2. The great financial crisis in Finland and Sweden: the dynamics of boom, bust and recovery, 1985–2000

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INTRODUCTION[1]

The beginning of the 1990s witnessed a severe recession in Western Europe. The climax was the European currency crisis in the autumn of 1992 and summer of 1993. The recession turned most severe in Finland and Sweden, the northern periphery of the continent. The timing and the nature of the deep crises in the two countries were astonishingly similar – it was the crisis of the twins. To policy-makers and economists the power of the crisis came as a major surprise. The general view had been that such a depression could not happen in advanced welfare states like Finland or Sweden with a long tradition of full employment policies and strong labour union influence on the design of economic and social policies.

Figure 2.1 demonstrates that the annual percentage growth of GDP was negative over the period 1991–93 in both countries. Unemployment mirrored the depression, shooting up in both countries in the early 1990s. The rate of unemployment rose from a level of around 3 per cent in Finland during 1989–91 to around 18 per cent at the beginning of 1994. Unemployment in Sweden followed the same pattern, starting from around 2 per cent in 1990 and rising to a level of 10 per cent during the period 1993–97.[2] The co-variation between economic developments in Finland and Sweden was high, although the depression was deeper in Finland than in Sweden. A comparison across industrialized countries for the period 1970–2000 reveals that the boom–bust cycle in Finland and Sweden 1984–95 was more volatile than the average boom–bust pattern.[3]

The severity of the crisis of the 1990s is brought out when all the major crises that have hit the Finnish and Swedish economies in the last 130 years are compared.[4] Measured by the output loss, the depression of the 1990s was the most severe peacetime crisis during the 20th century in Finland, more severe than the Great Depression of the 1930s. Even unemployment

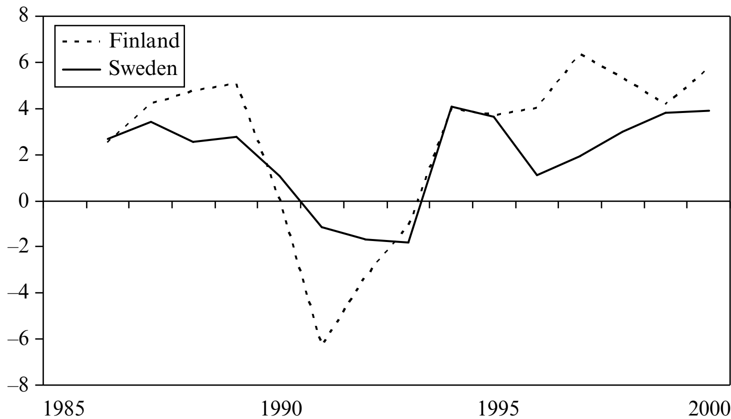


Figure 2.1 GDP growth in Finland and Sweden, 1986–2000 (yearly percentage change)

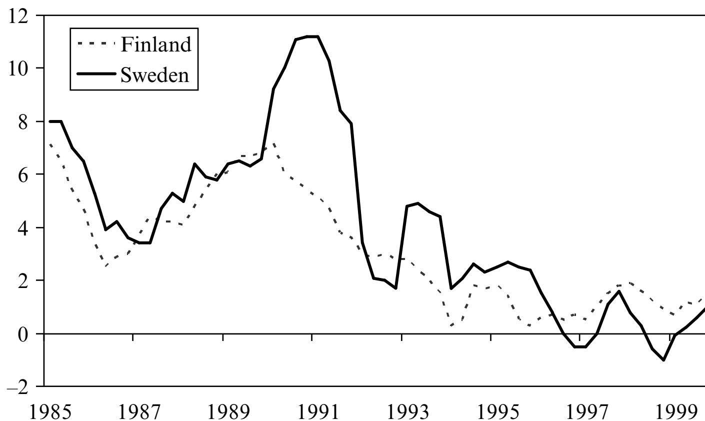


Figure 2.2 Inflation in Finland and Sweden, 1985–2000 (per cent)

rose to a higher level than during the 1930s. In Sweden, the crisis of the 1990s was the second worst during international peacetime. Only the depression of the 1930s exhibited a larger output loss.

The depression brought down the rate of inflation significantly. From the end of the 1980s to the end of the 1990s Finland and Sweden experienced disinflation (Figure 2.2); during a few months in the 1990s the price level actually fell – inflation turned into deflation. The crisis of the 1990s marks the transition from an accommodative stabilization policy

regime characterized by high inflation to a stability-oriented one with low inflation.

The aim of this chapter is to examine and explain financial and macroeconomic developments in Finland and Sweden before, during and after the crisis of the 1990s, using a comparative perspective. By now there are several studies focused on either the Finnish or the Swedish crisis experience.[5] Here we cover both countries at the same time in a search for similarities and differences. First, we present the analytical framework, inspired by the work of Irving Fisher on debt deflation. Next we describe the initial conditions in place before the beginning of the process that culminated in the crisis. Then we examine the record of the period 1985–2000, split into three phases: first, the run-up in 1985–90 to the crisis, the boom; second, the outbreak, spread and effects of the 1990–93 crisis, the bust; and, third, the ensuing recovery in 1993–2000. Finally, we address two major questions raised by the crisis record: first, why was the pegged exchange rate defended so stubbornly, and second, what policy lessons emerged from the crisis?

2.1 THE CONCEPTUAL FRAMEWORK

How could the Finnish and Swedish economies end up in such a deep depression? How could policy-makers committed to full employment allow widespread unemployment? To answer these questions we first have to identify the forces, domestic and international, responsible for the exceptional depth of the crisis and then find a suitable framework to account for them. We also have to explore the mindset of policy-makers and economists during this period to understand their actions and advice.

We find it fruitful to start from the conventional view of the causes and consequences of the many financial crises that occurred in the 1990s.[6] In our opinion, the crisis in the two countries was closely related to the financial liberalization of the mid-1980s. The Finnish and Swedish crisis during the early 1990s should thus be viewed as a predecessor of the crises in Asia and Latin America later in that decade.[7]

A growing body of comparative research has identified central elements of the boom–bust cycles during the 1990s.[8] The starting point in Figure 2.3 is a small open economy with a pegged exchange rate and extensive financial regulation of domestic and international credit and capital flows as well as of the domestic interest rate, which is generally kept below the level that would be determined by a 'free' market outcome.

The boom–bust process starts with a deregulation of financial markets, inducing a lending boom and an inflow of capital to finance domestic

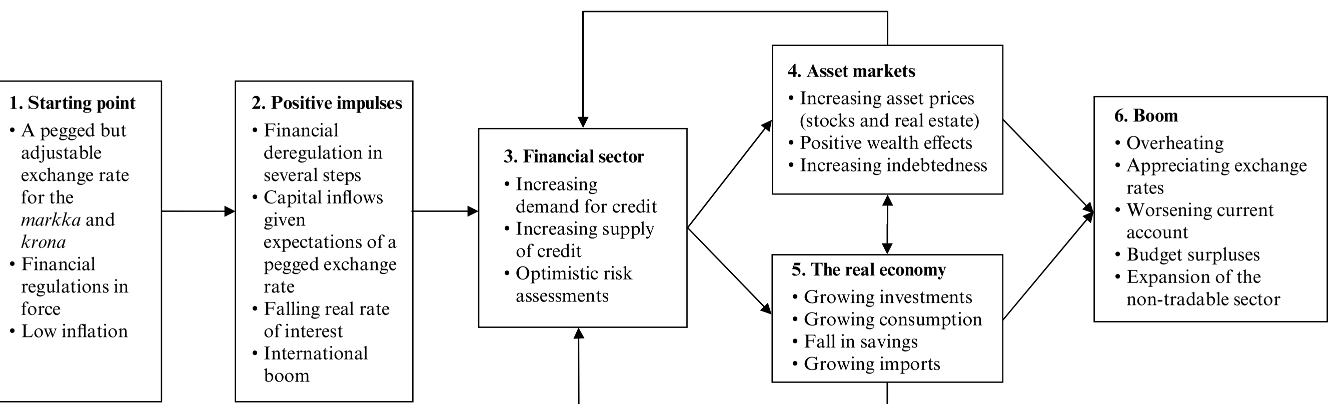


Figure 2.3 The boom phase in Finland and Sweden, 1985–90: a stylized picture

investment and consumption. The combination of financial deregulation and a pegged (fixed) exchange rate contributes to a speculative bubble, characterized by rising inflation rates and inflationary expectations, especially in asset markets such as the market for stocks and real estate. At this stage, the real rate of interest is low or even negative, which further spurs asset price inflation. This creates positive wealth effects, which in turn lead to a further strengthening of aggregate demand. During the expansion phase, the pegged exchange rate is perceived as irrevocably fixed by investors.

Eventually, unexpected negative impulses change the economic and financial outlook (Figure 2.4), and the credibility of the pegged exchange rate is put in question. The capital inflow is reversed into an outflow. The credit expansion comes to a halt, turning into a contraction. Domestic policy-makers try to stop the capital outflow and attract foreign capital by raising interest rates, which hurts indebted firms and households. The real rate of interest rises quickly, undermining balance sheets and thus the stability of the domestic financial system by creating credit losses. The harder the central bank tries to defend the pegged exchange rate with high interest rates, the deeper the crisis becomes. The financial bubble turns into a bust with a sharp increase in the number of bankruptcies and in the number of unemployed. Finally, the central bank is forced to abandon the peg and allow the currency to float. The decision to float is followed by a sharp fall in the foreign value of the currency. Domestic interest rates are lowered. The first step to recovery is taken.

The account above, summarized in Figures 2.3 and 2.4, fits nicely with the story of boom and bust for Finland and Sweden. Prior to the boom of the late 1980s, both Finland and Sweden maintained pegged exchange rates and strongly regulated financial markets. Both countries liberalized their financial markets in the mid-1980s in a way that induced rapid credit expansion, low real rates of interest, capital imports, growing trade deficits and asset bubbles during the latter half of the decade. During the boom, according to some estimates, the unemployment rates were below the natural rate in both countries. The sharp increase in asset prices increased household wealth.

When the real interest rate rose sharply, asset prices started to fall and finally collapsed. The borrowers and the financial system were put under severe pressure due to negative wealth effects.[9] Output and employment decreased and the budget deficits rose sharply, reflecting the workings of automatic stabilizers as well as government support given to the financial system. Speculative attacks eventually forced Finland and Sweden to abandon their pegs and allow their currencies to float during the fall of 1992. The depreciation that followed from the floating eased the depression and became the starting point for the recovery.

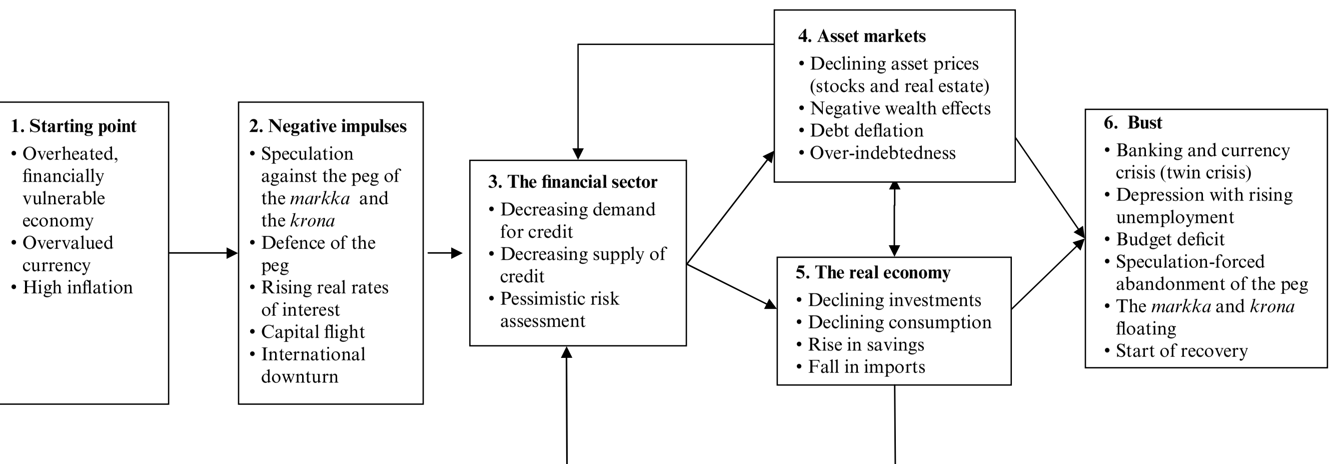


Figure 2.4 The bust phase in Finland and Sweden, 1990–93: a stylized picture

The way the crisis is summarized above has much in common with Irving Fisher's analysis of the Great Depression in the United States in the 1930s. Fisher stressed the effects of changes in the balance sheets of the private sector brought about by macroeconomic developments: 'In the great booms and depressions . . . [there have been] two dominant factors, namely over-indebtedness to start with and deflation following soon after'.[10] Fisher depicted debt deflation as a process where indebted economic agents become over-indebted, when actual income (earnings) and real interest rate developments do not meet previous expectations. Over-indebted economic agents, facing mounting liquidity problems, are suddenly forced to sell so much of their assets that asset prices start to fall. The fall in asset prices brings about a decline in their net wealth, as the nominal value of their debt to banks and other financial institutions remains unchanged. Falling asset prices undermine the value of the collateral used for taking loans, leading to additional forced sales.

The process becomes cumulative and self-enforcing: the stronger the fall in prices, the larger the volume of forced sales of assets pledged as collateral. Bankruptcies and credit losses are integral parts of the process of debt deflation, which finally threaten the liquidity and solvency of the whole financial system.

Fisher studied debt deflation in the United States in the 1930s, when consumer and wholesale prices as well as asset prices were falling at the same time. In addition to the collapse in asset prices, the general price level fell by about a third. However, Finland and Sweden's experience in the early 1990s demonstrates that a debt deflation process can occur when asset prices are falling, while the consumer price level remains fairly stable or is even rising. The rate of inflation was reduced during the crisis but it remained positive. Thus, disinflation, but no deflation of wages and prices, took place in both countries.[11]

The traditional Keynesian approach tends to ignore the balance sheet adjustments that were at work in the Finnish and Swedish financial systems in the 1990s. In the standard aggregate demand model, the attempt by economic agents to cut their spending as their incomes decline sets off, through various multipliers, a decline in production because the expenditures of one economic agent are the revenues of another. This leads to output losses because prices and wages are assumed to be inflexible or sticky.

Fisher's analysis is focused on the workings of financial markets. Here the existence of inflexible nominal debt contracts is a major feature behind the wealth effects driving the debt deflation process. When prices fall and real interest rates rise, the real value of nominal debt such as bank loans increases. The process brings about a rise in the sales of assets and

a reduction in borrowing and consumption while savings increase. This vicious circle was a major feature in the crisis of the 1990s in Finland and Sweden. Indebted households and firms ended up in a situation described by Fisher as 'Then we have the great paradox which, I submit, is the chief secret of most, if not all, great depressions: the more the debtors pay, the more they owe.'[12]

The attempt by some households and firms to shore up their financial positions by refraining from spending and selling assets thus affects the wealth positions of others. In the depression of the 1990s, cutbacks in consumption and investment weakened the profitability of viable companies and lowered their stock prices, exacerbating problems of over-indebtedness. When prices of equities and housing fell, households and firms with 'healthy' balance sheets also increased their savings and reduced consumption and investment.

The forced sales of assets as part of the debt deflation process did not affect households in an even manner, even though there was a sharp fall in the value of all dwellings. Households that took loans to buy houses when high prices prevailed in the late 1980s were affected the most. According to Statistics Finland, in the early 1990s roughly half of Finnish households had debts while the other half were debtless. About 10 per cent of the indebted households had their debt restructured in 1992 and 1993, while 20 per cent did so in 1994.[13]

Our study will stress one element lacking in Fisher's original analysis. He examined the case of the United States, a fairly closed economy in the 1930s. However, Finland and Sweden in the 1990s were small, open economies with large tradable sectors. We thus examine debt deflation in an open economy. One of our major findings is that the deflation spiral was effectively stopped when Finland and Sweden abandoned their pegged exchange rates. When the two countries were forced to adopt a floating exchange rate in the fall of 1992, the deflationary forces were arrested. True, the depreciation of the domestic currencies that occurred when the currency peg was eliminated also created negative wealth effects when the real value of foreign nominal debt rose. However, these effects were countered by the rapid increase in exports after the crisis, driving the recovery. This chain of events illustrates an asymmetry between the tradable (open) and non-tradable (sheltered) sectors during the boom–bust cycle.[14]

The standard argument by economists against the use of devaluations is that they are ineffective in the long run. They improve export performance in the short run but eventually increase inflationary pressures, thus bringing about demands for new devaluations, in this way creating devaluation cycles. This argument was an important factor behind the Finnish and

Swedish 'hard' currency policy after the experience of the devaluations of the late 1970s and early 1980s.[15]

The financial crisis of the 1990s demonstrated, however, that the policy of the hard *markka* and the hard *krona* actually amplified the boom and deepened the economic downturn. When an economy has ended up in a debt deflation process with an overvalued currency, loss of competitiveness, rising current account deficit and mounting financial imbalances due to rising real rates of interest and falling asset prices, the policy-makers can and – as a normative proposition – should arrest the process by a change in the foreign value of the domestic currency. This was a major policy lesson that Finland and Sweden were forced to learn in the early 1990s. In short, devaluation was deemed a better alternative than deflation by policy-makers.

Following the insights of Irving Fisher, we may classify the crisis of the 1990s as a real interest rate crisis, since the significant rise in real rate of interest constituted a central feature of the boom–bust cycle.[16] We may also label it as a financial crisis as financial developments gave the impulse for the boom–bust. As stressed in this chapter, the 'twin' crisis in Finland and Sweden was very similar to the crises in other economies that deregulated their financial markets while maintaining pegged exchange rates.[17] Norway went through a similar boom–bust process to that of Finland and Sweden.[18] This similarity between Finland and Sweden and other nations provides firm support for analysing the crisis as a financial one. True, the crisis had many dimensions, involving imbalances within both the financial system (the banking crisis) and the foreign exchange market (the currency crisis). The latter crisis was manifested by the speculative attacks on the pegged exchange rate of the *markka* and the *krona*.[19] In this sense it was a twin crisis as the concept is used to describe financial crises in the world economy in recent decades.

2.2 THE POLICY FRAMEWORK PRIOR TO FINANCIAL LIBERALIZATION

An understanding of the institutions and economic policies that evolved in Finland and Sweden after World War II helps us to clarify the policy reactions during the years 1985–2000. Both Finland and Sweden became early members of the Bretton Woods system, pegging their exchange rates to the US dollar. Finland signed the articles of agreement in 1948 and paid up her share to the IMF in June 1951. The exchange rate was set at 231 *markkaa* to the dollar. Sweden joined in August the same year. The rate for the *krona* was set at 5.17 *kronor* per dollar, and was kept constant by

the *Riksbank* for 20 years. Finland had the same objective but devalued the *markka* in 1957 and in 1967.

Capital account controls (foreign exchange regulations) served as a wall behind which the central banks determined the rate of interest as well as the distribution and size of credit flows. Monetary policy was used to subsidize those sectors of the economy that the government wanted to support with low interest rates and an ample supply of credit. Since interest rates were kept low and the tax system allowed large deductions for the cost of borrowing (deduction for the payment of interest rates on loans), private sector demand for credit was typically greater than the available supply. As international financial markets deepened, so did the possibility of speculating against pegged exchange rates. Financial market integration contributed to the downfall of the Bretton Woods system in the early 1970s. Still, after its demise, capital account controls remained in force in Finland and Sweden until the end of the 1980s.

In the 1970s, full employment was the main policy goal, one reason being the strong political position of labour unions. Both countries had, and still have, some of the largest shares of unionized workers in the OECD countries. Wage negotiations were based on centralized negotiations between confederations of employer associations and trade unions. The results were then applied first at the union level and then at the firm level. The goal of maintaining full employment contributed to expansionary fiscal and monetary policies. This led to low rates of unemployment, high rates of inflation and several devaluations during the period 1976–82. The discretionary exchange rate flexibility created the necessary adjustment of real wages required for maintaining full employment and external balance.[20]

The devaluation policy reached a climax during the second oil crisis. The Centre-Right government in Sweden devalued the *krona* by 10 per cent in September 1981. Immediately after the election in 1982, when the Social Democrats regained power, an 'offensive' 16 per cent devaluation (originally intended to be 20 per cent) was carried out. The idea was that Sweden would gain a competitive advantage for a few years. The devaluation option would then be closed forever, according to the political rhetoric. Finland followed the Swedish devaluation of 1982 in order to protect its competitive position vis-à-vis Sweden.

Prior to the crisis of the 1990s, both Finland and Sweden appeared to be small, rich welfare states immune to the high unemployment that had plagued most Western European countries since the 1970s. Labour market policies were used in both countries to reduce long-term unemployment.[21] The Finnish and Swedish economies were characterized by high taxes and large public sectors. To many, they appeared to be

successful models for economic policy. Few understood that the macroeconomic policy regimes of the two countries rested on a system of strong capital account regulations which isolated the two countries from the rest of the world.

2.3 THE 1985–90 BOOM: FINANCIAL LIBERALIZATION AND OVERHEATING

We examine the boom of the late 1980s by looking first at the developments in Finland, then in Sweden, and finally summarizing the common features of the boom in the two countries. We adopt the same arrangement in the following sections on the 1990–93 crisis and the 1994–2000 recovery.

2.3.1 The Boom in Finland

Macroeconomic developments

The drawn-out process of financial deregulation started in the mid-1970s when a money market emerged. In the 1980s, the Bank of Finland allowed banks to handle foreign exchange affairs, a move that increased short-term capital flows. By the mid-1980s, the lending rates of banks were deregulated and companies were allowed to borrow abroad. When the Bank of Finland started with open market operations in 1987, a modern financial market was created. The pressure to deregulate increased as the liquidity in the corporate sector grew from foreign trade. A market for short-term lending outside the banking system emerged as well.

During the period of regulated financial markets, the Bank of Finland was able to control bank lending because, in the absence of free international capital movements, banks were typically indebted to the central bank. The Bank of Finland set the terms for central bank borrowing which the banks followed.[22] It was not always possible to get a loan at the prevailing interest rate even with sufficient collateral. Thus, the Bank of Finland was able to regulate the availability of credit for firms and households via the banks as well as via the rate of interest.

This system of financial governance changed significantly when capital movements were liberalized and the interest rate controls phased out in the mid-1980s. Households and companies, previously accustomed to living in a world of credit rationing, responded by increasing their debt significantly (Figure 2.5). As a result, bank lending to the non-bank public doubled during the latter half of the 1980s. Lending in foreign currency rose dramatically, too. The inflow of foreign capital increased liquidity and fuelled the domestic credit expansion.

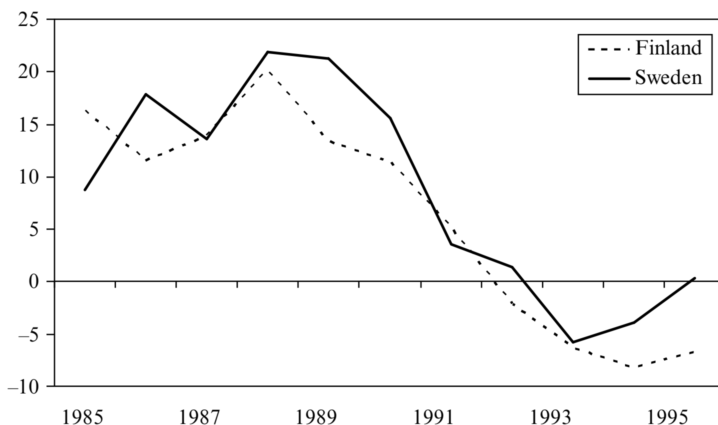
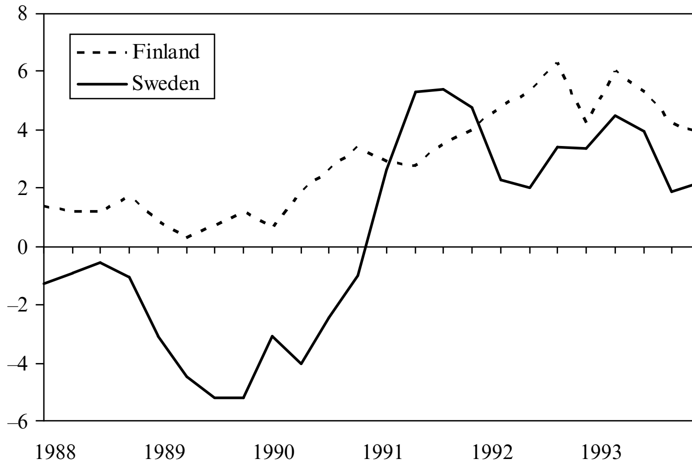


Figure 2.5 The volume of credit in Finland and Sweden, 1985–95 (yearly percentage change)

The growth of private consumption accelerated along with the easing of the availability of credit in the latter half of the 1980s. The demand for housing, real estate and stocks led to a rise in their prices. The rise in the value of assets and the ensuing rise of expectations of future increases in prices fuelled consumption through wealth effects. The increase in wealth enabled additional borrowing by increasing the value of collateral, without households feeling that they were becoming over-indebted. The rise in borrowing was partly driven by the fact that expenses for interest payments were deductible from income before taxation, causing low after-tax real rates of interest (Figure 2.6).

The real economy, especially the construction sector, grew strongly in the latter half of the 1980s. The Finnish economy was characterized by a rapid growth in GDP and a boom in the labour market. Widespread optimism and strong economic growth led to a shortage of labour and accelerating wage inflation due to wage drift. In 1989 the unemployment rate was 3 per cent and long-term unemployment was almost non-existent. At the same time, nominal wages rose by 10 per cent that year.

The rise in asset prices sparked optimism (Figure 2.7). The increase in share prices was seen as the result of the new financial integration between Finland and the rest of the world, which increased the price of previously undervalued Finnish shares. In the media, the yuppie culture and the new 'casino economy' was portrayed favourably. The business papers were filled with success stories from the stock market, contributing to a general sentiment of optimism and encouraging risky investments.[23]



Note: The real rate of interest ex post after tax is calculated by the following: (1 – tax rate on capital) ∗ nominal interest rate – inflation rate.

Figure 2.6 Real rate of interest ex post in Finland and Sweden, 1988–93 (per cent)

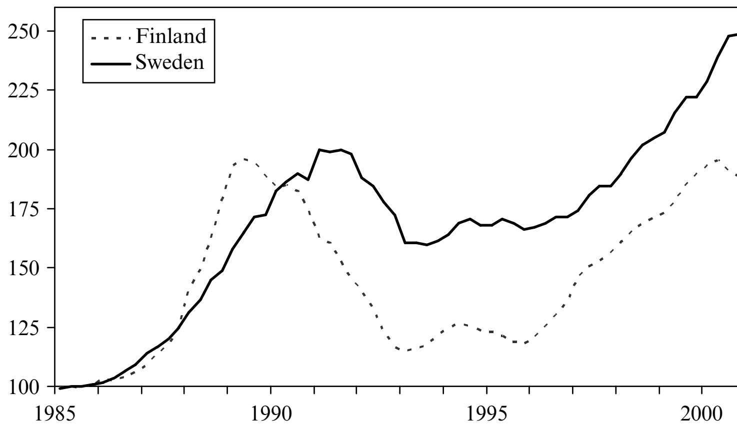


Figure 2.7 House prices in Finland and Sweden, 1985–2000 (1985=100)

Economic policies

In order to dampen the boom, the Bank of Finland made attempts to raise interest rates in 1987–89. The impact of its actions was at first negligible, however, because inflow of foreign capital offset the tightening of domestic

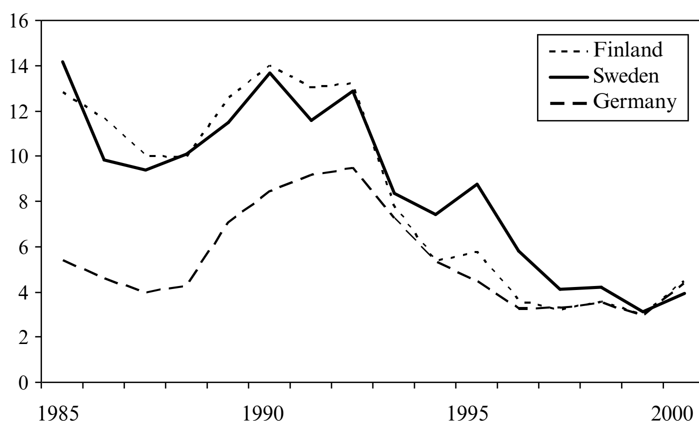


Figure 2.8 The three-month interest rate in Finland, Sweden and Germany, 1985–2000 (per cent)

monetary conditions. The situation changed in 1989, when foreign investors started to have doubts about the credibility of the pegged exchange rate. Still, companies that took on foreign credit did not fully understand that the large differential between domestic and foreign interest rates was a sign of exchange rate risk.[24] Figure 2.8 shows the differences between Finnish, Swedish and German interest rates.

Since monetary policy was committed to maintaining the pegged exchange rate for the *markka*, the responsibility for stabilizing the economy was de facto assigned increasingly to fiscal policy. Indeed, the central government ran a surplus for a few years, but this was attributable mainly to exceptionally strong economic growth, not to any fiscal tightening.

At the same time as financial markets were deregulated, a tax reform was carried out at the end of the 1980s, easing income taxation, even though it should have been tightened for cyclical reasons. The aim of the tax reform was to improve economic incentives and foster neutrality of taxation by widening tax bases and lowering tax rates. Attempts to scale back the tax deductibility of interest payments on loans for consumption and housing had little success. Since the interest rates on bank loans were deducted in taxation, real after-tax interest rates were barely positive, and the relatively high nominal interest rates were not high enough to dampen credit-fuelled demand.[25]

The Economic Council, a discussion forum led by the prime minister, addressed issues related to monetary and exchange rate policies several times. Officials from the Bank of Finland testifying before the Economic Council warned about the dangers of overheating and the rising current

account deficit. In March 1989, the general secretary of the Economic Council, Seppo Leppänen, presented a report which later became famous as the *Current Account Problem in Finland*. The risks of indebtedness were depicted in a crisis scenario, where 'borrowing quickly becomes uncontrollable' and the 'Finnish economy may in the 1990s be driven into a period marked by permanently low growth, high unemployment, a low investment rate, a high government deficit, a current account deficit and instability in the labour markets'. The scenario was not taken seriously at the time, however.

The tightening of fiscal policy was also hampered in the late 1980s by constitutional obstacles to austerity measures, notably the fact that a simple parliamentarian majority was sufficient to increase spending while a two-thirds majority was needed for reductions in entitlement programs.[26] Prime minister Harri Holkeri together with the minister of finance, Erkki Liikanen, made attempts to tighten policy, but spending cuts were rejected by the opposition.[27]

The central goal of the Bank of Finland, namely to keep the *markka* exchange rate pegged (the policy of the stable *markka*), was temporarily relaxed when the central bank decided to revalue the *markka* by 4 per cent on 17 March 1989. The government and the Bank of Finland justified this action by asserting that it aimed at dampening inflation.[28] The revaluation led to higher domestic interest rates, which were intended to dampen the overheating which was still seen as a major problem at that time. In hindsight, the revaluation of the currency aimed at curbing the boom came too late. Export prices had been rising since 1987. This positive terms-of-trade shock had spilled over into the economy in the form of rising wages and rising raw timber prices. The revaluation tried to neutralize the positive terms-of-trade shock, but it was two years too late. Instead, it contributed to the overvaluation of the Finnish *markka*, and by making imports cheaper it also widened the current account deficit. It soon became clear that the revaluation deepened the coming current account crisis.

The revaluation of the *markka* also created a credibility problem for policy-makers as it was not consistent with the pegged exchange rate policy. A more proper response, given the pegged exchange rate, would have been to leave the exchange rate unaltered and conduct a more restrictive fiscal policy.[29] Devaluation expectations already existed prior to the revaluation and did not disappear afterwards. The low credibility of the exchange rate policy was apparent in the interest rate differential between Finland and Germany (Figure 2.8).

As the outlook for the Finnish economy grew bleaker, interest rates rose sharply. The situation worsened as a result of the simultaneous increase in international rates following the German reunification. The boom ended

in 1990 as higher real rates of interest led to falling asset prices, falling profits and increasing savings. The Finnish economy started to slide into an exceptionally deep currency and banking crisis.

2.3.2 The Boom in Sweden

Macroeconomic developments

World War II unleashed a process of far-reaching regulation of the Swedish economy. At the start of the war, capital account controls (*valutaregleringen*) were introduced. They were complemented in the 1950s by a series of instruments that made it possible for the *Riksbank* to set the interest rate and steer credit flows according to political priorities. The objective of the regulation of the financial system was to facilitate a policy of low interest rates (*lågräntedoktrinen*), which aimed at keeping interest rates below the levels that would have prevailed in the absence of the regulatory system.[30]

Step by step, these regulations were abolished in the 1970s and 1980s. Just after the 1985 election, the governing board of the *Riksbank* abolished the quantitative controls on lending by commercial banks. This step, later dubbed the November revolution, had a significant – although unexpected – effect on macroeconomic developments over the next ten years.[31] It was regarded rather as a technical measure not expected to have any significant real economic consequences.[32] As it turned out, the 1985 financial deregulation was an important first step in the march towards the crisis of the 1990s.

The deregulation should be judged against the imbalances that had characterized private sector portfolios prior to the November 1985 decision. Companies and households had been restricted in their choice of portfolio compositions due to the extensive credit market regulations, high inflation and a tax system that favoured borrowing. The financial deregulation of 1985 fundamentally affected this incentive structure by creating strong incentives for companies and households to increase their borrowing at prevailing interest rates. It also changed the environment for banks, now facing more open competition for market shares. Banks adjusted to the new situation by expanding credit as borrowers stood in line to increase their debts.

The result of the new structure of incentives was that debt increased dramatically between 1986 and 1988 (Figure 2.5). A large part of the expanding volume of credit was channelled into the asset markets, that is, into the property and share markets. The private sector utilized the rising value of its assets as collateral for further borrowing.

The process was fuelled by a rising rate of inflation, which peaked in

1990 (Figure 2.2). The real after-tax interest rate was negative for many investors due to the combination of high inflation, high inflation expectations and the rules of the tax system. The low and often negative real interest rates made it tempting to raise loans – both within Sweden and from abroad – for investments and consumption (Figure 2.6). The final result was the creation of a financial bubble in the Swedish economy, built on excessive indebtedness within the private sector and a corresponding overlending within the financial system.

The credit boom was reflected within the real sector of the economy as well. Consumption became the driving force, while the savings ratio declined. During the most intensive boom period, households consumed more than their disposable income. Government finances improved rapidly during the overheating since the sharp growth in consumption resulted in growing tax income from value added taxes. The budget even showed a small surplus in the late 1980s, creating a significant decline in the debt-to-GDP ratio.

The labour market was driven by strong demand from the domestic (non-tradable) sector, in particular from the construction sector. New construction was favoured by the increases in the price of real assets. It was also heavily subsidized through the design of the housing policy of the government. Significant wage drift emerged. The labour market became overheated with unemployment of less than 2 per cent at the end of the 1980s.

As a consequence of the rapid domestic expansion, the export sector (the tradable sector) was squeezed. The growth in exports became negative while imports soared. The current account worsened towards the end of the 1980s after the recovery in the wake of the 1981–82 devaluations. Gradually, Sweden slid into a cost crisis, temporarily covered up by domestic expansion.

Other factors also fuelled the economic upturn. The fall in oil prices in 1985 gave the world economy a positive impulse. The expansionary American stabilization policy contributed to a long period of international economic upturn that commenced in 1982–83. It reached a peak in 1989–90, when all indicators pointed to an overheating of the Swedish economy. The overheating was characterized by a much faster rate of domestic inflation and lower domestic unemployment than in the rest of the world, and a worsening of Swedish competitiveness. This undermined the credibility of the pegged exchange rate for the *krona*.[33]

Economic policies

The expansionary impulse that the deregulation of 1985 created was not countered by any contractionary policy measures until 1989–91. The

conduct of fiscal policy in combination with the financial deregulation thus became the prime reason for the overheating, the cost crisis and the financial imbalances that appeared in the form of over-indebtedness and over-lending during the latter part of the 1980s.

Monetary policy had, since 1982, been founded on the pegged exchange rate of the *krona*. The devaluation in 1982 was declared the last of its kind. The *Riksbank* did not counter the overheating by revaluing the *krona* as its Finnish counterpart did. The responsibility for the stabilization policies thus fell solely on the ministry of finance. In February 1990, the government proposed a freeze on all wages, prices and dividends for two years and a limitation of the right to strike. The freeze package triggered a government crisis.[34] The Social Democratic government resigned. Kjell-Olof Feldt, the minister of finance, left. The new minister of finance, Allan Larsson, took over an economy that was entering into a deep crisis.

In October 1990, as a consequence of a speculative attack on the *krona*, a new austerity package was introduced. At the same time, the government announced that Sweden would apply for EU membership, a measure that can be viewed as an attempt to shore up the credibility of the *krona*. In May 1991, the *Riksbank* attempted to strengthen the credibility of the *krona* by abandoning the currency basket and pegging the *krona* to the ECU. In September 1991, a major financial institution, the *Nyckeln*, collapsed – an event that is commonly regarded as the start of the bust phase.[35] The very same month, the Social Democratic government lost the election to parliament. A four-party coalition formed the new government with Carl Bildt from the Conservative party as prime minister. The new government inherited an economy in rapid decline.

2.3.3 The Common Pattern

Macroeconomic developments in Finland and Sweden during the 1980s were almost identical. The controls over capital flows and interest rates had given the central banks a significant degree of freedom to conduct monetary policy in spite of the pegged exchange rate regime. The financial liberalization of the 1980s affected the incentives of borrowers and lenders in a fundamental way. As a consequence, bank lending increased dramatically. It was channelled to the asset markets, mainly to the real estate and stock markets, raising asset prices and thus private wealth. A new feature appeared in the business cycle, namely asset prices increasing much faster than consumer prices.

The process of financial regulation was accompanied by rising inflation and inflation expectations. The real interest rate after tax fell below zero for many investors through a combination of high inflation, high inflation expectations and the rules of the tax system.[36] The low real interest

rates made it tempting to borrow, both domestically and abroad, for consumption and investment. The result was a financial bubble built on over-indebtness and over-lending within the financial system.

Initially policy-makers were unwilling to change either monetary or fiscal policy in response to the boom. Monetary policy was confined to defending the pegged exchange rate. Finland made an unsuccessful attempt to revalue its currency. A forceful restrictive fiscal policy would have been necessary to control the expansion in the aggregate demand, but such a policy did not come about in either country.

Financial deregulation was the key to the start of the boom. However, the liberalization was pushed through without any serious public debate. It was not presented as part of a larger policy program, but rather as a series of technical changes. There was no common knowledge of the consequences of financial deregulation, though a few experts warned of the dangers. A critical discussion emerged only afterwards about the deregulation of the financial markets, in particular concerning the sequence of the deregulatory steps.

2.4 THE BUST 1990–93: OUTBREAK, SPREAD AND EFFECTS OF THE CRISIS

2.4.1 The Bust in Finland

Macroeconomic developments

Even if the employment outlook remained good, reasons for concern gradually emerged in the summer of 1989. Stock prices began to fall in April 1989 after the central bank's decision to further revalue the overvalued currency. An early sign of the brewing storm was the first bankruptcy of a highly leveraged listed investment company (*Mancon*) in the spring of 1989. Short-term interest rates rose in the autumn by 4 percentage points. At the same time, another listed company, the flagship of the Finnish shipbuilding industry, *Wärtsilä Marine*, filed for bankruptcy. At the end of 1989, the Finnish public was shocked by the news of the suicide of the CEO and president of the Finnish savings bank group's *SKOP-Bank,* Matti Ali-Melkkilä. The rise in interest rates and the fall in stock prices, with fateful consequences for *SKOP-Bank*'s investment strategy, were thought to be a factor contributing to his death. The situation in the banking sector was rapidly deteriorating. In the spring of 1989, the demand for housing slackened, the selling times grew longer and the rise in prices came to a halt. As the stock of unsold housing began to grow, prices gradually started to fall, a devastating process that was to last for four years.

Despite the increase in uncertainty, GDP growth was still 5.4 per cent in 1989, the same as in 1988. However, on a monthly level the output started to contract towards the end of 1989. Unemployment was still at a record low: about 3 per cent in the entire country and only 1 per cent in Helsinki. Throughout 1990, short-term interest rates remained at high levels and asset prices continued to decline. After good results in 1989, the profitability of companies and banks weakened sharply in 1990.

The Finnish economy also faced a series of negative external shocks in 1989–91. There was a clear slowdown in the international economy, and European interest rates rose in 1990. Finland was also affected by the collapse of the Soviet Union and the subsequent reduction in Finnish–Soviet trade in 1990–91. Export earnings decreased 10 per cent in 1991. Furthermore, the Finnish terms of trade deteriorated by more than 15 per cent. This adverse terms-of-trade shock would have required a swift reduction of labour costs or a devaluation/depreciation for Finland to maintain its international competitiveness.

Weak export performance together with sizeable current account deficits (about 5 per cent of GDP) caused growing uncertainty in the foreign exchange market and speculative attacks against the *markka*. The Bank of Finland raised interest rates in order to defend the pegged – and clearly overvalued – exchange rate. On average, short-term rates were 13 per cent in 1989–92. Disinflation was faster than anyone had expected and high real interest rates together with shrinking asset values depressed domestic demand. Private investment was reduced by 50 per cent and private consumption by 10 per cent in 1990–93. Disposable household income fell and the savings rate increased.

As a consequence, domestic demand collapsed and GDP fell by 13 per cent from mid-1990 to mid-1993. It was not until 1996 that the pre-crisis GDP level was reached. The negative demand shock affected employment and unemployment as well as public finances. The beginning of the 1990s thus witnessed a radical change from almost full employment to the longest mass unemployment in Finnish history. The demand for labour fell within three years (from 1990 to 1993) by almost 20 per cent and the rate of unemployment rose from 3.5 to 20 per cent. The fall in demand for labour was strongest in the private sector, but the public sector – mainly local government – contributed as well. For the first time in modern Finnish history, public employment decreased (by 10 per cent in 1992–94).

Both the central government and local governments took harsh measures to reduce public spending. Notwithstanding the increasingly restrictive fiscal measures, very large fiscal deficits appeared and the development of public debt turned explosive. In order to reduce fiscal deficits, the government increased income taxes, payroll taxes and consumption taxes

in 1992–94. At the same time, taxes on profits and capital income were reduced.

The sharp fall in share prices and real estate weakened company balance sheets during 1989–92 and reduced the net wealth of households. The corporate sector responded to the crisis by cutting costs and selling off assets. This further sharpened the debt deflation spiral in the economy. As the numbers of sellers increased and buyers decreased, prices fell. The downturn in the economy was followed by a marked increase in the number of bankruptcies.[37] This led to a further fall in investment and consumption and thus forced the economy deeper into depression.

During the boom, households had increased their consumption in relation to disposable income and the savings rate turned negative. During the depression the opposite happened. Within three years the savings rate climbed from minus 2 per cent of disposable income to plus 10 per cent. High real interest rates in combination with weaker expectations led to falling investment, first in the construction sector.

Economic policies

After the parliamentary election in March 1991, the new Centre-Right government under prime minister Esko Aho was immediately faced with the worst crisis in the post-war period. The new government declared that it would stick to the policy of the pegged exchange rate, much to the surprise of its traditional supporters in the electorate and its economic advisers. The Bank of Finland supported this policy, and the government had to back it.

The Swedish decision to unilaterally peg the *krona* to the ECU in May 1991 complicated matters. After prolonged arm-wrestling, the Bank of Finland called upon the government to unilaterally peg the Finnish *markka* to the ECU as well. Many argued for a minor devaluation in conjunction with an ECU-peg, or at least for a rolling back of the 4 per cent revaluation of the *markka* two years earlier. Two members of the board of the Bank of Finland, Markku Puntila and (former prime minister) Kalevi Sorsa, were clearly opposed to any devaluation. Other directors, such as Ele Alenius, Esko Ollila and Bank governor Rolf Kullberg, would have supported such a move. Harri Holkeri, former prime minister, who had returned to his post as one of the executive directors at the central bank, was not present at the decisive meeting on 3 June 1991. According to Kullberg (1996), Holkeri was 'satisfied with the group's decision' to peg the *markka* to the ECU at an unchanged rate.[38]

Governor Kullberg did not like the idea that the board of the central bank would be split in its decisions. Since two influential members of the board made clear that they opposed any exchange rate realignment,

Kullberg was not willing to take a risk and have a vote. As a result, the majority of the board accepted the view of a strong *markka* as a vocal minority proposed that there would be no devaluation when the *markka* was tied to the ECU.

The government could have forced the central bank to accept devaluation. However, there was a clash within the government on this issue. Prime minister Aho – and probably also the majority of the members of the government – was in favour of a mini-devaluation. President Mauno Koivisto also backed the government's devaluation stance.[39] The minister of finance, Iiro Viinanen, was against any devaluation, while the minister of foreign affairs, Paavo Väyrynen, supported a bigger devaluation. However, when the government got the message that the central bank wished to keep the exchange rate unchanged, it decided to support this line of action. The ECU-peg was approved almost unanimously by the parliament.

The decision to peg the *markka* to the ECU was of no help to the Finnish economy. The exchange rate was still overvalued and interest rates remained high. GDP and employment continued to fall. As devaluation was ruled out for political reasons, the government tried to resort to new incomes policy measures. The discussions between the government, unions and employers started in August and continued until November 1991. The objective of this 'internal' devaluation was to render an external devaluation unnecessary.[40] The government wished to reduce nominal wages by 5 per cent. Prime minister Aho decided to put the former Social Democratic prime minister and then board member of the Bank of Finland, Kalevi Sorsa, in charge of the negotiations on 20 September 1991. The heads of the central trade union organizations approved an agreement which would have lowered nominal wages by 3 per cent and shifted 4 per cent of pension contributions from employers to employees, thus cutting the employers' labour cost by 5 per cent. The chairman of the Federation of Trade Unions (SAK), Lauri Ihalainen, described the birth of the Sorsa package as follows:

> It was an exceptionally difficult matter in principle. The idea was to make a wage-cutting deal in the hope that it would prevent devaluation and enable us to cope with the situation via so-called flexibility. I was personally involved in the talks and after a lot of deliberation we got a decision made in SAK, but it was an extremely painful process.[41]

However, the package was subsequently shelved after two weeks of intensive negotiations, because the powerful trade unions (paper and metal industry workers) within the export industry did not accept it. They understood that an 'internal' devaluation was not the best alternative for the export industry.

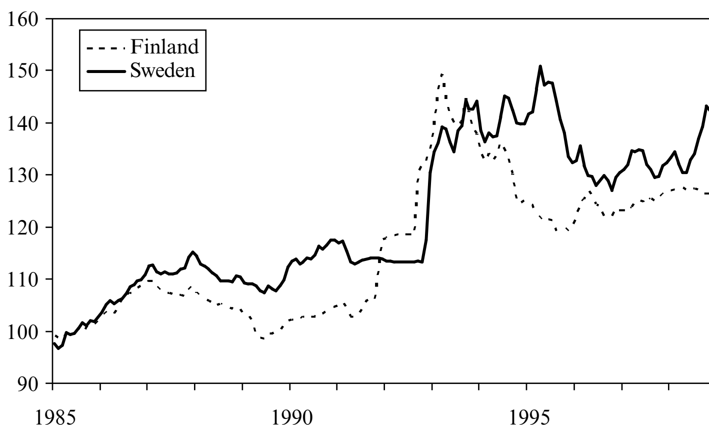


Figure 2.9 The Finnish and Swedish exchange rates against the ECU basket, 1985–99 (1985=100)

When it became apparent that there would be no reduction of nominal wages, the credibility of the pegged exchange rate collapsed. In the face of the currency outflow, the Bank of Finland tried to support the exchange rate by raising the overnight rate of interest to 50 per cent. It also pushed the one-month inter-bank market rate (Helibor) to 27 per cent. However, these interest rates were not high enough to stop the run on the Bank's reserves. These drastic measures only weakened the credibility of the pegged rate. Eventually, the Bank of Finland was forced to devalue the *markka* by 14 per cent on 15 November 1991 (Figure 2.9).

It is not very likely that the implementation of the Sorsa package would have improved economic growth during the crisis. A wage cut would certainly have improved competitiveness, slowed inflation, curbed purchasing power and therefore improved the current account as well as lowering interest rates – but probably only for a while. Another problem was that it would have strengthened deflationary developments, which would then have exacerbated debt problems and pushed the Finnish economy deeper into crisis.

A common view of the Finnish crisis is that it became deep because of idiosyncratic export problems caused by the Soviet collapse in 1990–91. This was certainly a severe exogenous shock as about 20 per cent of Finnish exports went to the Soviet Union in the 1980s. In hindsight, the collapse of the Soviet trade caused only a temporary export shock; total exports decreased by 10 per cent in 1991. Such a shock would not alone have been sufficient to cause a major recession. However, it is difficult to say what the effect of the 1991 export shock on investor confidence was.[42]

The collapse of the Soviet Union placed a burden on Finland also indirectly via world trade. The reunification of Germany – which can also be considered a consequence of the political weakening of the Soviet Union – boosted Germany's budget deficit and fuelled inflation. Due to the anti-inflation policy of the *Bundesbank*, European interest rates climbed in the ERM – within which Finland was committed to keep its exchange rate pegged. This in turn deepened the recession in Western Europe. Exports to Germany grew due to the reconstruction in East Germany, but export demand in other European countries as well as in North America fell in 1991.

During the European currency crisis in September 1992, the capital outflow from Finland increased and the Bank of Finland lost reserves. At this stage, there was no alternative but to leave the ECU-peg. Finland let the *markka* float on 8 September 1992. The *markka* rate fell by about 10 per cent that month and depreciated by a further 20 per cent in subsequent months (Figure 2.9).

2.4.2 The Bust in Sweden

Macroeconomic developments

As in Finland, the boom in Sweden ended in 1989–90. The main driving force behind the bust was the strong and unexpected upturn in the real rate of interest adjusted for taxes. The Swedish rate of inflation decreased markedly after having reached a peak of about 10 per cent in 1990 (Figure 2.2). Inflationary expectations, which followed actual inflation with a small time lag, started to decrease around 1991. A major tax reform, dubbed 'the tax reform of the century', carried out in 1990–91, worsened the conditions for loan-financed investments and favoured savings.

International factors forced Swedish real interest rates upwards, in particular the German reunification, which induced the *Bundesbank* to raise German and thus European interest rates. The *krona* was subject to several speculative attacks due to the falling credibility of the pegged *krona* rate policy. The *Riksbank* had to defend the *krona* rate by raising the Swedish short-term interest rates to a level unseen in the rest of Europe.

When the real rate of interest rose, the price of assets declined in a downward spiral. The fall in asset prices reduced fortunes, since they had been financed by loans of which the nominal value remained unchanged. The downturn became cumulative through expectations that asset prices would continue to fall.[43] The number of bankruptcies increased dramatically.[44] Söderström (1996, pp. 174–9) estimated that the value of tangible assets in Sweden declined by about 30 per cent, from SEK 3500 billion to SEK 2500 billion. He also assumed that the private sector tried to counteract the wealth loss by increasing its financial savings by amortizing its

loans and thereby trying to rebuild its equity.[45] Households also increased savings by cutting down on consumption, primarily of durable consumer goods. The savings ratio increased from a negative level at the end of the 1980s to about 8 per cent in 1993. This change in private savings was a significant feature of the crisis.

At this point, it became apparent that the many years of regulated low interest rates had resulted in considerable over-investment. The rise in the real rate of interest revealed excessive holdings of assets, mainly in the form of housing, at the beginning of the 1990s. The revaluation of property and other assets brought with it an abrupt freeze on investment within the housing sector – a sector that had previously been considered a major engine of the Swedish economy. In addition, the last parts of the capital account controls were abolished in 1989, inducing an outflow of capital from Sweden.

As in Finland, the real interest rate shock created a sharp fall in aggregate demand. Unemployment increased from a level of around 2 per cent to a level close to the OECD average of over 8 per cent. Employment fell sharply. The number of bankruptcies skyrocketed just as in Finland. In 1990 inflation was 10 per cent per annum; in the mid-1990s it was down to 2 per cent. Available indices for asset prices show deep deflation during the years 1990–93 (Figure 2.7).

The rapid increase in real interest rates undermined the financial system, creating a banking crisis. The government intervened to prevent a major financial collapse. A bank support authority was set up and two banks, *Nordbanken* and *Gotabanken*, ended up as government-owned.

As a consequence of the decline in economic activity, the rise in unemployment and government support to the financial sector, the budget deficit increased alarmingly. The national debt in relation to GDP reached the highest figure registered since World War II, considerably higher than during OPEC II. The expansion of the national debt occurred more or less automatically; it was the result not of discretionary decisions but rather of the workings of automatic stabilizers.

Economic policies

The Centre-Right government that came to power after the election in 1991 was firmly set to continue the pegged *krona* rate policy. From the start it chose to focus on supply-side policies, that is, on structural reforms of the Swedish economy to increase its growth potential. However, the new government soon faced the same catastrophic developments as in Finland.

Domestic developments – a growing financial crisis, a fall in industrial output and rising unemployment – undermined the credibility of the

pegged *krona* rate. Stabilization policy was trapped in a situation where external conditions (the currency crisis) required contractionary measures, while domestic considerations (the banking crisis) demanded expansionary policy. The more the *Riksbank* tried to defend the pegged *krona* rate by raising interest rates, the deeper the domestic crisis became.

With the European currency markets facing unrest in September 1992, the *Riksbank* defended the *krona* by significantly raising its overnight rates. For a very short period, the marginal interest rate, the overnight rate, amounted to 500 per cent. The government and the opposition party, the Social Democrats, agreed to back up jointly two austerity packages in September to avoid a devaluation of the *krona*. Bengt Dennis, governor of the *Riksbank*, played a highly active role in this process.[46] However, the defence of the *krona* broke down in November 1992 when the *krona* came under massive speculative attack. A floating exchange rate was introduced on 19 November 1992, amounting to a substantial depreciation of the Swedish currency – close to 30 per cent (Figure 2.9).

The downturn was halted by the depreciation of the *krona* and the Swedish economy turned upward during 1993. As had been the case after the devaluations in the 1970s and early 1980s, exports and thus industrial output increased. But the crisis left a lasting legacy in the form of high national debt and high unemployment during the rest of the 1990s.

2.4.3 The Common Pattern

The recessions in Finland and Sweden started with an increase in the real rate of interest and, after a while, a debt deflation process set in. In this regard, it is proper to classify the crisis as a real interest rate crisis that spread to all parts of society via the balance sheets of companies and households. The value of assets fell as the real interest rate rose, while the nominal value of debts remained unchanged. The losses of wealth became enormous, forcing an adjustment of portfolios, leading to lower consumption and investments and an increase in savings. The harder households and companies tried to improve their wealth position by selling assets, the deeper the crisis became.

In parallel with the domestic banking crisis, Finland and Sweden were hurt by their overvalued currencies and the weakened credibility of their pegged exchange rates. The central banks were forced to raise domestic interest rates to defend the pegged rates against speculative attacks, which worsened the domestic situation. The process continued until Finland and Sweden were forced to let their currencies float and depreciate during the fall of 1992. Afterwards, as interest rates were reduced, the crisis was checked and the recovery eventually started.

The process demonstrates the difficulties inherent in a policy of pegged exchange rates in a world of free capital markets during a debt deflation process. Falling asset prices, financial instability, widespread bankruptcies and banking crises cannot be countered successfully as long as the defence of the pegged exchange rate requires high domestic interest rates.[47]

2.5 THE RECOVERY 1993–2000

2.5.1 The Case of Finland

Macroeconomic developments

The floating of the *markka* in September 1992 allowed the Bank of Finland to cut short-term interest rates by 10 percentage points within a couple of months. If we believe that excessive monetary tightening was the main cause of the recession, then it is proper to conclude that the biggest macroeconomic change contributing to the recovery was the loosening of monetary policy, including the currency depreciation in the aftermath of the 1992 EMS crisis. The lowering of interest rates helped to first stabilize and then reflate asset prices, ending the deflationary process. Savings rates started to fall and private consumption and investment began to grow again in 1994. The Finnish economy started to recover by the end of 1993. After that the Finnish GDP grew on average about 4.5 per cent annually during the rest of the 1990s (Figure 2.1).

Net exports were the first component of GDP to recover, improving already at the darkest moment of the recession in 1991 (not because of increasing exports but due to declining imports). In 1993, exports clearly exceeded the pre-crisis level. The average rate of growth of Finnish exports in 1992–2000 was high, about 10 per cent per annum. As a result, the volume in 2000 was more than double the pre-crisis level.[48] Such growth went beyond all expectations. Three major factors explain it: the depreciation of the exchange rate, wage moderation and strong productivity growth.

The Finnish currency depreciated in 1991–93, first by the devaluation in November 1991 and then by the floating after September 1992. The cumulative depreciation of the external value of the *markka* was more than 30 per cent. It rapidly led to a significant improvement in the competitiveness of exports. The persistent competitiveness problem, which constrained Finnish exports in 1989–91, was thus solved when the Finnish *markka* was allowed to float with many other EMS currencies in the autumn of 1992.

Export growth was clearly faster than the development of domestic demand, which remained subdued and did not exceed the 1990 level in real terms until 1999. In this respect, Finland differed from other European

countries, where the growth contributions of external and internal sources were much more balanced. Rapid export growth together with depressed domestic demand caused an unexpectedly strong improvement in the current account, which went quickly from a deficit of 5 per cent of GDP to a surplus of 7 per cent of GDP in a few years.

The effect of the depreciation turned out to be surprisingly long-lasting. According to the standard view of macroeconomic textbooks, a nominal change in the exchange rate has only a temporary effect on production. In the long run, prices, not volumes, are affected. This pattern is not supported by the Finnish post-crisis experience: the effects of depreciation at the beginning of the 1990s were maintained well into the first years of the 21st century.

Although domestic demand and investment remained depressed throughout the 1990s, the growth of GDP in the post-crisis years was impressive. In 1994–2000, the annual growth rate averaged 4.5 per cent. As a result, the rate of unemployment was reduced from 17 per cent in 1994 to 10 per cent in 2000 and to 6 per cent in 2008. Total employment rose by 25 per cent at the same time, and the employment rate increased by 11 percentage points. In 2007, the aggregate employment exceeded the pre-crisis level. Employment could have increased more quickly if economic growth had been stronger in labour-intensive sectors such as services and construction. However, until 2000 the main contributors to Finnish economic growth were exports and industrial production, which helped to improve average labour productivity while making economic growth less labour-intensive.

Although the improvement in competitiveness was initially achieved through the depreciation of the *markka*, the depreciation was not permanent. Part of it was clearly due to temporary overshooting. The Finnish currency appreciated again in 1995–96 before it was irreversibly linked to the euro (Figure 2.9). More lasting factors contributed positively to competitiveness, most importantly wage moderation and productivity growth. From 1995, wage moderation was achieved through economy-wide agreements between the government and the labour market parties. Wage moderation was supported by tax reductions – average income tax rate was reduced by 8 percentage points in 1996–2007.

The recovery period was characterized by rapid productivity growth. Finland made a qualitative leap from an economic structure dominated by mostly resource-based heavy industries to one with knowledge-based, mostly ICT, industries as a leading sector. It is rare for a new industry to become dominant so quickly, and the growth of the electronics (ICT) industry in the post-recession years was truly spectacular. Its output multiplied more than sixfold and its relative share grew from 8 per cent to over

27 per cent of total industrial production – while total production almost doubled. In 1992, the metal, paper and pulp, food and chemical industries were all bigger than the electronics sector, but by 2000 it had overtaken them to become the single largest sector. In 2000, Finland's *Nokia* Group was the world's biggest manufacturer of mobile phones.

The great depression and subsequent recovery during the 1990s led to a fundamental 'Schumpeterian' restructuring of the Finnish economy.[49] Many inefficient establishments were closed and more efficient ones opened within existing firms and industries. In many cases, full exit or entry was not observed but labour was shifted from less productive to more productive plants. There were thus microeconomic forces behind the Finnish recovery, involving structural changes and creative destruction. Productivity improved due to investment in machinery and equipment, private and public investment in R&D, training and education.

The average labour productivity in Finland moved closer to the productivity frontier of the United States and surpassed that of EU15 during the second half of the 1990s. The growth of industrial production in 1992–2000 was higher than ever before, an average of 7 per cent per annum. The annual rate of labour productivity growth in manufacturing was also exceptionally high.

The role of the 'new economy' was decisive in the Finnish productivity miracle. The rise of wireless communication technology, often described as the *Nokia* cluster after *Nokia*, the leading firm in this field in the 1990s, manifested these structural changes. The spectacular ICT sector growth contributed significantly to the growth of Finnish GDP, exports and productivity. The share of business sector value-added produced by the ICT sector rose by almost 10 percentage points in the 1990s. Industrial R&D spending grew faster than in any other OECD country throughout the 1980s and 1990s.

The depreciation put more strain on firms in the closed (non-tradable) sector, which had acquired large foreign currency debt. The real value of their debt rose sharply through the devaluation and the depreciation that occurred with the floating of the *markka*. Closed sector companies did not have offsetting growth in exports to rely on. On the contrary, the revenues of these firms were hurt by the contraction of domestic purchasing power triggered by the devaluation and the depreciation of the *markka*. The closed sector was thus squeezed from two directions: first, by a rising real debt burden and, second, by falling domestic demand.

Economic policies

Prior to the floating of the *markka*, a common view was that it would be disastrous, and there would not be any easy way to achieve lower

interest rates, except through a painful process of structural adjustments. However, to the surprise of politicians and the public alike it was suddenly possible to reduce interest rates by almost 10 percentage points in a short time. Finland adopted an inflation target in 1993, and three years later, in 1996, decided to fully join the euro area. In 1999 the *markka* was irrevocably pegged to the euro.

As the economic crisis with its mass unemployment and tight fiscal policy made Esko Aho's Centre-Right coalition unpopular, the Social Democrats regained power in the parliamentary election of 1995. A new 'rainbow coalition' led by the Social Democratic Party leader Paavo Lipponen, consisting of Social Democrats, Conservatives, the Green Party and even the Left Alliance (the former Communist Party), stayed in power until 2003.

The first years of the recovery phase, 1994–97, were characterized by tight fiscal policy aimed at consolidating public finances. Within seven years, 1994–2000, the total public sector financial balance moved from a deficit of 6 per cent of GDP to a surplus of 7 per cent of GDP.

It may be tempting to suspect that the impressive economic performance of post-recession Finland – high growth, rising productivity and employment – was caused by a wave of structural reforms. However, there were few major institutional reforms – apart from the aforementioned public support to R&D and higher education – which could have improved productive potential and work incentives. Nevertheless, gradual change took place when many income support schemes lagged behind wage increases and labour taxes were reduced.

At the end of the 1990s, the level of social spending (excluding unemployment-related expenditures) was about 10 per cent lower than at the beginning of the decade although the number of pensioners had increased. The volume of public consumption, that is public services, was reduced by 10 per cent in the midst of the recession. At the same time, other public expenditures increased, mostly owing to increased social spending caused by high unemployment. Later on, when unemployment declined, spending on transfers started to decrease. The budgetary cuts were initially justified as necessary savings, and later as a method to improve the work incentives of the unemployed. Most voters accepted them reluctantly as they were presented as the only way to save the basic structure of the Finnish welfare state.

All European countries went through reforms and adjustments during the 1990s. Yet all of them have ultimately remained examples of the European social model with strongly regulated labour markets. Perhaps the biggest change in the 1990s in Finland was the adoption and wide acceptance of a policy of long-term wage moderation. This was an

expected response, even in unionized labour markets, owing to high unemployment. For the unions, this represented a positive alternative to being marginalized or excluded from decision-making. The Centre-Right government in power in 1991–95 expressed its intentions to reduce the role of trade unions and to abolish the old corporatist wage-bargaining system dominated by central organizations of trade unions and of employers. These initiatives were successfully opposed by the trade unions, which twice threatened to call a general strike.

In the 1990s, fiscal policy was thus more or less procyclical in Finland. In the first half of the 1990s, fiscal policy was tightened by discretionary tax increases and spending cuts. These policies aimed at fiscal consolidation and fulfilment of the EMU convergence criteria. The large deficit was not much helped by the spending cuts made in the same years; higher taxes and reduced public spending squeezed domestic demand and increased unemployment, which led to higher than expected social spending and lower than expected tax revenue.

In the latter half of the 1990s, lower interest rates and the previous budgetary cuts created new leeway for policy-makers, who used the higher than expected tax revenues to finance tax cuts and increase public spending. In the environment of falling real interest rates, improved competitiveness and growing employment, expansionary fiscal policy was no threat to fiscal stability. The spectacular improvement in fiscal balances achieved in 1995–2000 was caused not by fiscal tightening but by strong growth, lower interest payments and declining unemployment-related expenditures. After six years of rapid growth and falling unemployment, Finland had a record high (7 per cent of GDP) fiscal surplus in 2000.

2.5.2 The Case of Sweden

Macroeconomic developments

The depreciation of the *krona* in November 1992 marked the culmination of the crisis and the beginning of the recovery in Sweden. As the *krona* was floating, interest rates were gradually lowered. The turnaround and the recovery started in 1993. Economic growth turned positive in 1993 and remained strong throughout the rest of the 1990s, with the exception of a short downturn in 1996–97 (Figure 2.1).

As in Finland, exports were the major driving force behind the Swedish recovery, growing strongly and increasing as a share of GDP. In 1992 exports amounted to 28 per cent of GDP. By the end of the decade the number was over 45 per cent – a remarkable development within less than a decade.[50] There is no similar case in Swedish economic history.

Several factors contributed to this sharp expansion in exports. First,

the large and persistent depreciation of the *krona* after November 1992 increased Swedish competitiveness. Actually, the Swedish depreciation remained stronger than the Finnish in the mid-1990s. As in Finland, wage moderation and improvements in productivity facilitated the growth of exports. *Ericsson* held a position in Sweden similar to that of *Nokia* in Finland.[51] Exports were also favourably affected by Sweden's entry into the EU in 1995, which promoted trade directly and indirectly by promoting foreign direct investment, not least in the rapidly growing ICT sector.[52]

The rise in domestic demand during the recovery phase was markedly lower. Both private and public consumption grew more slowly than GDP during the years following the crisis. At the same time, the household savings rate remained at a higher level than before the crisis, indicating a continued improvement in the balance sheets of the private sector.

The effects of the crisis on employment were more prolonged. The low unemployment rate that prevailed during the 1980s was never reached again in the 1990s. Open unemployment started to decline from the high level of around 8–10 per cent by the end of 1997. The high and persistent rate of unemployment contributed to wage moderation in the 1990s and well into the new century.[53]

The move from the pegged exchange rate regime to inflation targeting in 1992–93 had a profound impact on the behaviour of the labour market participants. The new regime of low inflation contributed to non-indexed two-year collective wage agreements in 1993 and to three-year contracts from 1995 until 2008. Judging from the emergence of three-year collective wage agreements, confidence in the new regime of inflation targeting developed quickly. In this sense, it stands out as a successful regime, at least so far. Of course, there is no guarantee that the inflation-targeting regime will remain associated with long-term contracts in the future.[54]

Economic policies

The fall of the *krona* in November 1992 allowed the *Riksbank* to move to lower interest rates. Policy-makers were not ready to go back to a fixed *krona* rate again. The *Riksbank* announced unilaterally a policy of inflation targeting in January 1993. The target rate of inflation was set at a 2 per cent yearly increase within a range of plus/minus 1 per cent.[55] The *Riksbank* declared that the new target range was to be binding from January 1995. The parliament backed the inflation target officially in the spring of 1993. The rate of inflation and inflationary expectation declined surprisingly quickly towards the level set by the *Riksbank*, suggesting that the new monetary policy regime gained credibility.

As in Finland, the government lost the election in the fall of 1994

immediately after the crisis, yielding power to the Social Democratic opposition. There was initially some uncertainty about the economic policies of the new government – was it going to contract or expand fiscal policy? However, uncertainty was dissolved when the new government launched a program of fiscal austerity. As the crisis had caused enormous budget deficits, large cuts in government expenditures and tax increases were deemed necessary by Göran Persson, the new minister of finance.[56]

As the economy was recovering after the floating of the *krona*, the deficit as a share of GDP decreased quickly and government debt in relation to GDP was brought down significantly during the latter part of the 1990s.[57]After a period of tight fiscal policy, Göran Persson moved to the post of prime minister, which he held from 1997 to 2006.

As a consequence of the crisis, the procedure of fiscal policy-making was reformed. Expenditure ceilings were introduced and a surplus target of 2 per cent of GDP over the business cycle was established. The crisis thus brought about a new framework for monetary as well as fiscal policy-making. Since Sweden decided by referendum in September 2003 not to join the euro, it is likely that the inflation-targeting regime will remain in place for the foreseeable future.

2.5.3 The Common Pattern

Finland and Sweden experienced the same path of recovery during the years 1993–2000, shortly after the trough of the crisis. The long recovery was facilitated by sharp depreciation of their currencies and the rapid fall in the short- and long-term interest rates. Monetary policies in both countries turned expansionary after the decision to float in the fall of 1992. The main force behind the recovery was the depreciation of the *markka* and the *krona* that followed the decision to let the two currencies float. The competitive advantage created by the depreciation was surprisingly long-lasting. Exports grew strongly and the surplus on the current account increased, making it possible to reduce the volume of foreign debt held by the public and private sectors.

As the economies started to grow during the recovery, budget deficits were reduced through the workings of automatic stabilizers. During the recovery, tight fiscal policies were directed at bringing about budget surpluses and reducing government debt. The welfare state – that is, the large public sector – in both Finland and Sweden remained basically unchanged during the 1990s although the replacement ratios of many benefits decreased. The recovery did not bring about any major scaling down of public services.

High unemployment explains why the recovery was able to take place

without large nominal wage increases. Unemployment fell slowly during the latter half of the 1990s, but employment did not return before the turn of the century to the high levels recorded during the boom years prior to the crisis.

The crisis caused a major restructuring of Finnish and Swedish industries, making them more dynamic and competitive. The rise in information and communication technology (ICT)-related industries, notably *Nokia* in Finland and *Ericsson* in Sweden, constituted a remarkable part of the recovery. Productivity improved significantly during the recovery phase; productivity growth became high and persistent in both countries, above the EU average.

In both countries, financial liberalization contributed to changes in the stabilization regime, causing the end of the pegged exchange rate regime. Both countries adopted initially a floating rate and inflation targeting. Eventually, Finland became a member of the euro area, while Sweden remained outside after the euro referendum in 2003.

2.6 WHY WAS THE PEGGED RATE DEFENDED SO STUBBORNLY?

As seen from the account above, policy-makers in Finland and Sweden defended the pegged exchange rate stubbornly – and at a high cost in terms of output and employment lost. The whole political establishment, as well as the economics profession, supported the hard currency policy right up to the bitter end. Economists often argue that politicians are inclined to adopt short-term expansionary policies that turn out to be inflationary in the long run. However, in Finland and Sweden the opposite pattern was registered in the early 1990s. Policy-makers carried out a contractionary policy in order to avoid inflation in the long run – while bringing about a deep crisis.

This pattern must be explained as the outcome of a learning process of policy-makers and economists alike. In short, the experience of the devaluations (or soft currency policies) and the high rate of inflation in the 1970s and early 1980s accounts for the hard currency policy of the late 1980s.

2.6.1 The Case of Finland

During the immediate post-war decades, Finnish macroeconomic developments were characterized by rapid but unstable growth and chronic balance-of-payments problems. As inflation was faster than in competitor countries, this caused competitiveness problems, which were ultimately

solved by devaluations. Major devaluations in 1957, 1967, 1977 and 1982 inspired the development of a theory of devaluation cycles, where a devaluation boosts competitiveness, profitability, investment and growth in the short run but in the long run causes faster domestic inflation than in the rest of the world.

In fact, the Finnish experience of high inflation and repeated devaluations did not differ from that of some other industrialized countries. During the post-war years, the Finnish *markka* tracked the value of the currencies of France, Britain and other Nordic countries relatively closely. However, it weakened appreciably compared with the 'hard' currencies of Germany, Switzerland and Japan. After the collapse of the Bretton Woods system in the early 1970s, Finland tried to continue with a pegged exchange rate policy to keep the average value of the *markka* stable. The average exchange rate was defined by weighting selected currencies according to their shares in Finland's foreign trade.

Devaluations remained a main instrument of Finnish macroeconomic stabilization policies up to the 1980s. Deliberate currency depreciation was used with apparent success during the international recessions of the 1970s and the early 1980s to boost Finnish exports. However, the soft currency policy faced increasing criticism – not only from the central bank but also from economists. In fact, there had been an almost constant debate among economists and central bankers about the desirability and usefulness of devaluation policies since the 1950s.

Eventually, a critical view of the policy of repeated devaluations emerged – first among economists. Now, it was argued that such a policy would gradually shape the expectations and behaviour of economic agents in a way that eventually would reduce the benefits of a devaluation policy.[58] Seen in the long run, the devaluation cycle would create higher inflation than in other countries, without any lasting gains in economic growth.[59]

The policy of discretionary devaluations was relatively easy to conduct in the environment of regulated capital movements in the 1960s and 1970s and even at the beginning of the 1980s. It was possible to decide about devaluations in the spirit of consensus when all parties – especially trade unions – were taking part. Policy-makers were able to conduct such operations without the fear of adverse financial market reactions because international capital movements were regulated and foreign currency speculation was thus limited.

The growing integration of international financial markets in the early 1980s highlighted the need to break away from the Finnish devaluation cycle. After the 1982 devaluation, strong support emerged among Finnish economists and politicians for the stable *markka* policy. The

anti-devaluation policy gained considerable credibility when the Bank of Finland succeeded in defending the *markka* in August 1986 against a small-scale speculative attack. At that time the Bank of Finland quickly ended exchange rate speculations by temporarily raising the call rate to 40 per cent.

The stable *markka* policy was also supported by developments in economic theory, stressing the role of credibility and norms, and downplaying traditional Keynesian demand management. This change was related to the rational expectations revolution and to growing support for monetarism. The new theories essentially suggested that monetary policymakers should concentrate on fighting inflation and fostering stability and credibility. Leading politicians adopted the new view as well. After the devaluations at the beginning of the 1980s, there was a strong wish – openly declared – to keep the devaluation window closed. The pegged rate was to act as an anchor for economic policy and as an insurance against inflation.

The currency crisis in 1991–92 was viewed as the ultimate test of the pegged exchange rate policy. The problems in the foreign exchange market were regarded as an opportunity to prove the will to stick to the pegged *markka* policy, to prove that the old way of devaluations was finally abandoned. Politicians were given a unique opportunity to gain credibility for what they had been saying for about a decade. If this battle could be won, the expectations of future devaluations would become weaker.

A freely floating *markka* and a price stabilization target did not appear on the agenda, either within the economics profession or among policymakers, until after the defence of the *markka* had broken down. At the beginning of the 1990s, pegged exchange rates were the norm in Western Europe as well as in Finland. Policy-makers thus had to choose between fighting to maintain the peg and gain credibility for such a policy or giving up and returning to a devaluation strategy that they had condemned. Politicians also wished to prepare the Finnish economy for future membership of the EU, and it was believed that abandoning the currency peg would harm that goal.[60] The political incentives were clearly in favour of a stubborn defence.

2.6.2 The Case of Sweden

The Swedish defence of the pegged *krona* rate, with an interest rate of 500 per cent for a very brief period and a broad political backing for the 'crisis packages' in September 1992, attracted international attention. Hardly any other country showed such determination to keep its exchange rate pegged. Many currencies with a pegged rate were victims of speculative

attacks during September 1992 when Great Britain, Italy and Finland adopted a floating exchange rate. Sweden was forced by speculation to let the *krona* float two months later, however, on 19 November 1992.

Why was the pegged exchange rate of the *krona* so forcefully protected in the fall of 1992? The answer is found in the lessons economists and politicians drew from the devaluations of the 1970s and 1980s. The pegged exchange rate was an instrument to achieve low and constant inflation and at the same time function as an intermediate target for the *Riksbank*. The main lesson was that Sweden ought to avoid a 'soft peg' and adopt a hard currency policy.

This lesson emerged gradually in the 1980s. This view, in which inflation stabilization is seen as the all-embracing norm for economic policy and a pegged exchange rate is regarded as the primary tool for achieving a stable price level, was first advocated by the SNS Economic Policy Group in its reports from 1985 to 1992. The Social Democratic government's January 1991 budget proposal was firmly in favour of a low-inflation policy, giving higher priority to low inflation than to full employment. The ECU-peg in May 1991 was a part of this policy.

The non-socialist parties in opposition also embraced the new rule-based philosophy. In the run-up to the 1991 election, the Conservative Party and the Liberal Party prepared an economic policy program, *Ny start för Sverige* (A new start for Sweden), much inspired by rule-based thinking and supply-side economics. The opposition parties arranged a series of five joint seminars with economists from February to April 1991. These seminars revealed how deeply rooted rule-based thinking was with leading economists. One economist, Ulf Jakobsson, described the economists' perception of fiscal, monetary and tax policy as follows:[61]

> There is now consensus that the possibilities of stabilizing the economy through fiscal policy are strongly limited . . . In the future, the role of fiscal policy will be severely restricted. After all, we have chosen to pursue a pegged exchange rate policy. . . . We have to invest in credibility and use the economic downturn to bring down the rate of inflation. . . . Fiscal policy can only cause harm, whereas structural policy is of the utmost importance. An internal devaluation cannot be recommended.

The outcome was that *Ny start för Sverige* emphasized growth and supply policies such as deregulation, privatization and structural reforms. The program was founded on a pegged exchange rate for the *krona.* It also proposed a more independent role for the *Riksbank*, as well as promoting economic growth as the means to 'pull Sweden through the crisis'. The crisis itself was described as having been caused by the Social Democratic choice of 'the third way'. Anne Wibble (1996, p. 213), who became minister of

finance 1991–94, noted that the economists present at the spring 1991 seminars all conveyed the same message, that of 'pursuing a hard currency policy'. Anne Wibble (1994, p. 18) described the planning of the non-socialist government before the transfer of power:

> The program, which we had worked out together with the Conservative Party during a series of seminars in the winter and spring of 1991, shows good insight into the requirements of structural policy, but – for explicable reasons – not the acute crisis that we faced during our first autumn in power. Needless to say, neither did we have insight into the currency crisis we had to take care of in the autumn of 1992.

The new government that took over after the 1991 election was determined not to use changes in the exchange rate, that is, devaluations, as an economic policy measure. Anne Wibble referred to her own experience of earlier devaluations, which 'had not solved any problems'. She partly attributed the attitude of the government to her own experience (Wibble, 1994, p. 23):

> From the very start, the government had appointed the pegged exchange rate as the anchor of economic policy. From my days as a political officer working for previous non-socialist governments, I had learned that reoccurring devaluations did not solve anything. After the 1982 super-devaluation, the Social Democrat government had made it clear that the devaluation was the last of its kind. New devaluations would impair the credibility of Sweden. In addition, the Governing Board of the Riksbank had decided to tie the Swedish krona to the ECU index on 17 May 1991, i.e. to the European Community currency basket that was formed to further support fixed exchange rates. In this, we were fully intent on continuing the policy of the previous government.

As the newly appointed minister of finance, she considered it her prime target to counteract the acute crisis by strengthening the credibility of the pegged exchange rate by limiting the budget deficit through raising taxes and reducing expenditures. So, during its first year in power, the non-socialist government stood firmly by the pegged exchange rate policy.

Strengthening the budget became the lodestar of the agreements reached between the non-socialist government and the Social Democratic opposition in September 1992 when the *krona* was under speculative attack. The threat of a new devaluation gave rise to a unique political unity rallying around the pegged exchange rate. At the end of September, the government and the opposition tried to carry through an internal devaluation by reducing employer contributions, a step that the minister of finance considered to be a first attempt at dissolving the rule-based policy. The ministry of finance planned for further internal devaluations, but these

plans were abandoned when the *krona* was allowed to float in November 1992.

The official forecasts from the *Konjunkturinstitutet* (the National Institute of Economic Research), the *Riksbank* and the ministry of finance turned out to be severely wrong. They were based on macroeconomic models made for regulated financial markets, which did not include the financial processes that created the crisis of the 1990s. They were not able to handle a process driven by an increase in the real rate of interest, the fall of asset prices, international currency crises and currency speculation. The forecast errors thus became greater as the crisis deepened. Likewise, the commercial banks, in whose own interest it should have been to forecast the financial crisis, were not able to publish any warnings of the gathering storm.

The macroeconomic development surprised not only forecasters but also policy-makers responsible for stabilization policy. They were dumbfounded by both the strength of the boom phase and the economic recession. Kjell-Olof Feldt (1994, p. 67), minister of finance 1982–90, described the lack of understanding in the early 1990s as follows: 'Today, it is clear that neither the Social Democratic government during its last years in power, nor the non-socialist coalition that came into power in 1991, were aware of the extent of the economic abyss that spread out before them.' Bengt Dennis, governor of the *Riksbank* 1982–93, arrived at a similar assessment of the crisis:

> The Riksbank predicted to the same meagre degree as the Swedish Financial Supervisory Authority and the Ministry of Finance the actual extent and depth of the banking crisis. We did detect increasing problems in the financial sector at an early stage, but we expected the course of events to calmly fizzle out thanks to the reconstruction we knew we would have to undertake.[62]

The financial markets in Sweden had been regulated since World War II – so long that economists, forecasters, policy-makers, bankers and the public lacked knowledge about the role open and freely functioning financial markets can play. This knowledge was lost behind the thick walls of capital account controls. There was initially hardly any understanding of how the prerequisites for the stabilization policy had changed as Sweden had become more integrated with international financial markets.

2.6.3 The Common Pattern

In Finland as well as in Sweden the pegged exchange rate was strongly defended during the first phase of the crisis. The main reason for this determined policy response was the lessons drawn from the devaluation policy

during the 1970s and early 1980s in both countries. The major lesson emerging from this backward-looking process of learning was to avoid a 'soft currency' policy.[63] The common opinion among both economists and policy-makers was that the devaluations had not solved the economic problems in the long run, only masked them in the short run.

A pegged exchange rate policy was viewed as a more promising strategy – as a way of breaking away from the devaluation cycle. The idea was that the pegged rate should act as the anchor for monetary policy and serve as the tool to achieve low inflation and thus create a proper climate for growth and employment. Both countries also chose to move closer to the EEC, by pegging their exchange rates to the ECU.

An additional reason why the pegged exchange rate was defended so energetically was a general lack of knowledge of the workings of financial markets, the role of portfolio imbalances, of boom–bust patterns and of speculative capital flows in a world of pegged exchange rates and free capital flows across borders. Policy-makers and economists in Finland and Sweden did not understand that the financial deregulation of the 1980s had fundamentally changed the prerequisites for the pegged exchange rate policy. There existed hardly any knowledge of financial and banking crises. The crisis thus came as a surprise to policy-makers, economists and the public in both countries.

2.7 POLICY LESSONS FROM THE CRISIS

Depressions usually start a process of re-thinking economic policies. Indeed, the crisis of the early 1990s in Finland and Sweden set off a lively debate among economists and policy-makers about the proper strategy and institutions for stabilization policy-making. This process led eventually to the adoption of a new macroeconomic policy regime in both countries. Although, the preceding boom-and-bust patterns in Finland and Sweden were almost identical, Finland eventually adopted a permanently fixed exchange rate by joining the euro, while Sweden decided to remain outside the euro area with a floating rate.

2.7.1 The Case of Finland

There are reasons to expect that the severity of the Finnish depression would have led to calls for major policy reforms. However, this was not the case. On the contrary, it was widely thought, at least among policy-makers, that there was nothing wrong with the basic design of monetary and fiscal policies. Even after the collapse of the pegged rate in November

1991, the prevailing view was that the old model of economic policies based on a pegged exchange rate for the *markka* should be continued. Many policy-makers believed that the crisis was caused by the irrational or nearsighted behaviour of banks, investors, consumers and trade unions – thus not by faulty policies. Although the Finnish currency was allowed to float for four years, 1992–96, together with many other European currencies, the long-term goal of exchange rate stability was not abandoned. As soon as it was possible, Finland joined the ERM in 1996 and the EMU fully in January 1999 by becoming a member of the euro area when it was founded.

An important lesson from the crisis was that indebtedness and financial risks within the private sector ought to be more closely supervised. Bank supervision was reformed and a new agency with more powers was established to replace the old Bank Supervision Agency.

The recession caused growing budget deficits and a rising public debt in 1991–93. The fiscal balance deteriorated as a result of the crisis by almost 15 per cent of GDP in 1989–93. This was a shock to politicians and bureaucrats, accustomed in the past to almost permanent surpluses in public finances. Fiscal policy was tightened already in 1992 in order to restore a public sector surplus. This target was achieved in 1999, after seven years of deficits and various austerity measures. Tight fiscal policies were continued after the recession, and the maintenance of 'sound' fiscal balance became a cornerstone of post-crisis economic policies. Most of the post-recession budgetary savings were made in different income transfer programs, while public consumption and investment were allowed to grow in order to maintain and improve employment.

During the crisis, labour taxes were increased heavily. However, the post-crisis fiscal adjustment was not carried out by raising taxes but by restricting the growth of public expenditures. In fact, it was the aim of the post-recession governments (led by the Social Democrats) to reduce taxes on labour and improve work incentives through benefit reforms. A new flat tax of 25 per cent for profits and capital income was introduced in Finland in 1993, replacing the old system with high nominal marginal tax rates and relatively low effective tax rates. Raising other taxes initially compensated for this change. As a result, labour incomes and private consumption were more heavily taxed by the end of the 1990s than before.

National incomes policies in the form of social pacts and highly coordinated collective bargaining have played a central role in Finnish macroeconomic development for a long time. After unsuccessful attempts by the Centre-Right government in 1991–95 to decentralize the wage-setting system, the broad coalition governments of 1995–2003 returned to the old regime of centralized incomes policies, supporting wage moderation

through centralized wage agreements, and by tax reductions and by giving a voice to the social partners in questions related to social policy and industrial relations. In 2007, however, under the new Centre-Right government, largely because of initiatives by the employers, a less centralized model was adopted with more flexibility to individual industrial sectors and to individual companies in wage setting.

2.7.2 The Case of Sweden

The conventional view regarding the proper design of stabilization policies changed fundamentally due to the financial crisis and the move to a floating exchange rate for the *krona*. The basic lesson was that Sweden should not return to a pegged but adjustable exchange rate for its currency. Financial deregulation and the internalization of capital markets meant that any pegged rate was threatened by strong speculative pressure whenever inconsistencies between the pegged rate and domestic developments appeared.

In January 1993, the *Riksbank* announced an inflation target for its policy to be effective as of January 1995. The target was set at a 2 per cent rate of inflation per annum within an interval of plus/minus 1 percentage point. With this step, the *Riksbank* officially replaced the pegged exchange rate with an inflation norm. The *Riksbank* took this decision at its own discretion, without the declared support of the *Riksdag* or the government.

The crisis in the early 1990s affected the institutional environment for economic policy-making to a larger extent than any other event in Sweden during the 20th century.[64] The lessons were primarily learned after the failed defence of the *krona* in 1992, but were based to a large extent on experience and research prior to the fall of the *krona*. As long as the *krona* rate remained pegged, verbal support for the hard currency approach was more or less unwavering. But the floating paved the way for a new debate, new investigations and new views.[65] Soon the lessons of the crisis were transformed into new legislation concerning the institutional framework for monetary and fiscal policy.

One major lesson of the crises is that the *Riksbank* should have a clearly defined and legislated price stability target or inflation target for its activities. From this follows that the *Riksbank* should have an independent position which reduces the possibility for the government or other parties to influence monetary policy. By the end of the 1990s, these lessons had been incorporated into new legislation concerning the role of the *Riksbank*. In November 1998, the *Riksdag* passed a new *Riksbank* Act, which entered into force on 1 January 1999.

The Act is based on two principles. First, the target of price stability

is written into its fourth paragraph: 'The objective of the *Riksbank* is to maintain a stable monetary value.' The target is not given as an exact number but should be interpreted as equalling price stability or a low rate of inflation. The task of more clearly defining a stable monetary value is delegated to the *Riksbank*.

Second, it gives the *Riksbank* a more independent position: 'The *Riksbank* is responsible for monetary policy. No authority can decide on how the *Riksbank* should deal with monetary policy issues' (*Riksbank* Act §12). The bank is protected from direct political influence through provisions preventing members of the Executive Board, whose job it is to formulate monetary policy, from being a member of parliament, a minister, a government employee or a member of a political party. The lessons for monetary policy and for the institutional changes that followed rested implicitly on the idea that the Swedish financial system will in the future be open towards the rest of the world.

The crisis of the 1990s also provided lessons for fiscal policy that were eventually put into new legislation. The significant budget deficits and the rapid rise in the public debt in 1991–94 were considered by many to be the sign of a lax budget process. Had the budget process been more stringent, the problems would have been less obvious, according to this view. These lessons resulted in a number of institutional reforms carried out during the period 1994–96 with the aim of improving budget discipline in the *Riksdag*. The parliamentary term of office was prolonged from three to four years, which can be seen as way of creating scope for long-term fiscal thinking.[66] A limit was set on public expenditures by the *Riksdag* in the spring of 1995, effective from the spring of 1996. Today, the budget is dealt with by the *Riksdag* with the help of a general budget ceiling approach aimed at restricting the forces that increase public expenditures.

The financial crisis brought about changes concerning deposit insurance and financial supervision. The pre-crisis implicit safeguarding of deposits was transformed into a scheme of explicit deposit insurance after the crisis. The *Riksbank* took it upon itself to systematically monitor the financial system with the aim of 'detecting possible signs of potential financial problems and systemic risks'.[67] The surveillance is reported in the Financial Stability Report (formerly known as the Financial Market Report), of which the first issue was published in November 1997. This report is now published twice a year. The financial crisis also confirmed a division of responsibility between the government and the *Riksbank*. The government, or to be more precise the ministry of finance, should be responsible for solvency issues, while the *Riksbank* should be responsible for the supply of liquidity.[68]

2.7.3 The Common Pattern

The crises in both countries affected the thinking about and thus the design of the institutions for stabilization policy-making. The central bank was given a more independent position. Both countries became members of the European Union in 1995 and thus adopted the convergence criteria of the Maastricht Treaty. Finland eventually moved to full membership in the euro area. Sweden maintained its national currency. Initially, Finland returned to the traditional mode of centralized wage bargaining. Sweden took no such steps. Instead, wage bargaining became less centralized.

The crisis had similar political consequences. In the years of the deep recession, 1991–94, both countries had Centre-Right governments. This was exceptional. A coalition government led by Social Democrats has been the rule in Finland, while a Social Democratic government has been the standard arrangement in Sweden in the post-World War II period. The crisis had a clear impact on election outcomes. In Finland, the Social Democrats returned to power via a coalition government in 1995. In Sweden, the Centre-Right government formed in the fall of 1991 became the victim of the crisis. The Social Democratic party returned to power in the fall of 1994 as the incumbent government was blamed for the crisis. The unique power of the Social Democratic party was re-enforced in the elections of 1998 and 2002,[69] while in Finland the Social Democrats lost control in the election of 2003 but stayed in the government with the Centre party. A Centre-Right government was established in Sweden after the election of 2006 and in Finland after the election of 2007.

As stated above, Finland and Sweden adopted different exchange rate policies around the turn of the century, even though the crises were very similar in both countries. In Sweden, the foundations for a new institutional framework for the monetary and fiscal policies were laid, based on an independent central bank and inflation targeting. Finland, on the other hand, abolished its national currency by adopting the euro. Here the economic twins parted from each other – Finland opted for membership in a monetary union, Sweden for a freely floating exchange rate.

2.8 CONCLUSIONS

Finland and Sweden were economic twins in the sense that they followed the same economic path during the last quarter of the 20th century. They were hit simultaneously by a crisis that was the most severe of the post-World War II period. The anatomy of the crisis was identical in the two countries. The financial deregulation of the mid-1980s, while both

countries were on pegged exchange rate regimes, was the starting point for the boom–bust cycle. First, it contributed to low real rates of interest and rapid growth in the volume of credit, thus creating a boom at the end of the 1980s. Next, the credit expansion was stopped and both the Finnish and Swedish economies ended up in a deep crisis. The domestic crisis in combination with the unrest on the European currency markets spelled the end of the pegged exchange rate policy in the fall of 1992.

The financial liberalization eventually undermined the pegged rate regimes in Finland and Sweden. This is a clear illustration of the view that a pegged exchange rate, international capital mobility and monetary policy sovereignty do not mix, commonly described as the macroeconomic policy trilemma for an open economy.

The crisis was a balance sheet crisis as changes in the real interest rates, in asset prices and in wealth played a central role in the process of boom and bust. Irving Fisher's theory of debt deflation provides a fruitful approach for analysing the sequence of events leading to the crisis. The crisis was triggered by an increase in the real rate of interest through a rise in the international interest rate level, tighter domestic fiscal and monetary policies, changes in the taxation of interest payments and falling inflation rates. High after-tax real interest rates undermined the value of the assets of households and corporations, creating a process of falling asset prices. This, in turn, led to severe problems in the financial system and large budget deficits as the governments were forced to socialize the losses caused by the debt deflation process.

Why was the crisis allowed to become so deep? One contributing factor was the lack of accurate forecasts and analyses of the effects of financial deregulation in an open economy. The macroeconomic consequences of falling asset prices were not understood by policy-makers. They were unaware of the chain of events they had unleashed. In hindsight, the severe underestimation of the impact of disinflation on portfolio balances and on asset behaviour, aggregate demand, investment and savings and the consequent fall in production was a major error by forecasters, policy-makers and economists before and during the crisis.

This lack of knowledge is easy to explain. Pre-crisis macroeconomic thinking in Finland and Sweden was strongly dominated by the Keynesian approach with its stress on flow concepts and its disregard of financial variables and balance sheet developments. An analysis of balance sheet imbalances moves the focus from aggregate flows to financial stocks such as the assets and liabilities of households and firms. The disregard of the role of portfolio imbalances was largely due to the system of heavy regulation of the financial system in Finland and Sweden that was in place during the post-World War II period up to the financial deregulation in

the mid-1980s. As financial markets were held dormant, knowledge of the effects of financial forces became weak.

A strong reason for stressing the importance of the financial system in the type of crisis that hit Finland and Sweden in the early 1990s is the striking similarities between the Finnish–Swedish crisis and other crises that later in the 1990s hit economies that deregulated their financial systems while trying to maintain pegged exchange rates.

The defence of the pegged exchange rate was initially strong and stubborn. The broad political consensus on defending the peg was a reaction to the devaluation policies of the 1970s and 1980s. The goal of the hard currency policy was to prevent a new devaluation cycle with high inflation rates. Eventually, both countries had to give in and let their currencies float. The recovery was then driven by falling interest rates and a strong rise in exports due to the depreciation caused by the floating. Unemployment remained high for more than a decade after the crisis.

As a result of the experiences from the crisis, both countries reformed their institutional systems for pursuing stabilization policies and introduced more independent central banks. In January 1999 Finland joined the euro area. Sweden has so far chosen to maintain a currency of its own. The inflation rate has been kept at low levels in both Finland and Sweden, significantly lower than the inflation rates of the 1970s and 1980s.

It remains to be seen whether Finland and Sweden – after Sweden's decision in September 2003 to remain outside the euro area – will evolve along significantly different macroeconomic paths. Have the two economically identical twins separated, after having followed the same stabilization policy road during the post-World War II period? The future will tell.

NOTES

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2. See Chapter 4 in this volume for a comprehensive study of the high unemployment in Finland and Sweden in the 1990s.
3. See Chapter 6 in this volume.
4. See Chapter 5 in this volume.
5. The literature on the crisis of the 1990s in Finland and Sweden is substantial. For earlier studies on the Finnish crisis, see among others Bordes et al. (1993), Åkerholm (1995), Kiander and Vartia (1996a), Kiander and Vartia (1996b), Honkapohja et al. (1996), Honkapohja and Koskela (1999), Ahtiala (2006) and Honkapohja et al. (2009). For studies of the Swedish crisis, see Jonung and Stymne (1997), Söderström (1995, 1996)

and Jonung (1999, Chapter 9). Jonung et al. (1996) cover both the Finnish and Swedish records of boom and bust. See also Chapters 3–6 in this volume adopting a comparative perspective.

6. See, for example, Krugman (2000) and Rose (2001).
7. This is the view propagated in Chapter 9 in this volume.
8. By now the literature on financial crises in the 1990s is immense. For surveys see, for example, Bordo (1998), Eichengreen (2003) and Hunter et al. (2003).
9. For an in-depth study of financial developments during the financial crisis in Finland and Sweden, see Chapter 3 in this volume.
10. Fisher (1933). Fisher's approach has much in common with the theory of balance sheet crisis. See for example Allen et al. (2002).
11. The applicability of the debt deflation theory to a situation where the general price level does not fall has been addressed by Tobin (1980), Minsky (1982), King (1994) and Wolfson (1996).
12. Fisher (1933). See also Fackler and Parker (2005).
13. The most common way to alleviate debt problems was to modify the repayment schedule or change the interest rate paid on loans. In 1994 there were about 17 000 Finnish households that got their banks to agree to lower the rate of interest charged on their loans. About 8000 people arranged for debt restructuring in 1994 in a court of law, while 11–12 000 did so in 1995 and 1996.
14. This sectoral asymmetry during boom–bust cycles is examined by Tornell and Westermann (2005).
15. See Jakobsson (2003) for a discussion of devaluation cycles in Finland and Sweden.
16. This interpretation can be found in Bäckström (1998), Jonung and Stymne (1997) and Söderström (1996) among others. See also the assessments of the crisis in Drees and Pazarbasioglu (1998), an IMF report dealing with the Swedish crisis. There were, of course, more traditional factors driving the crisis, but they played a less prominent role than financial factors.
17. See Chapter 9 in this volume on the Asian crises in the late 1990s.
18. See Chapter 7 in this volume.
19. The connection between the banking crisis and the currency crisis is emphasized by Bengt Dennis (1998, pp. 213–36), who was heading the *Riksbank* 1982–93.
20. See, for example, Santamäki-Vuori and Parviainen (1996).
21. Santamäki-Vuori and Parviainen (1996).
22. Descriptions of the 'old' system can be found in Pekkarinen and Vartiainen (2002) and Kullberg (1996). See also Lassila (1993) and Honkapohja and Koskela (1999).
23. Pentti Kouri, venture capitalist in cooperation with George Soros, became famous and highly controversial due to the 'Kouri deals' on the Helsinki stock exchange during the boom. See Kouri (1996).
24. The interest rate differential was so large that many economists thought that over the long run it was worthwhile to take foreign currency loans. For example, Juhani Huttunen of the Federation of Finnish Industries stated in the *Helsingin Sanomat* on 14 December 1989: 'Foreign currency loans are now six percentage points cheaper than *markka*-denominated loans. If a company must invest or for other reasons take a long-term loan, it is worth borrowing in foreign currency. The interest rate differential can bear considerable exchange rate risk in long-term loans.' Unfortunately, some companies applied this idea to short-term loans as well.
25. Newspaper reactions to proposals to constrain the credit expansion by tax measures were hostile. See Hautala and Pohjola (1988).
26. This was pointed out by Harri Holkeri, the prime minister. Requests for austerity measures were also made by Mauno Koivisto, Matti Korhonen and Sixten Korkman, leading policy-makers at this time, according to interviews made by researchers of SITRA in 1995. SITRA, a semi-public think tank, carried out extensive interviews of about 70 decision-makers involved in the economic crisis. The interviews are lengthy and classified but researchers have got permission to use quotes from them. Mauno

Koivisto was president 1982–94, prime minister 1968–70 and 1979–82, central bank governor 1970–79, social democrat, and strong defender of the hard currency policy. Matti Korhonen was chief of staff at the office of prime minister Harri Holkeri in 1987–91. He held several positions in the employers' organizations before and after. He was one of the architects of the hard currency policy. Sixten Korkman was chief economist at the ministry of finance 1988–95, before that economist at the Bank of Finland, later director general for economic and social affairs of the general secretariat of the Council of the EU. During the economic crisis, Korkman proposed that monetary policy should focus on price stability and fiscal policy on budgetary balance, and labour market organizations should decide upon wages and employment.

27. Legislation was later (in 1992) reformed by the Centre-Right government of prime minister Esko Aho so that budgetary changes could be decided by simple majority. This reform was accepted by the opposition party as well.
28. Rolf Kullberg in an interview by Kiander and Vartia (1997).
29. This was stressed by, among others, Sixten Korkman, in an interview by SITRA in 1995.
30. See Jonung (1993) on the rationale behind the low interest rate policy and for an account of the rise and fall of the credit market controls.
31. When Kjell-Olof Feldt, minister of finance, approached Olof Palme, the prime minister, to discuss the coming decision of the *Riksbank* to deregulate, he realized that this step was a milestone:

    > The political meaning was crystal clear: it meant that social democracy, after decades of resistance, abandoned one of its most symbolic bastions for managing the Swedish economy to the market powers. Although the management during recent years had been just that, i.e. symbolic, it was still a major concession to the neo-liberal ideology which we as Social Democrats had spent so many years fighting. (Feldt, 1991, p. 260)

    It proved difficult for the minister of finance to gain the prime minister's approval. Olof Palme's thoughts were elsewhere, but he finally answered: 'Do as you please, I don't understand much of it anyway.' With this reply the road was open for the *Riksbank* to abolish the ceiling on lending and take the decisive steps towards financial deregulation.
32. See Svensson (1996) for a detailed description of the decision process behind the November revolution in 1985.
33. Lindberg and Söderlind (1991) demonstrate that expectations regarding future devaluation were well developed in the financial markets throughout the 1980s – a sign that the pegged exchange rate for the *krona* was not credible.
34. A freeze on prices and restrictions on rents were introduced on 7 February 1990 as a result of the crisis. They were abolished on 12 April the same year.
35. The collapse of *Nyckeln* came as a complete surprise to the public. There was no publicly available information that signalled in advance the problems facing this company, according to Jennergren (2002).
36. See also Chapter 3 in this volume.
37. See Figure 3.3 in Chapter 3 in this volume.
38. For more details on these events, see Kullberg (1996, pp. 151–62).
39. Koivisto (1994, p. 364).
40. It was thought at first that the depression was a normal economic downturn due to weakening competitiveness and should thus be counteracted by a lowering of the Finnish cost level. The deflationary effects of such a step were not considered.
41. According to an interview conducted by SITRA in 1995. See note 26 on the SITRA interviews.
42. See Kiander and Vartia (1998) on the role of the collapse of the Soviet Union.
43. The real rate of interest determines the value of existing assets (capital stocks) as well

as the value of planned investments (flow of new capital). A doubling of the real rate of interest would halve the value of a 'perpetual' capital asset.
44. See Figure 3.3 in Chapter 3 of this volume.
45. The size of the real rate shock within the private sector can be estimated in various ways depending on the choice of period, the real rate of interest used (ex ante or ex post) and choice of taxable entity. Söderström (1996, p. 176) set the real rate shock as an increase from minus 3 per cent to plus 8 per cent, that is, a total increase of 11 percentage points. See also Figure 2.6.
46. Dennis (1998, pp. 57–96).
47. The Finnish and Swedish crisis record is an illustration of the famous macroeconomic policy trilemma for an open economy.
48. See Figure 10.1 in Chapter 10 in this volume.
49. See Maliranta (2003).
50. See Figure 10.1 in Chapter 10 in this volume.
51. The role of the ICT sector in raising labour productivity growth is examined by Edquist (2005).
52. See SOU 2008:90 for a broad study of the evolution of Swedish exports in the period 1995–2006.
53. See Chapter 4 in this volume.
54. On this point see Fregert and Jonung (2008) demonstrating that the inflation-targeting regime after 1993 is associated with less macroeconomic uncertainty than any other policy regime since 1908.
55. See the contributions in Jonung (2003) on the adoption and the evolution of the inflation target of the *Riksbank*.
56. It is an open question to what extent the policy of fiscal tightening contributed to or dampened the recovery. See Chapter 10 in this volume.
57. See also Chapter 9 in this volume.
58. See, for example, Eriksson et al. (1990) and the SITRA interviews in 1995 with Korhonen, Viinanen, Talonen and Niskanen.
59. The debate about the devaluation cycle was initiated by Jouko Paunio in the late 1960s.
60. See, for example, the SITRA interview in 1995 with Korhonen.
61. Bergström (1993, pp. 197–8).
62. Dennis (1998, p. 213).
63. See Jonung (1999) for a discussion of the backward-looking learning process among Swedish economists and policy-makers during the period 1970–95.
64. The interpretation of the depression in the 1930s did result in a new view concerning stabilization policies. The legal regulations concerning monetary and fiscal policy, however, remained more or less unchanged during the 1930s, in sharp contrast to events in the 1990s.
65. The pattern is familiar from previous episodes when the *krona* has deviated from a fixed exchange rate and been allowed to float. The debate on stabilization policy reached a peak after World War I – Sweden having abandoned the gold standard in 1914 with the outbreak of the war – and again after the decision of the *Riksbank* to abandon the gold standard of the inter-war period in September 1931.
66. After the fall of the *krona*, the Centre-Right government appointed a committee to present proposals concerning the future policies of Sweden. The committee, headed by Assar Lindbeck, suggested a large number of reforms. Some of them were implemented. See Lindbeck et al. (1993).
67. Bäckström (1998, p. 17).
68. Dennis (1998, p. 232) arrives at the conclusion that 'When the next banking crisis occurs, both the government and the Riksbank will have the same division of tasks as during the latest crisis.'
69. The Swedish pattern after the crisis in the 1990s is similar to the pattern of the 1930s. The Social Democrats gained political control in 1932 as a result of the depression and

remained in power until 1976. The crisis of the 1990s gave the Social Democrats a government position, though for a shorter time than the depression of the 1930s.

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