present prices relative to future prices.

Is any such project for monetary reform in EMU pure fantasy? It is implausible (albeit not impossible!) that reform is going to come

from within the present structure of decision-making or framework making in the EMU. Perhaps the economics directorate in Brussels charged with writing briefs on EMU (with no authority over the ECB) could respond to a combination of pressures to draft a research paper on the subject of reform. But there is nothing in the first decade of EMU history to suggest that such an event is at all likely or even effective in influencing events in Frankfurt (except in an obstinate counter-reflex).

And there is no real open forum for outside views to enter the decision-making process. Instead, euro-citizens are treated to its officials taking the trouble periodically to explain their thinking to various selected audiences (as in the example of Bini-Smaghi's Geneva address and the whole collection of speeches made by the thinkers within the ECB Board over its decade or more of existence). This brings us to the much larger question of remedies for present non-transparency and non-accountability.

Let the sunshine in!

Ever since President Mitterrand overrode his Finance Minister Pierre Bérégovoy (1987) in proposing (to Chancellor Kohl) that the committee designing a blue-print for monetary union should be dominated by central bankers and exclude finance ministers (on the principle that if you want an agricultural treaty you don't set up a meeting of agricultural ministers), European monetary policymaking has taken place in a grey zone where the light hardly comes in.

In a Europe without political union, monetary framework-making and monetary policymaking has been dictated in effect by a politburo of central bankers. To understand how this politburo assumed power we should remember that in 1987 there was a widespread perception that the only monetary task was to get inflation down and keep it there. It seemed that independent-minded central bankers, ready to administer strong anti-inflation medicine had succeeded in bringing the Great Inflation to an end. Central bankers were in high esteem.

Now the idea of leaving central bankers to get on without any outside auditing of their policies has little if any plausibility – whether in terms of liberal principle or efficient results.

The claim that the central bankers are apolitical experts who should by and large be deferred to by the politicians is nonsense. They may be experts, but the experts have made many mistakes including some near the catastrophic extremities. And fundamental disagreements between

different groups of experts are so well known that no particular school has claim to unchallenged wisdom. Deference is not in order.

Political liberalism has to have as one dimension monetary transparency including control over central bankers. But who in EMU could exert control (in a checks-and-balances sense)?

And how can integrating the central bankers into the political process be done in such a way as to prevent their becoming agents of powerful finance ministries for whom doses of inflation might at times make eminent sense in terms of political arithmetic?

Reverse the 1988 victory of the ordo-liberals

The response of German central bankers to the dilemma of reconciling liberalism with a stable monetary order has been to hark back to the principles of ordo-liberalism which influenced Ludwig Erhard and other policymakers as they drafted the plans in 1948 for the launching of economic and monetary reform, the precursor to Germany's economic miracle. For example, ECB Executive Board member Jürgen Stark told the Eleventh Euro Finance Week in Frankfurt, 18 November 2008, that Walter Eucken's famous book, 'Principles of Economic Policy', had been a constant source of inspiration throughout his career:

Eucken's main insight was that a market economy can only flourish in a sustainable manner if certain timeless principles are adhered to – and importantly, all at the same time, because of what he called the interdependence of orders.

This philosophy stems from a group of political economists based in Freiburg (see Vanberg, 2004). A key principle of ordo-liberalism is that certain institutions – including critically the central bank – have to be outside the political process if the market economy is not to become 'corrupted' (for a full statement of the role of such arguments in influencing the relationship between the Bundesbank and the government and later in Germany's approach to the evolution of EMU see Marsh (2009) and Leaman (2001)). 'Corruption' would mean the state using its power in the interest of powerful monopolies or labour groups albeit so undermining the functioning of the market economy.

The ordo-liberals had very much in mind German history extending from Bismarck through the Weimar Republic and beyond. In partial contrast to ordo-liberalism have been 'classical liberals' in the tradition of Adam Smith, Hume and Hayek.

The classical liberals start with Smith's assertion (in his 'Theory of Moral Sentiments') that people are born with a moral sense, just as they have inborn ideas of beauty and bolster it with a natural fellow-feeling (sympathy) (see Eamonn, 2007). And so there is a benign invisible hand which tends to guide the creation of beneficial social patterns. Social organization is the outcome of human action but not necessarily of human design. Our unplanned social order is far more complex and functional than anything we could reason out for ourselves (see, for example, Manfred E. Streit and Michael Wohlgemuth (1997).

A key element which Hayek added to this discussion was the concept that the market is an information system which enables mobilization of dispersed knowledge in society. Hayek takes issue with the static general equilibrium theory of the Austrian School which in principle leaves open the possibility that the set of equations could be solved by a control board. It is the inherent perpetual evolution of information and the capacity of market systems to discover this that form the case for decentralized markets rather than control authority. And this thinking applies also to social organization and its capacity to adapt (see Hayek, 1978).

The classical liberals would balk at the whole construction of the ECB and its role within EMU. The severe hurdles placed in the way of reform, the long fixed tenures of its leading officials making them largely (if not entirely) insulated from the constructive political forces of change and adaptation, all should be anathema to the classical liberal. But these same hurdles are fully understood and welcomed by the *ordo-liberals*.

In the run-up to EMU it was the *ordo-liberal* concept which dominated – there could be no other way given the nature of the deal between France and Germany in the absence of political union.

Political Union essential in fight against monetary complacency

The traditional position of the Bundesbank in the 1970s and 1980s as voiced by Otmar Emminger and Helmut Schlesinger (each successively chief economist and later President) had been that European Political Union should precede EMU. That position had been based not on qualms about classical liberalism but on a view that monetary policy-making could not be divorced from overall economic policymaking (involving fiscal policy, financial stability and currency stability). But the same conclusion holds once we consider the troubling issues of non-accountability, non-transparency and appointment-making.

In particular, central bankers could be brought back into the fray of the political marketplace albeit subject to some overriding constitutional principles (regarding monetary stability) which they would have to respect or else face hazards such as impeachment or private legal retribution (for damages) from citizen victims.

The central bank president would be appointed by the executive branch of the hypothetical political union subject to ratification by the legislative branch and for a three- or four-year term (not the eight-year term set under the present *ordo-liberal* conceived version of EMU). The legislature would appoint a monetary audit committee made up of monetary experts with the different parties able to choose their own members (in proportion to their weight in parliament).

The audit committee would have full access to records of monetary decision-making and full rights to cross-examine policymakers. Any reports written by the committee could have dissenting views – likely to be the case as between those appointed by different parties. And parliamentarians would be able to influence members of the committee in the pursuit of their functions.

The reports would be issued to the parliamentary monetary committee responsible for the ECB and published simultaneously. They could be used to improve the quality of parliament's interfacing with the ECB (including discussions as to monetary reform or reappointment of senior officials). Indeed it should be within the scope of the monetary auditors to write a report (again this may be with many dissenting opinions) about the record to date of particular senior officials.

This open framework described here as a prototype for monetary union within the context of European Political Union is quite different from where central bankers, subject to no effective monetary auditing, seeking to popularize their institution. For example, Professor Bernanke won praise for popularizing his institution, participating in a one-hour town-hall style forum on TV (moderated by Jim Lehrer on 'The Newshour', 26 July) and answering questions from local residents.

When a small business owner asked Professor Bernanke why the Federal Reserve helped rescue big banks while short-changing small companies, he answered that he had decided to hold his nose because he was afraid the entire financial system would collapse. But what would have been the course of this town meeting if an audit committee member who had signed an opinion (perhaps minority) deeply critical of Bernanke had been allowed to participate and accuse the professor of grave mistakes?

In fairness to the overall US climate of monetary political debate, in the same week a slating attack on Professor Bernanke was published in the *Wall Street Journal* authored by Professor Anna Schwartz arguing that in no way should he be reappointed (Schwartz, 2009). And remarkably a Gallup poll conducted in mid-July 2009 revealed that only 30% of Americans thought the Fed was doing a good or excellent job. It was the lowest such score out of nine key government agencies. In fact more Americans approved of the IRS than the Fed!

As a practical matter, European Political Union, under which a starker form of monetary democracy could come into existence than anything even remotely now on offer in the US, is nowhere on the horizon. And in any case, in itself political union provides no guarantee that there would be a better outcome for monetary democracy or EMU. Much would depend on the success of the political union in becoming a 'marketplace' in which the invisible hand would work effectively in both commercial and policymaking domains.

US 'monetary democracy' is not a good model for Europe

The sequence of monetary policy disasters in the US since the creation of the Federal Reserve in 1913 played out with remarkably little democratic control in evidence. Those highest officials responsible for the catastrophes were never hectorated and savaged by monetary audit committee members and rarely by powerful Congressional committee chairs. Instead they enjoyed an aura of being in a higher order, above the fray, which was closer to the concept of *ordo-liberalism* than of classical liberalism, albeit less close than the situation for the European central bankers. Arguably three of the most disastrous Federal Reserve chairs obtained presidential re-nomination to second terms which were duly ratified by the Senate (albeit that at the time Professor Burns was re-appointed in early 1973 the enormity of the Great Inflation was not yet apparent).

Perhaps, nonetheless, over coming years the forces of political liberalism will achieve results in the US in terms of re-modelling the process and framework of monetary policymaking. One particular proposal getting a lot of attention at the time of writing was the proposal of Congressman Ron Paul for regular monetary audits of the Federal Reserve. (The audits, however, were to be limited to staff of the general accounting office – a far cry from the much broader proposal here).

The follower of the regular testimonies before Congress of Federal Reserve presidents cannot but be impressed by how weak the accountability and control function has been within the US context. Throughout

the Greenspan presidency, there were no searching difficult questions about what might be going wrong. Instead Alan Greenspan presided over the hearings as the Maestro with deferential senators and Congressmen asking polite questions of information on a wide span of topics. During the presidency of Ben Bernanke no Congressional questioner raised the issue as to whether there were alternative and better courses of action to the mega-sterilized liquidity support and protracted fight against inflation through late 2007.

Professor Bernanke faced remarkably little questioning in Congress about his role in creating the credit bubble (his critical advice as a new governor in 2002 and early 2003 that the US faced a Japan-style deflation risk and that inflation should be breathed back into the economy). Though to the credit of the US Congressional monitoring role there is on record Senator Bunning's statement to the Senate Banking Committee of 15 July 2008 (addressed to the chairman of that committee):

First, on monetary policy, I am deeply concerned about what the Fed has done in the last year and in the last decade. [...] The Fed is asking for more power, but it has proven they cannot be trusted with the power they have. [...] Their monetary policy is a leading cause of the mess we are in. [...] Now the Fed wants to be the systemic risk regulator. But the Fed is the systemic risk.

There was no questioning in Congress about the merits or not of the QE policy on which the Federal Reserve embarked early in 2009, let alone the putting forward (by congressional panels) of proposals for a negative interest rate regime.

Yet there are clues from US Congressional proceedings about one way forward to stricter transparency and accountability for the central bank.

One such clue comes from the procedures surrounding Congressional vetting approval of presidential Cabinet nominees. For example a Treasury Secretary-appointee is presented with a long list of questions from different senators, some of which go to independent academics to insert difficult points. Another clue comes from the regular bi-annual monetary testimonies. Congress has on occasion the day before assembled a shadow panel of academics to testify on how they view the present conduct of monetary policy.

Of course, the mere fact of introducing well-known eloquent academics skilled as pungent debaters into the process of accountability is no guarantee that the appropriate questions from a current or historical

perspective will get asked. If there is a fault in the form of a pervasive monetary fashion proving to be misguided, many academics will suffer from the same malaise as the policymakers. An example of this comes from the ill-fated sweeping of the monetary corridors of power in the 1990s and the 2000s by the illusory doctrine of 'inflation-targeting'. Only a small minority of neo-Austrian economists and perhaps some eclectics drawing in part on Milton Friedman's earlier warnings sounded the alarm about the dangers and fallacies of the new prescriptions of the inflation-targeters.

Beware the professor of economics!

The ranks of the most disastrous monetary policymakers in Europe and the US over the past century are populated by a list of renowned professors of economics.

Reichsbank President Professor Havenstein took pride during the Weimar Republic's hyperinflation in the efficiency with which the note-printing presses were organized.

Professor Arthur Burns, who in his writings had warned about the evils of inflation, presided over the greatest peacetime inflation in the US.

Professor Ben Bernanke, who as the renowned scholar of the Great Depression swore at Milton Friedman's birthday party (2002) that the Federal Reserve would never again repeat the errors which contributed to that, in turn was instrumental in steering the US economy into arguably the greatest credit bubble and bust since that time, albeit that some commentators claim that in the end his emergency-relief schemes revealed talent.

Professor Mervin King whose guiding principle of making monetary policymaking boring by following an inflation target set at 2% p.a. (effectively though revised upwards mid-stream due to a change in definition to exclude housing) catapulted the UK into its biggest credit bubble and bust in modern history. (This broad-brush account would be qualified in any finer drawing by the details of Professor King being outvoted in his opposition to one micro-decision to make a micro rate-cut in August 2005. This outvoting incident was not followed by any campaign by Professor King to assert a stricter monetary policy and there is no evidence that he was even pondering the diagnosis that the UK economy was in severe monetary disequilibrium. The next outvoting incident was in June 2007 when Professor King sought to raise the overnight rate by an extra 25 bp to 5.75% when the economy was already in recession and the bursting of the credit bubble already evident.)

Professor Otmar Issing renowned in particular for his academic work on optimal steering of monetary policy in a world of uncertainty took the chair in designing the policy framework for the ECB. But that framework was so flawed that it in no way prevented the ECB through its first ten years or so making roughly commensurate policy errors to the Federal Reserve. Nor did the Issing framework stop the ECB stop the ECB performing in a tragicomedy of total non-flexibility where it drove up risk-free rates to almost 5% six months into a recession and almost one year on from a global credit quake.

Yes, a Congressperson might find one leading outside professor to tackle with the professor in charge of the central bank, but will anyone be impressed, least of all the policymakers? The professor president might simply cast an intellectual smear against the challenger.

Something more powerful in concept than a lone contrarian academic albeit as Congressional witness is required to crack the power of the central banker and expose the raw inefficiencies, misconceptions and arrogance which might lie below the veneer. That is where the proposal of the parliamentary monetary audit committee, integrated into the political process derives its attraction. Its members would not be muzzled by the process of consensus opinion-making. Instead they would have full scope to aggressively expose faults and flaws and put these together into a minority opinion if there is no consensus and the majority for various reasons (including of course political ties) decide on a tamer approach. And intrinsic to all of this is access of any challenger in the audit committee to full information about what is occurring around the policymaking table.

One proposal here goes all the way back to Senate Banking Chairman Gonzales in the 1990s who sought to have continual TV coverage of all policy meetings and full non-edited transcripts of the proceedings available to his committee (albeit not necessarily to the general public) with minimal delay. The hypothetical monetary audit committee might insist on such a privilege.

The Gonzalez proposal never became law but there has been some progress at the edges as regards freedom of information – as illustrated by the success of Professor Thomas in obtaining the telephone log of Chairman Bernanke during the crisis days of August 2007. The log revealed the sheer extent of telephone communications between the chairman on the one hand and the ex-Treasury Secretary on the Board of the biggest US bank on the other. And at the time of writing, Bloomberg News is fighting a legal battle with the Federal Reserve to obtain details of how its massive cheap sterilized credits have been

disbursed. No such freedom of information has applied in the European context.

Remove the European veneer of monetary transparency

European central bankers have been seriously aware of how important the veneers of transparency and accountability are in terms of general political correctness for an institution which is so much at risk of becoming alienated from the European public. In addition, there have been papers and talks from ECB officials and researchers on how some transparency might actually make monetary policymaking more effective by jolting expectations in the appropriate direction (e.g. see Gerrats, Pera (2008)).

All of this is a far cry from the remedy of real transparency and accountability in its most virulent form which might actually jolt policymakers in time away from a mistaken path or make them appropriately better decision-makers (even with no guarantee of success) by expanding the important scenarios which are considered and making it less likely that sloppiness will go undetected.

The area of transparency where US and European central bankers have been keenest to make concessions about – the publication of their macro-economic forecasts – is the least valuable of all. Like all forecasts these are most often likely to be wrong. The success of the central banker should not be measured in the same way as that of the economic forecasting institute.

The ECB has laid claim to being open by citing the press conferences which immediately follow policymaking meetings and the full reports which are produced each month to explain its policy. But anyone who follows these conferences realizes that the questions are with very few exception superficial and there is no opportunity for asking serious follow-up questions (in the rare cases where the journalist might have a biting one to ask). In fact the poor record of the press conferences, and the command which the president has in selecting who asks the questions, means that news agencies can see no advantage in sending along top probing economic journalists even in so far as they would have insightful questions to put to the president.

The ECB has doggedly resisted following US practice in publishing full minutes of policymaking meetings (these are of only limited insight given that they are edited and in any case the disagreements are ironed out before the official meeting takes place) or of publishing full transcripts several years later. ECB officials have defended this practice by claiming that if exposed policymakers would come under pressure from

domestic political forces, heaven forbid! But why is that such a bad thing except in the make-believe world of ordo-liberalism?

Controlling the central bankers, driving out the negligent and incompetent, and letting the light shine in to their decision-making, are all jobs either not started or in very early stages in all areas of the world, even though almost a century has elapsed since the world of the international gold standard whose automatic functioning made such issues largely irrelevant, collapsed. One of the most despairing aspects of the search so far as to what went wrong that allowed the credit bubble to grow and grow and then burst in such a damaging way is that the political economies of Europe and the US have not generated self-corrective forces to deal with the deep flaws in the monetary policy frameworks including the decision-making processes.

Perhaps these forces will strengthen over the next decade in the US. Professor John Taylor (ex-senior international economic official in the Bush Administration) has led the way in his book which might be described as 'J'accuse' of the Federal Reserve (see Taylor, 2009). But there has been little follow-through into the political system, where the 'greedy bankers and hedge funds' are the easy fodder for populist anger. A potentially important exception has been the groundswell support within the US Congress for an auditing of monetary policy (see p.191).

In the euro-area, despair at the functioning of the monetary authority and the failure of the political system to operate such as to contain abuses and call incompetents to account is even more justified.

Yet in Germany the tradition of respect for the independent monetary authority runs deep. And mainstream politicians could make no gains (in terms of their own popularity) by savaging the performance of the ECB even if they had ready a think-tank with the appropriate ammunition for the purpose. They would instead run the risk of being seen as breaking dangerously with Germany's post-war cohesion and stability based in part on being an exemplary member of European Union.

In France, the ruling elite has shown no stomach for digging into potential exposing of monetary incompetence in Frankfurt as this would not just be indicting itself and its role in driving forward monetary union with all its flaws, but it might detract from French power based on firm integration within the European institutional framework such as it is.

It has been much easier for French and German politicians to join in fermenting populist anger against the ills and locusts of 'Anglo-Saxon finance' (including hedge funds) and the Swiss private bankers than taking a hard look at the flaws of EMU, how they contributed so powerfully

to the global credit bubble and bust especially in its European dimension, and now to the looming prospect of a Lost Decade in Europe.

Lost Decade in Europe?

The Lost Decade is itself an intellectually sloppy term at least in its now familiar economic interpretation. (An example of its non-economic use was Scott Fitzgerald's choice of the title 'Lost Decade' for a selection of short stories about contemporary life in the US during the 1920s.) Much of the discussion has been pitched in the recent popular accounts of Japanese economic history following the bursting of its bubble economy in the late 1980s. How fickle is memory!

On virtually all metrics, the Japanese bubble economy was of a much greater order than anything experienced in the US or Europe in the first decade of the twenty-first century (see Aliber, 2009). (In the 1980s, stock prices in Japan increased by a factor of five and real estate prices by a factor of six, the ratio of household wealth to GDP doubled. In contrast in the few years 1998–2006 US house prices increased by 60% in absolute terms – on average across all areas, albeit by as much as 2.5 times in some hot areas – and the ratio of household wealth to GDP increased by 15–20%. The bubble in Japan in the 1980s was ten times larger than the recent US bubble.)

Even so the Japanese economy through the 1990s experienced three strong economic expansions (1993–4), (1996–7), (1999–00), while overall it was a period of good productivity growth for the business sector swollen by rapid integration with China. Indeed one commentator, Professor Eisuke Sakakibara, has claimed that the 1990s in Japan was a lost decade only for the public sector. For the private sector this was a decade of dynamic change (see p. 58).

But while so revising Japanese economic history of the 1990s we should not minimize the extent of economic loss even though the term lost decade might itself be misleading. Severe monetary disequilibrium – the essential condition for bubble and bust – has a long and serious aftermath in economic opportunity lost, even if the actual outcome does not seem that bad. Yes, the 1990s were not all bad news for Japan – there was no Great Depression and living standards overall advanced. Still the huge monetary disequilibrium of the late 1980s and early 1990s meant that economic resources were squandered on a huge scale – buildings and equipment accumulated in the late 1980s which brought no or negative return, human training and talent which was of no avail.

Maybe a decade is about what it takes to get the money monkey wrench out of the machinery of the economy in terms of the

bubble-and-bust bomb damage having been made good in aggregate terms (the capital–output ratio, where capital includes human capital and measured in market rather than book terms, is back to a normal trend line) and the natural unemployment rate back to within a normal range. But the loss of potential output during the interim and the squandering of human talent is permanent.

In looking at the waste of the credit bubble and real estate bubble in Europe and US accumulated through the middle years of the first decade of the twenty-first century this was visible in such areas as over-construction of homes, excess investment in producing items of conspicuous consumption, excess production of shopping malls and over-investment in certain types of human capital (e.g. know-how in financial engineering and intermediation), and excess investment in certain highly cyclical industries (autos in particular) which had thrived on underpriced leverage.

Overall the qualitative evidence does not suggest that the excesses overall were huge by historical comparison (but there were some heavy concentrations of waste both by region and country). Homes were built in advance of demand but with growing populations in most cases they would not stay empty, albeit that there would be regional stories of surplus housing stock eventually demolished or let on a rental basis which confirmed that the original construction was extremely wasteful in terms of economic resources used. The human capital in financial engineering and intermediation could be re-moulded (through some retraining). Outside the euro-area, in the UK especially, there had been vast over-expansion (on the basis of sober cost–benefit analysis) in public spending financed by bubble revenues from the financial sector.

The cutbacks in overall construction activity could be painful over a long period. But the glut even at the peak does not compare impressionistically to the bubble excesses of construction of every form (public and private) which characterized the end of the Weimar boom in 1928–9 or the US Jazz age. And the equity bubble of the 1920s had spawned huge waste in non-financial sector investment – capital which could not earn a normal rate of return once the rose-coloured spectacles of the bubble-period fell off. In the 2000s the rose-coloured spectacles and equity bubble had been confined to the financial sector, the real estate sector and arguably the commodity sector.

From Sarajevo to monetary competition in Europe

It is not obvious in advance that the decade which follows the bubble and bursts in Europe or the US will earn the title ‘lost’ in any deep

historical sense, even though the great squandering of economic opportunity is beyond doubt.

The big pity in a European context has been the extent to which gross and avoidable monetary errors contributed to that waste if not devastation. EMU failed to deliver on its promise of providing a superior or even similar quality monetary environment for its members to the preceding German-led regime. And there are plausible hypothetical alternatives which might well have outperformed both. (One such alternative would have included independent sovereign monies for France, Germany and Holland, all freely floating, and with the respective central banks each operating monetary base control and setting a very long-run aim for the path of the domestic price level.)

Instead the flaws of EMU and mistakes in ECB policymaking and framework making contributed towards the monetary environment turning out to be alarmingly turbulent. (The definition of 'turbulence' far transcends the simplistic and misleading yardstick of how closely the price level sticks to a stipulated 'medium-term' path and includes critically the fuller concept of monetary disequilibrium as outlined by economists from J. S. Mill onwards to the Austrian School and Chicago.)

There are few grounds for optimism that the potential of EMU for throwing further monkey wrenches into the economic machinery will fall as a result of any learning process. The record to date is one of remarkably complacency on the part of euro-officialdom unruffled by any significant external or internal forces working towards a re-vamp of the monetary policymaking process.

It may well be that the most realistic forecast of the monetary future in Europe as much as in the US is a continuation of the present. No system of monetary control and of effective democratic checks on those running the great concentrations of power described as 'central banks' has evolved such as to prevent the periodic eruption of severe monetary disequilibrium in this post-gold standard age.

Some historians would argue that even in the heydays of the international gold standard (1870–1914) there were also serious episodes of monetary disequilibrium, in particular 1906–7. But these never reached the order of severity (in terms of global measures) of 1927–37 (the First Great Global Credit Bubble and Bust) or 1967–79 (the Great Peacetime Inflation) or even 1997–2009 (the Second Great Global Credit Bubble and Bust). Moreover, the 1906–7 Bubble and Bust has been linked to the US Treasury flouting the rules of the gold standard by grossly manipulating its huge cash deposits with New York banks (see Bruner, 2007).

It is just a fact of paper money and political reality that in Europe as elsewhere great quakes will erupt from time to time. The advent of EMU and its record to date has not brought any improvement to monetary conditions outside the Golden Garden of Eden. The lack of any plausible prognosis for improvement in the function of the monetary union does not suggest any grounds for hope growing forward.

Yes, it would be possible for monetary economists (that way inclined) to draw up a blueprint as to how EMU could lead the return back, at least half-way, to the favourable combination of low monetary instability and very long-run price level stability which prevailed under the gold standard. There could be a totally new policy framework based on re-vamped monetary base targeting. Perhaps public confidence in this could be bolstered by a golden formula in which high-powered money (or at least additions to a starting total of this aggregate) was backed by specified weights of the yellow metal (with no official parity or 1:1 convertibility between the two). The past history, however, of the whole human endeavour described as European monetary integration does not provide a shred of optimism about any such path lying ahead.

Perhaps the truth of the matter is that the bullet which killed the Archduke in Sarajevo on Sunday, 28 June 1914, led to a conflagration which had as one of its many curses the demise of a monetary system for the world and for Europe which despite its imperfections no alternative could match. And there would never be a possibility for re-creation.

Confronted with the original fall from monetary grace, some economists of the Austrian School have flirted with promoting monetary systems based on competition between privately issued currencies. As a practical matter this remains a non-starter and at the level of theory there is much blur.

Out of the Austrian fantasy, however, can be distilled one compelling idea. Monetary competition and diversity are important elements of a second-best monetary world.

Surely in a Europe with several competing national monies and central banks, all would not have fallen for the same flawed doctrines of monetary control at the same time. In competition, Europe would have found its monetary strength in comparison with the US.

Independent competing national central banks in Europe would not have had qualms at preaching the potential advantages of their own model of control and at pointing out the faults of competing models to their wider audiences. Diversity rather than conformity would have been the name of the monetary competition game. And all would not be wrong at the same time in such a devastating way.

Bibliography

- Aliber, R. Z. 'Client Letter', 29 April 2009.
- Aliber, R. Z. and Kindleberger, C. P. 'Manias, Panics, and Crashes', Palgrave Macmillan, 2005.
- Baba, McCauley, R. and Ramaswamy, S. 'US Dollar Money Market Funds and non-US Banks', BIS Quarterly, March 2009.
- Bank for International Settlements, Annual Report, June 2008.
- Bini-Smaghi, Lorenzo 'Conventional and unconventional monetary policy', Keynote lecture at the Center for Monetary and Banking Studies, Geneva, 28 April 2009.
- Blamen, Robert 'Bernanke-ism: Fraud or Menace', Paper delivered at Burton S. Blumert Conference on Gold, Freedom & Peace, LawRockwell.com.
- Broadus, J. Alfred and Goodfriend, Marvin 'Sustaining Price Level Stability' Federal Reserve Board of Richmond Economic Quarterly, Vol. 90/3, Summer 2004.
- Brown, Brendan 'Bubbles in Credit and Currency', Palgrave Macmillan, 2008.
- 'Monetary Chaos in Europe', Routledge, London, 1986.
- 'The Euro on Trial', Palgrave Macmillan, 2004.
- 'The Yo-Yo Yen', Palgrave Macmillan, 2002.
- 'The Case for Negative Interest Rates', *Financial Times*, 20 November 2008.
- 'This is not a tale of two depressions', *Financial Times*, 18 June 2009.
- Brown, William Adams (1940) 'The International Gold Standard Reinterpreted 1914–31', New York, National Bureau of Economic Research.
- Bruner, Robert and Carr Sean, D. 'The Panic of 1907: Lessons Learned from the Market's Perfect Storm', Wiley, New York, 2007.
- Brunnermeier, Markus K. 'Deciphering the 2007–8 Liquidity and Credit Crunch', *Journal of Economic Perspectives*, 23(1), pp. 77–100, Winter 2009.
- Buiter, Willem, H. 'Overcoming the zero bound on nominal interest rates with negative interest on currency: Gesell's solution', *The Economic Journal*, 113 (490), pp. 723–46, 2003.
- Butler, Eamonn 'Adam Smith – A Primer', IEA, 2007.
- Bank for International Settlements, Annual Report, June 2008.
- Cecchetti, Stephen G. and Schoenholtz, Kermit 'How Central Bankers See It: The First Decade of ECB Policy and Beyond', NBER Working Paper 14489, November 2008.
- Dimand, Roger and Geanakoplos, John 'Celebrating Irving Fisher: The Legacy of a Great Economist', Blackwell, 2005.
- Eggertsson, Gauti and Woodford, Michael 'The Zero Bound on Interest Rates and Optimal Monetary Policy', Princeton University Working Paper, 26 June 2003.
- Eggertson, Gauti, IMF 'How to Fight Deflation in a Liquidity Trap: Committing to be irresponsible', 1 March 2003.
- Eichengreen, Barry 'Viewpoint: Stress Test for the Euro', *Finance and Development*, June 2009 (IMF).

- 'The Gold Standard in Theory and History', Routledge, London, 1997.
- Friedman, Milton 'The Optimum Quantity of Money', Aldine Transaction, London, 2006.
- 'Essays in Positive Economics', University of Chicago, 1966.
- Friedman, M. and Schwartz, A. 'A Monetary History of the United States', Princeton University, 1963.
- Galati, Gabriele and Tsatsaroris, Kostas 'The Impact of the Euro on Europe's Financial markets', BIS Working Paper, No. 100, July 2001.
- Gerrats, Pera M. 'ECB Credibility and Transparency', ECB Economic Papers 330, June 2008.
- Gesell, Silvio 'The Natural Economic Order', Peter Owen, London, 1958.
- Hayek, Friedrich A. and Salerno, Joseph T. 'Prices and Production and Other Works on Money, the Business Cycle and the Gold Standard', The Ludwig von Mises Institute, 2008.
- Hayek, Friedrich A. 'Denationalization of Money: The Argument Refined', The Ludwig von Mises Institute, 2009.
- 'New Studies in Philosophy, Politics, Economics, History of Ideas', London, Routledge, 1978.
- Hetzl, R. L. 'Monetary Policy in the 2008–9 Recession', *Economic Quarterly*, Vol. 95, No. 2, pp. 201–33, 2009.
- Hirsh, Michael 'Channeling Milton Friedman', *Newsweek*, 17 July 2009.
- Hordahl, Peter and King, Michael 'Developments in repo markets during the financial turmoil', *BIS Quarterly*, December 2008.
- Issing, Otmar 'The Birth of the Euro', Cambridge University Press, 2008.
- Issing, O., Gaspar, V., Angeloni, I. and Tristani, O. 'Monetary Policy in the Euro-area', Cambridge University Press, 2001.
- Jordan, Thomas 'Central Banks in Action; financial market turbulences and policy measures', Speech to the 36th General Assembly, Association of Foreign Banks in Switzerland, Geneva, 6 June 2008.
- Kindleberger, C. 'The World in Depression', University of California Press, 1973.
- Leaman, Jeremy 'The Bundesbank Myth', Palgrave Macmillan, 2001.
- Lowenstein, Roger 'The Education of Ben Bernanke', *New York Times (Sunday Magazine)*, 20 January 2008.
- Mankiw, Gregory 'It May be Time for the Fed to Go Negative', *New York Times*, 18 April 2009.
- Marsh, David 'The Euro: The Politics of the New Global Currency', Yale University Press, 2009.
- McGuire, Patrick and von Goetz, Peter 'US Dollar Shortage in Global Banking', *BIS Quarterly*, March 2009.
- Meltzer, Alan 'A History of the Federal Reserve, 1913–51', University of Chicago Press, 2004.
- Pollock, Alex 'Towards Creating a Systemic Risk Adviser', *American Banker*, 17 July 2009.
- Rogoff, Kenneth 'Risk of Deflation', *Nihon Keizai Shimbun*, 17 July 2003.
- Rothbard, Murray, N. 'America's Great Depression', The Ludwig von Mises Institute, 1972.
- Schwartz, Anna 'Man Without a Plan', *Wall Street Journal*, 26 July 2009.

- Stark, Juergen 'Economic prospects and the role of monetary policy in the current situation', Speech to the Deutsche-Luxemburgische Wirtschaftskonferenz Luxembourg, 9 March 2009.
- Streit, Manfred D. and Wohlgemuth, Michael 'The Market Economy and the State: Hayekian and ordo-liber conceptions', Max-Planck-Institut zur Ergorschung and Wirtschaftssystemen, Diskussionsbeitrag, 06-97.
- Taylor, John 'Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis', Hoover Press, 2009.
- Vanberg, Viktor J. 'The Freiburg School: Walter Eucken and Ordoliberalism', Freiburg Discussion Papers on Constitutional Economics, 04/11.
- Volcker, Paul 'Winning over the Americans', in 'Schmidt and the World, Tribute to Helmut Schmidt', 13th Annual Conference of the German-British Forum in Hamburg, October 2008.
- Von Mises, Ludwig 'Human Action: A Treatise on Economics', The Ludwig von Mises Institute, 2003.
- 'The Theory of Money and Credit', The Ludwig von Mises Institute, 1971.
- White, William 'The Coming Transformation of Continental European Banking', BIS Working Paper, No. 54.
- Yellen, Janet, speech, 'The Uncertain Economic Outlook and the Policy Responses' 25 March 2009, presentation to the Forecasters' Club of New York.

Index

- Accountability, the ECB's lack
of 42–3; no challenge to
or investigation of the ECB's
fatefully poor decisions 41;
see also, press conferences,
testimony of ECB President to EU
Parliament
- Aliber-Kindleberger concept of
speculative displacement and
its application to euro credit
bubble 32
- Article 105 of Maastricht Treaty
stating primary objective of price
stability 5
- Asian dollar bloc, how the euro-
nationalists joined in its
destruction 33–4: who did
Trichet speak for when he
negotiated at Dubai 34? No
debate around the ECB table on
the subject 34 *see also* Trichet,
Claude and euro-nationalists
- Austrian school economists, attitude
towards money supply targets
9, 11; understanding that price
level fluctuates as condition
of monetary equilibrium 9;
overlooked or neglected by secret
Issing Committee? 12
- Austrian critique of ECB 18
- Automatic monetary control
mechanisms 7
- Baltics, Germany's Russia First policy
applied towards 44; ECB bows
to Berlin's policy towards 44;
France rallies G-20 support for
IMF lending to 45; ECB passes
up historic opportunity to
stabilize Baltics as bulwark against
Putin dictatorship 45
- Bank of England, as most extreme
inflation targeter 16; as
worst performing central
bank 16
- Bank of Japan, frightened by the
yen's surge as Asian dollar bloc
smashed launches its own pale
version of inflation-targeting
which becomes catalyst to yen
carry trade 35
- Benign fluctuations of the price
level 7; failure to spot these
leads ECB policy astray 20,
24; pricing power in cyclical
industries 21; why cyclical
industries should have low
leverage 21 *see also* price level
stability
- Bernanke, Ben, his special prompting
of 2002–3 leading to “breathing
in inflation policy” 24–5;
coincidence of the 2003
Bernanke-induced Federal Reserve
policy error and the ECB's error at
the same time 25; his warning
about “too low inflation” and
its influence on the ECB 31;
his appointment to the Federal
Reserve in 2002 31; serious
flaws in his advocacy of inflation-
targeting 51; transcripts reveal
that he pressed for quantitative
easing in Spring 2003! 57 *see
also* bogus diagnoses of Japan
deflation, monetary policy
analysis
- Blinder doctrine 30
- Bogus diagnoses of Japan deflation,
their influence within the Federal
Reserve and ECB 57
- Bogus claims by EMU defenders
on its price stability
performance 49, 13
- Bogus separation principle (monetary
policy separate from liquidity

- policy) as applied by the ECB 39–40
- Break-up of EMU, speculation on in markets 48; pompous officials deny it could happen 48
- Breathing in inflation, the attempts of the ECB to do this in 1999 and 2003 24, 52–3, 54; by Federal Reserve in 2003 54, 57 *see also* euro plunge
- Bundesbankers, excess influence within the ECB? 27
- Carry trade, how this interconnected with UK banks' access to euro interbank markets 30; how Dubai summit and break-up of Asian dollar bloc gave fillip to carry trade in yen 35
- China, cheap imports from as a missed element in monetary policy-making by ECB 24; Trichet takes note of France's relations with 33
- Consumer price index, flawed definition of in euro-area 14, 23; failure of ECB to address the problem with any urgency 23
- Credit bubble, how flawed ECB monetary framework design contributed to this 13, 16, 52; the role of 2003 monetary policy error in promoting 26; failure of ECB to diagnose appropriately 27, 30; the role of EMU and its generation of irrational exuberance about bank profits 31; how European banks became participants in US credit bubble and the role EMU played in this 35
- Credit market quakes, of 2007 29; flawed ECB response to and its failure to cut risk-free rates immediately to zero 37, 39; ECB teleconference to consider action 37; ECB's bogus separation principle 39 *see also* panic
- Deflation, ECB's mistaken fears of in 1998–9 drive first big policy mistake 51–3 *see also* bogus diagnoses of Japan deflation
- Delors, Jacques, his false promise that monetary union would be catalyst to political union 48
- Design of EMU monetary framework, its failures 7 *see also* flawed monetary framework in EMU, credit bubble, re-design of EMU monetary framework in 2003
- Dual mandates for central banks, true and false 6; could the ECB have adopted a – in 1998? 13
- Dubai Summit, 2003 33–34, *see* euro-nationalism, Trichet, Claude
- Duisenberg, Wilhelm, as Don Quixote in 1999 23; Chirac-Kohl deal in 1998 regarding his succession by Claude Trichet 33, "I am Mr. Euro" 34
- Eastern Europe, its role in credit bubble 35; refusal of ECB to admit solvency risks of in 2007 38
- ECB, as new institution fails to set a high standard of monetary excellence and does no better than its peers 16, 30; three big policy mistakes by 18–20; as disastrous follower of monetary fashion 19, 26, 41; its underestimation of productivity growth and its relevance for policy 20, 24; its breathing in inflation 24; makes monetary policy for Germany? 26; its failure to perceive formation of credit bubble 30; copies Federal Reserve flawed framework of policy 30; how ECB officials unwittingly became cheer-leaders for irrational exuberance about European banks 31; how ECB got drawn into French foreign policy with respect to the assault on the Asian dollar bloc 34

- see also monetary policy errors, bogus separation principle
 ECB Watchers, not independent! 43
 ECB Monthly Report, inadequacies of 42
 Econometrics, over-emphasis put on by ECB policy-makers 23–4
 EMU expansion, ECB abstains from key role in recommending new members 43–4 see also Lithuania
 Equity markets, their failure to appraise in sober fashion value of bank shares and to discount euro-integration euphoria 31
 Essential friction between aims of price level and monetary stability 6
 Euro complacency, ECB officials shower their praise on EMU (and ECB) at 10th anniversary celebrations 47
 Euro plunge of 1999–2000, the role of ECB policy in causing this 53–5; see also monetary policy errors by the ECB
 Euro-nationalism, defined 33; its role in causing ECB and outside investors to over-look rising temperature in credit markets 31; role of French foreign office (Quai d'Orsay) in promoting; leads to under-estimation of exposure of euro-area economies to US risks 33; pursuance of agenda at Dubai by Trichet 33
 European corporate bond market, its rapid growth cheered by ECB officials who failed to spot the sinister aspects (of credit bubble) 32
 Excess reserves at ECB, why rate on deposit facility should have been cut to zero in August 2007 37 see also, panic
 Failure of ECB to consider alternative strategy (including cut of risk-free rate to zero) in response to credit quake of August 2007 37–8
 Faulty instrument board for pilots of euro monetary policy 4; unreliability of monetary indicator 20
 Federal Reserve, its mistakes in inflation targeting similar to those of the ECB 16, 25; pursues the same bogus separation principle as the ECB in 2007/8 41; makes same mistake as ECB in mistaking solvency crisis for liquidity crisis 41; its policy in aftermath of September 2001 attacks on New York 54; its historic decision to “breathe in inflation” in Spring 2003 57 see also, Bernanke, Ben
 Flawed monetary framework in EMU; incomplete mandate 4–7; insufficient reserve requirements and payment of interest on reserves 12; failure to improve on sketched monetary pillar and no construction of this 14; its contribution to credit bubble 13; options at the desing stage 13–15; no recognition of benign cyclical swings in prices contributes to 1998–9 starting error 21 see also, monetary pillar
 Flaws in EMU, related to intermediation of German savings surplus 28
 Friedman, Milton, his monetary targeting proposal rejected by Issing Committee 9, 13; warns against targeting the price level ignored by Issing 17; his pessimism on the future of EMU 48
 German banks, their involvement in credit bubble 27; irrationalities of their lending boom into Spain 29
 German boom of 2007, how it influenced ECB policy 27

- German savings surplus, swamped infant euro-credit market 28–9
- German taboo against challenging central bank on policy 43
- Germany, undue focus on - by ECB? 26–7; three episodes under study 27
- Gold standard, interest rate volatility under 11; achievement of price stability in the very long-run under 18; short-term instability of inflation under 20; how central banks acted in financial panics under 40
- Great Inflation of the 1970s 16; ECB fails to match Bundesbank's performance during 17
- Greenspan, Alan, his pursuance of the Blinder doctrine of ignoring asset bubbles 30; his "pre-emptive" easing of monetary policy in Autumn 1998 and its influence on ECB policy at the start of EMU 50, not totally convinced by Bernanke 58 *see also* monetary policy madness
- Hayek, Friedrich von 9
- High-powered money supply targets, *see* monetary base targeting
- High powered money injection, the ECB failed to do this in Summer 2007 39; "inflation targeting", how Issing Committee decided in favour of a version of this (albeit with a money supply target alarm system which in principle might over-ride) whilst denying the reality of that choice 13–14; ECB in adopting version of was in great company! 16; Austrian objections to more valid in practice so far than Milton Friedman's 18; definition of inflation aim by ECB and its absurdity 18; how - led to disastrous mistakes in 2007–8 36, big problems with 51
- High inflation target, should the ECB have pursued much higher inflation in 1999? 21, 52; solid grounds for rejection of 21–3, 53
- IMF, its bad forecast of and advice on deflation in 2003 26
- Insolvency crisis, failure of the ECB to diagnose appropriately in Summer 2007 38; the confusion of liquidity crisis with 39
- Interbank money markets in Europe, EMU creates special dangers 27–9; the bizarre role of UK-based banks in these and their access to ECB funds 29; freeze up of early August 2007 37
- Interest rate pegging, the rigid version of adopted by the ECB 14–15, failure to realize that this should be suspended in crisis 39, 90
- Irrational exuberance, about European bank profit opportunities created by EMU 31–2; how Spanish and Italian banks were a feature in 32
- Issing, Otmar, his role in design of EMU monetary framework 8; his account of what happened in the secret committee in 1998 which drew up monetary framework 13, 16; realizes dangers of inflation targeting 19; his historical observations on EMU 49; fails to confront mistaken policy in 98–9, 50; his applause for the Grand Old Duke of York policy of 2001–3 56; *see also secret Issing Committee*
- IT revolution, its implications (missed) for monetary policy 20, 50, 51, 54
- Italy and Spain, how their entry into EMU sowed some seeds to the credit bubble 32; Liquidity crisis, distinguished from solvency crisis 39

- Japan deflation, Professor Sakakibara denies any element of monetary deflation 25, 58 *see also*, bogus diagnoses of Japan deflation
- King, Mervyn, as Governor of Bank of England interviewed by secret Issing Committee 17
- Lithuania, rejection of as EMU member 44 *see also*, EMU expansion
- Luxembourg, as offshore centre influential in Bundesbank debate on reserve requirements 12
- Maastricht Treaty, its failure to provide for design of monetary framework 7
- Mill, J.S., the famous quote about money as monkey-wrench 10
- Monetary base, fulcrum role of in monetary frameworks 12; pivot role of ignored by ECB architects 11–12
- Monetary base targeting 9; Austrian attitude towards 11; two essential conditions for success 11
- Monetary fashion, disastrous following of by ECB 19, 50
- Monetary framework of EMU, *see* flawed monetary framework in EMU, re-design of EMU monetary framework in 2003
- Monetary Pillar of EMU, not yet built 14; the fantasy of 15–16
- Monetary policy errors by ECB, three big policy mistakes 18–20; the mistake of 1998–9 20–22, 49–51, 55; how the 98–9 mistake handicaps response to 2001–2 recession 56; the mistake of 2003–5 24–5 57–9; the mistakes of 2007–8 the worst since the 1930s 20, 36 *see also*, monetary policy madness
- Monetary policy madness, long day's journey into, Spring 2003 57–8 *see also* Bernanke
- Monetary stability and long-run price level stability, the problem of inconsistency 5–6
- Money supply targeting 8–9, as rejected by the Issing Committee 8; Austrian school recommendations 11
- Money supply expansion, fast rate overlooked by ECB in 2003 57
- Money supply alarm system, so as to supplement “inflation targeting” 14; the fantasy of this in EMU 15
- Monkey wrench, money as – in machinery of the economy 5; *see also* Mill, J.S.
- Monetary instability, defined 5 *see also*, monkey wrench
- Monetary savagery, in the run-up to EMU 52
- Mundell, Robert, his quip on the largest member of a monetary union 26
- Neutral interest rate, defined 6, variation over time 10
- National bankruptcy, its spectre within EMU in 2008–9 47
- Negative feedback loop, triggered by ECB in euro-plunge of 1999–00 53
- Natural interest rate, defined 6
- Negative interest rates 12
- Newness of EMU as a handicap to monetary piloting 15 *see also*, faulty instrument board
- Official intervention in currency markets, in euro during 2000 54
- Oil prices, at lowpoint in 1998 20; incorrect appraisal of in setting monetary policy by ECB 20
- Oil price bubble, 2008; failure of ECB to detect this 36

- Panic of 2007–8, the flawed response of ECB to the credit quake of summer 2007 37; no consideration given to alternative policy responses involving immediate cut of risk-free rate to zero? 37; in financial crisis of Autumn 2008 the ECB takes absurd step of narrowing band between rate on overnight deposits with itself and market rates 39
- Precipitous decline of the euro 23; faulty diagnosis made by ECB 23
- Press conferences at ECB, why mostly meaningless 42
- Price level stability, defined 5 *see also*, pro-cyclical swings in price level
- Pro-cyclical swings in price level, their stabilizing role 10, 20–1; ignored by ECB at its peril 20, 24, 51; pricing power and leverage in cyclical industries, 21
- Productivity changes, their implications for monetary stability 9; how these can combine with flawed monetary framework to produce credit bubble 16, 24, 50
- Quai d'Orsay, its role in promoting euro-nationalism 33
- Real estate market bubbles, temperature starts to rise already in 2000 23; subsequent temperature rises from 2003 27 *see also*, Spain
- Recession of 2001–2, ECB's response to handicapped by earlier mistakes 56
- Re-design of EMU monetary framework in 2003 24, why doomed 25–6
- Reserve requirements, required re-vamp of 9, 12; UK opposition to in context of EMU negotiations 9, 12; why Issing Committee rejected high level of 12; and *see also* monetary base targeting
- Reserves, why interest should not be paid on these 11, 53
- Rogoff, Kenneth, his disastrously wrong prognosis of deflation in 2003 26
- Round-trips, how ECB created in 2007–8 through pursuance of rate pegging and bogus separation principle 40
- Secrecy at ECB, failure to provide transcripts of Issing Committee 13
- Secret Issing Committee 8; its rejection of Milton Friedman monetary rule 9; gave no weight to Austrian School 12; rejected high reserve requirements 12; rejects advice from Vienna and Chicago 12–15; failure to publish transcripts 13; Issing claims later that this did discuss danger of asset bubbles 13
- South Korea, massive European bank lending to during credit bubble period 35
- Spain, origins of real estate bubble in 28; the bursting of the bubble in 46
- Stark, Jürgen 27
- Summary indictment of EMU 3–4
- Taylor rule, problems with 10
- Testimony of ECB President to EU Parliament, meaningless 42
- Trichet Claude, as euro-nationalist 33; his promotion of euro-nationalist agenda at Dubai Summit, 2003; his inter-play with French foreign policy with respect to China 33; literary idealism on Europe does not mean any support for Baltics 45; as part of French Foreign Office effort at G-20 summit of Spring 2009; his

- self-indictment of complacency
on occasion of EMU's 10th
anniversary 47
- UK segment of global credit bubble,
how the ECB and euro-interbank
markets provided funding for
this 29
- US dollar plunge, leads ECB policy
astray in 2004 34–5 *see also*
Dubai summit
- US recessions, ECB repeatedly
underestimates implications of
for euro-area 36
- Weber, Axel 27
- Zero-rate boundary, problems of in
determining stable monetary
conditions during recession
5, 10