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Is the Japanese disease infectious?

World's third-largest economy starts to resemble the second-largest

German banks share too many similarities with Japan's,

Last month's *Monthly Economic Review* asked, "will the world follow Japan?", where "Japan" is taken as a synonym for banking crisis, prolonged semi-recession and deflation. The answer was a strong "no", because the banking system of the world's most important economy (the USA) is profitable and well-capitalized. That answer was too hasty. The last month has seen a spate of alarmist newspaper stories about the banking system of the world's third-largest economy, Germany. The research paper in the following pages reviews some key facts about Germany's banks and concludes that in many key respects they resemble Japan's. In the background is the worrying demographic outlook. Like Japan's, Germany's working-age population is already going down. From 2015 it will start dropping by over 1% a year. This will reduce the trend rate of output growth, which even today is not much more than 1 1/2% a year, and requires an upward adjustment to asset yields. The rise in yields implies a fall in the values of equities and property. The bear market in German equities has in fact been worse than in other industrial countries (with 60% - 70% falls from the peak in early 2000), while the markets in commercial and residential real estate have been depressed for some years. As a result, the banking system's loan collateral has been heavily eroded. In 2002 German banks will have their worst bad debt experience in the post-war period and loan losses seem certain to exceed operating profits. Capital - and so the ability to extend new bank credit and create additional money balances - is being wiped out.

and when adverse demographics interact with an insolvent banking system, zero interest rates may be ineffective,

Germany is less important to the world economy than the USA or Japan, but the similarities between it and Japan are disturbing. The right forecast for 2003 must still be that above-trend growth is accompanied by low inflation, as no government or central bank wants deflation. Another cut in US interest rates seems certain and there is a possiblity that Fed funds rate will fall to 1%. But - as the Japanese example has shown - when adverse demographics interact with a crippled banking system even a zero interest rate may fail to stimulate an economy. (This does *not* mean that policy-makers have run out of options. As explained in the July and August 2001 issues of this *Review*, governments can increase the quantity of money directly by purchases of their debt [which in practice would be mostly long-dated issues] from non-banks. However, monetary theory is currently in such a mess that this approach tends to be condemned as "unconventional" and so is overlooked by policy-makers.)

The UK is in an unusually favourable position, as (for the time being) its economic and financial situation seems more robust than that in other leading industrial countries. Loan loss experience at the British banks has been unsatisfactory in 2002, but it is much less serious than in Germany or Japan, while operating profits are healthy. As always, people have their financial worries, but overall the British public is still confident enough to increase its stock of mortgage debt at a double-digit annual rate. Mortgage approvals in September reached £20,745m., another all-time record and 50.2% up on September 2001.

but the UK is alright

Professor Tim Congdon **30th October, 2002**

Summary of paper on 'Will Germany follow Japan?'

Purpose of the paper

Recent newspaper reports have pointed to a serious crisis in Germany banking, with some resemblances to that in Japan. The research paper considers whether this crisis foreshadows a wider macro-economic *malaise* comparable to Japan's.

Main points

* **On the demand side, the essence of the Japanese *malaise* is that the lack of capital in the banking system (due to bad debts caused by a collapse in asset values) constrains the growth of bank assets and so of the quantity of money.**

* **On the supply side, Japan's problem is partly demographic, a fall in the population. The implied decline in employment signals lower growth and requires an upward shift in asset yields, which feeds back to banks' bad debts and their solvency problem.**

* **Germany's banks suffer from poor operating profitability, but - until last year - loan losses were not so severe that they had losses overall. In 2002 it seems certain that loan losses will be the highest for over 50 years, that the loan losses will exceed operating profits and that the banking system will be loss-making. (See pp. 7 - 9.)**

* **The lack of capital in the banking system has been accompanied by a collapse in new credit extension (see p. 9). Small- and medium-sized companies (the *Mittelstand*) have complained of a tightening of credit terms.**

* **Germany's demographic problem is similar to Japan's, and has already been a crucial influence on weak property prices and a downturn in construction spending. From 2015 the working-age population will be falling by over 1% a year.**

* **Germany's banking problems are disturbingly reminiscent of Japan's.**

This research paper was written by Professor Tim Congdon, with help from Sonia Pangusión in the preparation of the charts.

Will Germany follow Japan?

Assessing the problems in the German banking system

Japan's defiance of Keynesian economics

Japan's economic situation has not only perplexed its policy-makers and their advisers over the last decade; it has also made a mockery of the claim that modern macro-economics - based on Keynes' *General Theory* - knows how to deal with chronically weak demand. In particular, Japan's experience has shown that fiscal expansion - by means of increases in the budget deficit - is not sufficient to boost an economy. Since the early 1990s Japan has expanded public works, enlarged its budget deficit and incurred huge amounts of public debt, just as Keynesian therapy would recommend. But its economy has obstinately failed to recover.

Threat to world economy if Germany follows Japan

So far Japan's problems have been unique. But there is growing concern that some European countries - notably Germany - may suffer the same kind of difficulty. If the world's second and third largest economies were to be caught in a prolonged and seemingly irremediable semi-recession, that would blight the outlook for all countries in 2003, 2004 and later years. A key question becomes, "has Germany caught the Japanese disease?".

A diagnosis of Japan's *malaise*

Before reviewing Germany's problems, it is important to analyse the Japanese *malaise* in more detail. The root cause of sluggish demand in Japan is debated, but a good case can be made that the trouble is monetary or, at any rate, that it is monetary with a demographic overlay. Almost everyone believes that the analysis must start with the banking system. For over a decade it has been crippled by bad debts, due to sharp declines in asset values which have eroded the collateral for bank loans.

Banks hit by bad loans caused by effect of falling asset values on collateral

The question then becomes, "what have been the causes of Japan's asset price weakness?". They seem to have been both cyclical and structural. The cyclical component has been the reversal of the real-estate and stock-market gains of the bubble in the late 1980s. But cycles come and go, and it is becoming implausible to blame Japan's problems on events that are now almost 15 years ago. (One caveat here is that the bubble appears to have had a significant element of gangsterism, as loans were made to *yakuza* groups without regard to normal business criteria. These loans cannot now be recovered. According to a story in the 28th October issue of *Forbes Global*, "About 20% of the supposedly 'clean' loans sold to a major US financial institutions' Tokyo operations turn out to 'be so contaminated by *yakuza* that we have to completely write them off'". If the *yakuza* problem is as serious as this, it may be deterring the entry of new capital into the banking system.)

Lower asset values partly due to demographic constraint on growth

The structural, deep-seated and perhaps more worrying element in the asset price weakness reflects Japan's demographics. Over the next few decades (and potentially into the indefinite future) Japan's working-age population will fall by about 1% a year. This contrasts with a typical annual rate of increase in the working-age population of 1% - 1 1/2% since the Second World War. If employment moves in line with the working-age population, and if productivity growth is unchanged, then output growth will be up to 2% a year less than in the past. That will affect the growth rate of profits

and rents, and demands a once-for-all upward yield adjustment so that afterwards investors can receive the same total return as in the past. (In other words, if - for example - property yielded 3% in an economy with 1%-a-year population growth it needs to yield 5% in an economy with 1%-a-year population decline. Of course, with unchanged rents, property values have to fall 40% to raise the yield in this way. The connection between the "demographic transition" now under way in several industrial countries and asset yields was explained in the November 2001 issue of this *Review.*)

Loan losses sometimes above operating profits, eroding banks' capital

Whatever the cause of Japan's asset price slide, the erosion of the collateral for bank loans has been severe and unremitting. Indeed, banks have been forced to write off bad loans on such a scale that the write-offs have in some years exceeded banks' operating profits. That has reduced their capital. But capital is needed at all times so that banks have a margin of safety to protect against future risks, as recognised by the internationally-agreed Basle rules of 1990. The rules specify that banks must maintain a minimum capital/asset ratio of 8% and that at least half the capital must be in the form of equity. If banks' capital falls and they have to keep a stable ratio of capital to assets, they must shrink their assets. (Although loan write-offs have been substantial, it is widely - and probably correctly - believed that they do not reflect underlying realities. If Japan's banks tried to recover their loans by calling in collateral, they would find that their loan losses exceeded their capital. The entire banking system would be bust.)

Lack of capital leads to shrinkage of banks' risk assets and reduces money supply growth

But - if banks shrink their assets - they must also reduce their liabilities. Banks' liabilities are predominantly to their depositors. As people can write cheques and other payment instructions against deposits, deposits are money. So - when the shrinkage of assets is accompanied by falls in deposits - the quantity of money also goes down. In practice, the quantity of money has continued to rise in Japan in recent years, although at a very slow pace. (The explanation is that the decline in banks' claims on the private sector has been more than offset by an increase in their claims on public sector. This development - wholly benign in the circumstances - was discussed in the August and September 2001 issues of Lombard Street Research's *Monthly Economic Review.*)

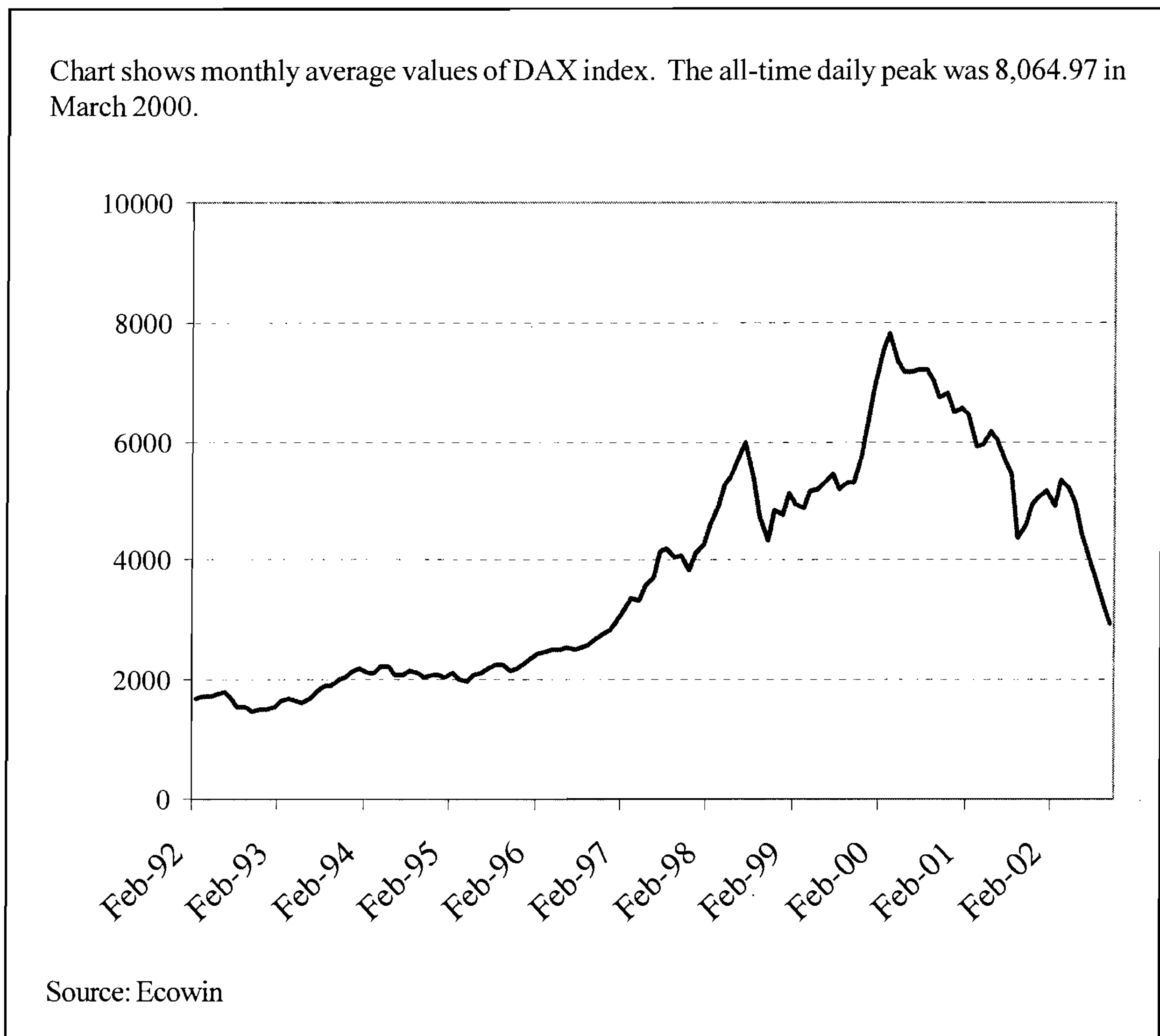
Effect of weak money growth on economy aggravated by rising "liquidity preference"

Unfortunately, business uncertainty has caused Japan's people and companies to hold more money, relative to their income and assets, than before. The combination of this rising "liquidity preference" (as the Keynesians would term it) and very slow money growth has led to stagnant nominal demand. Japan's nominal gross domestic product in 2001 was lower than in 1997. The trend rate of output growth in Japan - which was extraordinarily high (at about 10% a year) in the 1960s - has collapsed to negligible levels. Nevertheless, productivity and employment have somehow continued to grow in the last few years. With nominal demand flat and output rising, prices have started to fall. The consumer price index in the summer of 2002 was the same as in 1995 and 2% - 3% lower than in 1998. Of course, the fall in the price level increases the real value of any given amount of nominal money and strengthens the demand to hold money balances.

German share prices

70% off the peak, but still not cheap

Chart shows monthly average values of DAX index. The all-time daily peak was 8,064.97 in March 2000.



Source: Ecowin

Germany's stock market boom and bust was even more extreme than the USA's, but there was an important difference. Although the American productivity gains in the late 1990s were over-hyped, a case can be made that the trend rate of output growth is higher than before. It may not be an overwhelming case, but it does have valid items of evidence in support. Unfortunately, the evidence for Germany points the other way. The trend growth rate has declined remorselessly since the miracle years of the 1950s and 1960s, and may now be little more than 1 1/2% a year. If so, asset prices need to be on a higher yield basis (i.e., a lower price for any given income stream) than before. Germany's unfavourable demographic outlook is undoubtedly important here, particularly for assets such as commercial property where the demand for space is closely related to the number of people. The realisation that Germany's long-term growth outlook is poor may be part of the explanation for the drastic plunge in the stock market since early 2000.

Horror stories can be put together, in which banking system collapse becomes self-reinforcing

It is possible to put together horror stories in which Japan's ailments become self-reinforcing and catastrophic. On the one hand, the strains in the banking system lead to a collapse in the quantity of money. The bad loan problem overwhelms banks' capital; the banks pull in loans, including loans to solvent customers; the repayment of loans leads to another round of reduction in banks' assets and liabilities; the resulting fall in the quantity of money further depresses economic activity and asset prices, setting off a second wave of loan write-offs; and so on. On the other hand, deflation causes a run-away increase in liquidity preference and so a sharp rise in the desired ratio of money balances to income and expenditure. Plainly, if the dynamics of banks' bad-debt recognition, loss-making and balance-sheet contraction result in big falls in the quantity of money, and if deflationary expectations take hold and raise the desired ratio of money to national income, the equilibrium level of national income tumbles. In the extreme Japan could end up in the same sort of mess as the USA in the early 1930s.

Six symptoms of the Japanese disease,

The last seven paragraphs have been rather lurid and perhaps over-stated. The aim has been to identify the distinctive symptoms of the Japanese disease in order to assess whether they are also present, perhaps in an early and mild form, in Germany. To summarize, the symptoms are,

- a collapse in asset values which can be partly attributed to demographic influences,

- a heavy incidence of bad debts in the banking system, perhaps in conjunction with low operating profitability,

- a consequent erosion of banks' capital,

- very low growth or a contraction in the quantity of money,

- falling prices, and

- an increase in the desired ratio of money balances to income and wealth (increasing "liquidity preference").

Are they found in Germany?

Are any or all of these six symptoms to be found in Germany today?

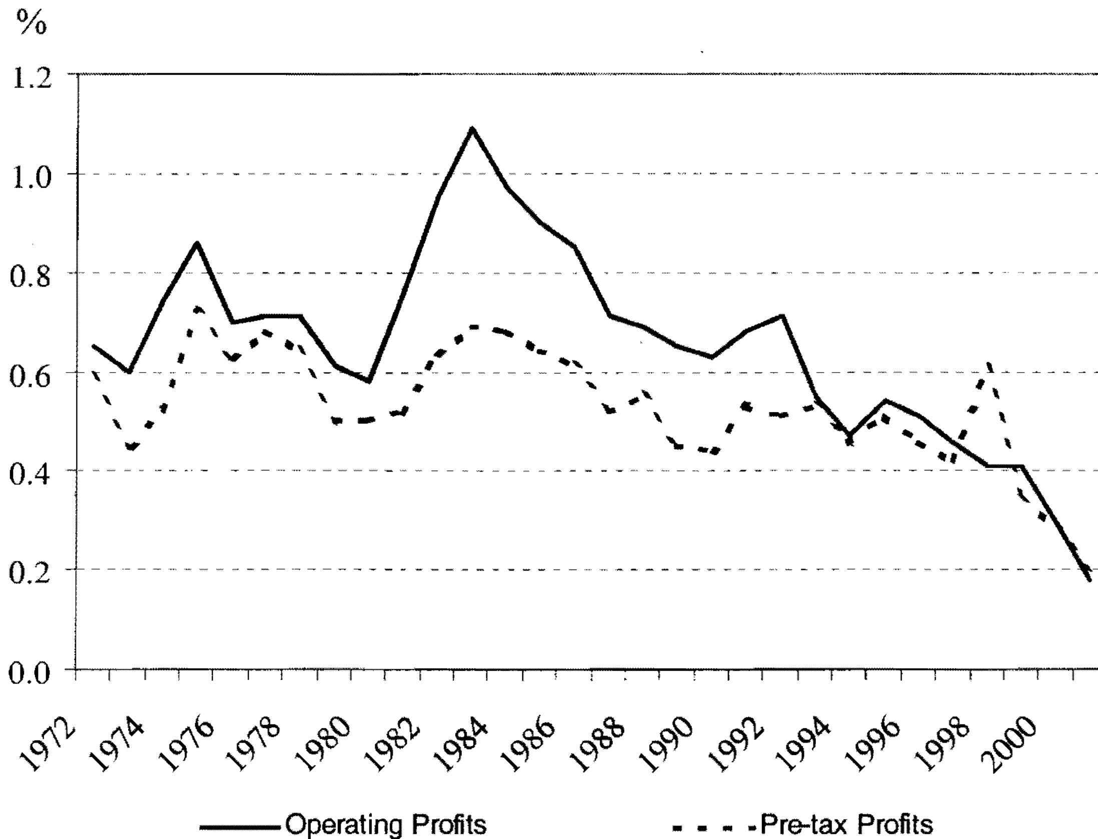
1. A collapse in asset values

The key assets are corporate equity and real estate. Germany's stock market has in fact suffered a precipitous decline from the peak almost three years ago. At the time of writing (23rd October) the XETRA Dax index was at 3,015.42, virtually 63% off the peak value of 8,064.97. At the 2002 low (2,597.88 on 9th October) the fall was almost 70%. (See the chart on p.5.) The Neuer Market - of supposedly dynamic young technology companies - had suffered the humiliation of having to be closed, because of collapsing values and seriously inadequate corporate governance. Real estate has not taken such a severe beating, but property values have fallen heavily in East Germany. The troubles in East German real estate are to be interpreted

German bank's profit record

Slide in operating profits and heavy loan losses in 2002

Chart shows operating profits (i.e., interest received plus commissions earned minus interest paid) and pre-tax profits of Germany's banking system, as % of total assets. Pre-tax profits are generally lower than operating profits, because of loan losses



Source: Deutsche Bundesbank

The German banking system is diverse and highly fragmented by UK standards. Its ownership is also very different from the UK, with substantial public ownership (notably, the controversial *Landesbanken*) and a large mutual sector. (There are even some banks owned by trade unions. The UK also used to have a large mutual sector in the form of the building societies, but this has declined drastically because of de-mutualization.) A fair comment is that a significant part of the system is not motivated by profit-maximization, but by wider objectives. Competition from the non-profit-maximizing organizations may explain the relentless slide in operating profits as a share of assets, from 1% in the 1980s to under 1/4% today. In the last few years the system has continued to make profits overall, because operating profits - although squeezed - have exceeded loan losses. But the low level of loan losses (measured by the gap between the two lines in the chart) since 1995 looks suspicious, and certainly will not be repeated in 2002 and 2003.

partly a reaction to the excess government subsidies distributed in the early 1990s to facilitate the privatization of assets which had been state-owned under communism. Also relevant has been internal migration to the former West Germany because of the poor performance of the East German economy.

2. Bad debts and low profits in the banking system

The vital statistics of the German banking system are set out on p.7. Profits were healthy in the early 1990s, helped by the re-unification boom. Since then operating profits have suffered serious erosion, perhaps because competition has been artificially intensifed by the high proportion of the banking system which belongs to the state or is mutually owned. Bad debts were not too painful in 2000 and 2001, but 2002 has seen the bankruptcy of Holzmann (Germany's second-largest construction company) and the plant-engineering company Babcock Borsig. According to an article in the July/August issue of *Global Finance*, banks have restricted credit to small- and medium-sized companies (the so-called *Mittelstand*) because of inadequate capital. In the recent election campaign Chancellor Schröder promised to create a new publicly-financed Mittelstandbank to ease the problem. Newspapers have carried reports that Commerzbank faced a liquidity crisis in early October, although the rumours appear to have died down.

3. A consequent erosion of banks' capital

The Bundesbank carries a regular annual article in its *Monthly Report* (usually in the September issue) on the profitability and capital position of the German banking system. The banks' poor profitability has inevitably constrained the growth of capital in recent years. The situation in 2003 may be yet more difficult. As already noted, banks' operating profits are weak, while recent months have seen both a spate of corporate disappointments and an intensification of the stock market slump. It seems inescapable that banks' loan write-offs in 2002 and 2003 will exceed their operating profits. Without the injection of new capital, their capital will fall. (The introduction of public money - as proposed by Schröder's Mittelstandbank - would be only a temporary palliative. To the extent that it reduced banks' profit margins, it would also discourage new private-sector money entering the banking sector.)

4. Low money supply growth

In principle the notion of "German money supply growth" is a misunderstanding, as Germany is a member of the Eurozone and the money assets held by its citizens are part of a large Eurozone money supply measure. However, the Bundesbank and other observers still write as if there were a "German banking system", implying that the notion of "German bank deposit liabilities" (and so of a "German contribution to Eurozone M3 growth") is viable. The recent path of this aggregate has in fact been erratic. Its growth ran at about 5% a year in the quarters immediately preceding the introduction of the new currency in January 1999, but then slithered to virtually nothing in early 2001. More recently, it has recovered to about 5% a year. However, this recovery may reflect Germany's payments surplus rather than a resilient banking system. (If a nation has a surplus, it is receiving more financial payments from other countries than it is remitting to them. If these payments are registered in the banking system, the money supply increases.) Bank credit to the private sector - which would reflect more accurately than the money supply the pressures from inadequate

Germany money and credit

Credit growth slumps, reflecting banks' capital strains

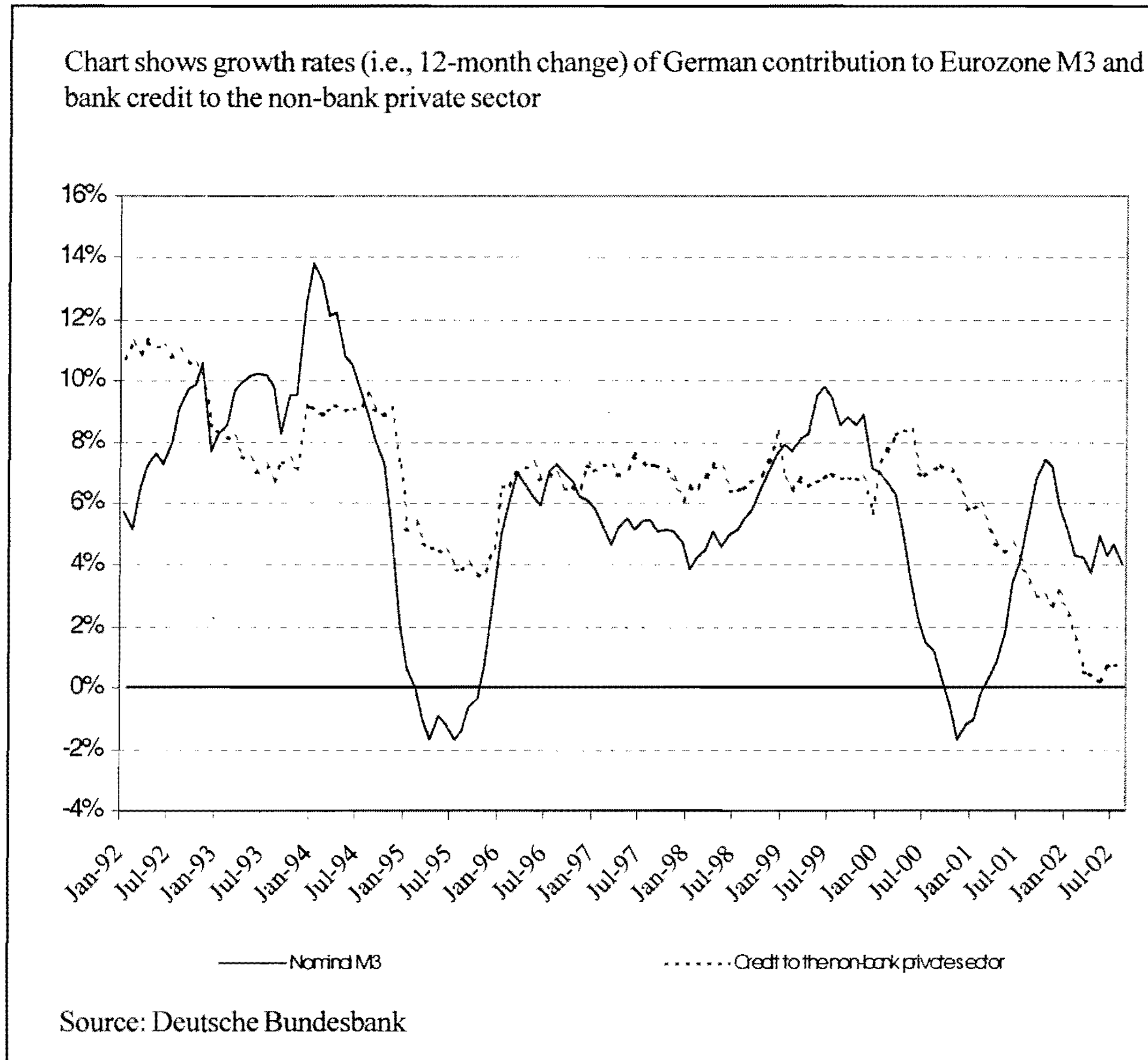


Chart shows growth rates (i.e., 12-month change) of German contribution to Eurozone M3 and bank credit to the non-bank private sector

Source: Deutsche Bundesbank

The alarming line in the chart relates to "credit to the non-bank private sector". Growth, which was a fairly consistent 6% - 8% a year from 1995 to 2000, has plunged to almost nothing. Complaints have been made by *Mittelstand* companies that banks have tightened credit criteria, making the strains in the banking system one theme in the recent general election campaign. According to a story on Deutsche Bank's profits in the *Financial Times* (30th October), "Insolvencies, many of them among small- and medium-sized companies, the so-called *Mittelstand*, are expected to top 40,000 this year as the economy teeters on the brink of its second recession in under a year." In the story Schroder Salomon Smith Barney describes Deutsche's exposure to the *Mittelstand* as a weakness and warns that loan losses may exceed operating profits in 2002. Indeed, Deutsche's loan losses are put at 1% of assets. If this reflects experience across the banking system, it will lose money this year.

bank capital - has weakened sharply in the last few years. After growing steadily at between 5% and 10% a year in the mid- and late 1990s, it has virtually stagnated in recent quarters. (See chart on p.9.)

5. Falling prices

As with the money supply, the notion of an independent national concept of the "inflation rate"is somewhat incoherent in a monetary union. Flows of goods, services and money between the participant countries should be so powerful as to swamp domestic influences on price changes. However, Germany's statistical agencies continue to prepare data as they did before the monetary union was created. When measured on a twelve-month basis consumer prices are still rising, but at a very slow rate. In September the consumer price index was only 1.0% higher than a year earlier. But this was largely a reflection of price developments in late 2001 and early 2002. The CPI was in fact the same in September as in March. Meanwhile producer prices have been falling gently for most of this year. A fall in construction costs is particularly marked and is consistent with the downard pressures on real estate values already noticed. (See chart on p.11.)

6. Rising liquidity preference

The risks of deflation are only beginning to dawn on the German public. (2002 has seen much media comment on the "teuro", a reference to the expensiveness of products after price increases attributed to the introduction of euro notes and coin in January.) Broad money had a long-run tendency to increase slightly faster than nominal GDP before the recent economic difficulties. At any rate, the ratio of money to GDP has risen somewhat, as it has in other Eurozone countries since the start of the new currency. But there does not seem to be anything unusual to report.

Conclusions must be less than reassuring, with big stock market collapse and adverse demographics in background

What are the conclusions? The answer has to be less than reassuring. In the background Germany's demographics are unfavourable for growth. The working-age population has now started to fall, but the rate of decline is quite modest (about a 1/4% ayear) until 2015, when it accelerates to 1 1/4% a year. Investors already need to think about the implications of this development for yields on long-lived assets (such as buildings and equities), and this may have an influence on stock market weakness in 2001 and 2002. Whether asset yields have risen sufficiently is a matter for debate. Obviously, a stock market fall in the 60% - 70% area is so drastic as to prompt a sense that "enough is enough". But the dividend yield on German equities is still not particularly attractive compared with, say, their UK counterparts. On the real estate front the demographics will be a constraint for decades to come.

2002 to be worst year for loan losses since 1949

The collapse in asset values has been accompanied by sharp increases in corporate and personal bankruptcies. The impact on banks' collateral will be severe, and there is little question that 2002 will be one of the German banking system's worst-ever years for loan losses. But the system does not have a cushion of healthy operating profitability to absorb these losses. The message must be that the amount of capital in the German banking system will shrink, with the extent of the damage depending partly on how tough banks' managements are in assessing their borrowers' ability to

German price trends

Consumer prices still rising (just), but building costs down

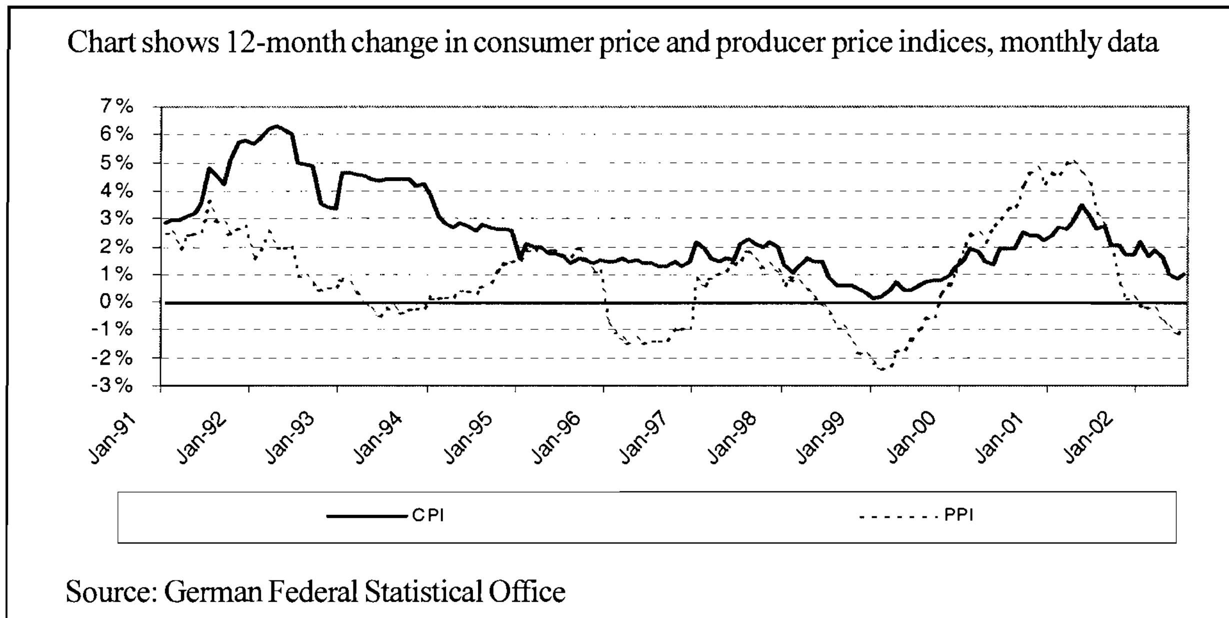


Chart shows 12-month change in consumer price and producer price indices, monthly data

Source: German Federal Statistical Office

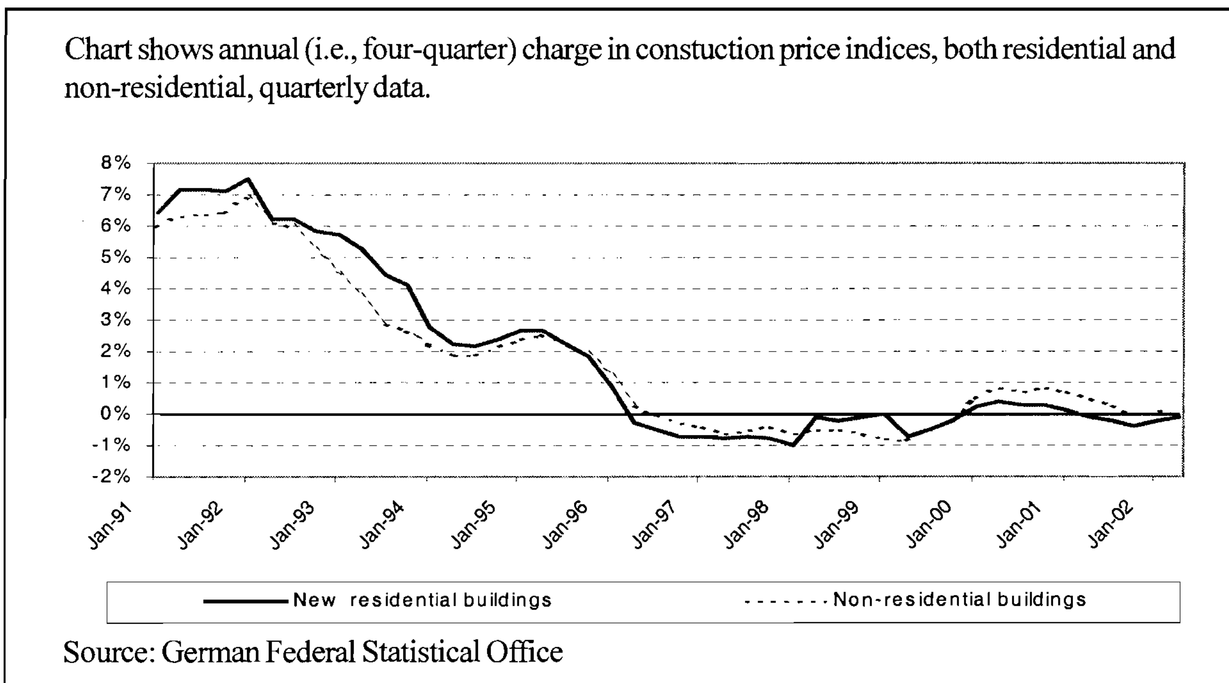


Chart shows annual (i.e., four-quarter) charge in constuction price indices, both residential and non-residential, quarterly data.

Source: German Federal Statistical Office

Germany's adverse demographics will discourage new building over the next 20 or 30 years, and perhaps for longer. The construction sector - booming in the early 1990s after re-unification - suffered a severe correction in the late 1990s. This weakening in demand slowed construction sector inflation between 1993 and 1995, and then caused falling prices from 1996 to 2000. The construction sector is in retreat again now and costs have resumed their decline, but producer prices as a whole are also falling. Consumer prices are a mere 1% up on a twelve-month basis and have been static over the last six months.

repay. In this light newspaper reports of banks' reluctance to extend new credits to *Mittelstand* companies are understandable.

Clear similarities to Japan

The demographic problem and the decline in banking system capital are reminiscent of Japan. In that sense Germany is catching the Japanese disease, but it is too early to make a categoric diagnosis. The normal response of market-based financial systems to capital adequacy crises of this sort is to widen profit margins, which restores equilibrium in two ways. First, it increases operating profits and helps to absorb loan losses. Secondly, it attracts capital back into the system.

Problems of re-capitalising the banking system,

These mechanisms have operated badly, or not at all, in Japan, for reasons which are not entirely clear. It may be that the asset price slump, and consequent erosion of collateral for bank loans, has been so great that ten or 20 years of healthy operating profitability cannot cover the loan losses. If adverse demographic change, and the associated shift from healthy trend output growth to virtual stagnation, are the key forces behind the asset price slump, then Germany - like Japan - has much difficulty ahead. Alternatively, the Japanese problem may be unique, reflecting a disintegration of corporate ethics (i.e., the *yakuza* problem) in the banking system and a distressing lack of cohesion, and even basic competence, in the political elite. Germany has its troubles, but surely there is nothing comparable to the *yakuza* problem.

with nationalization an extreme outcome

In the extreme it might become necessary to nationalize the banking system, wipe out the shareholders and recapitalize the system by a capital injection from the state. The capital injection can be financed by a large once-for-all increase in the national debt. A sequence of events like this was played out in Mexico, Thailand, Korea and other countries at various points in the 1990s. It is tough on the banks' shareholders and managements, but the depositors are safe and life goes on. Arguably, Japan should have done something of this kind several years ago. The German banks are plainly not in such severe trouble, but one or two institutions may need to be bailed out.

that would be constrained by Germany's Stability and Growth Pact commitments

Here Germany's membership of the Eurozone is more than a nuisance. For all its woes the Japanese government has the freedom to run a large budget deficit and to borrow without limit from the central bank. But - under the terms of the Maastricht Treaty - Germany does not have the same room for manoeuvre. In principle, it cannot run a deficit of more than 3% of GDP and any government borrowing from the European Central Bank is proscribed. Further, if a banking system bail-out were to involve a step increase in the national debt, there would be a risk of breaching the 60% limit on the ratio of public debt to GDP. The European Commission would also be concerned that any capital injections from the state must be on transparent market terms and must not include hidden subsidies.

German bank problems to influence Eurozone monetary policy?

The overall verdict has to be that the German banking system is in serious trouble. Germany may not have caught the Japanese disease, but it is vulnerable. In framing monetary policy for the Eurozone as a whole, the ECB's Governing Council needs to keep a watchful eye on the heavy losses that are about to be reported by the banks in its most important member state.