

DEPRESSION IN THE NORTH – BOOM AND BUST IN SWEDEN AND FINLAND, 1985–93

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A comparison of the boom-and-bust cycle of Sweden and Finland during 1985–93 reveals remarkable similarities. We examine macroeconomic developments during the period with a special emphasis on asset market developments. The seeds of the crisis were »traditional» Nordic problems combined with the consequences of late deregulation of financial markets. We identify five factors that were present in both countries and that account for the depth of the downturn: an »ordinary» cyclical downturn, a real interest rate shock, asset price deflation with balance sheet consolidation, financial fragility and slow structural adjustment. Differences in policy response are analyzed. (JEL E63, E44)

1. Introduction¹

Spectacular macroeconomic developments of a similar character took place in several indus-

¹ *We have received constructive comments from Ulric von Allmen, Michael D. Bordo, Per Frennberg, Steve Hanke, Monica Hargraves, Jan Wallander and David Weil. Maria Manhage provided research assistance.*

trialized countries during the past ten years. There was an unusually long period of economic expansion, involving financial liberalization and consumption-led growth, characterized by falling real rates of interest, rising asset prices, declining household saving rates and rapidly rising corporate and household indebtedness. Eventually this boom phase was followed by a bust phase, a downturn in economic activity

with sharply rising real rates of interest accompanied by falling asset prices, substantial balance sheet consolidation, financial fragility, slow or negative income growth, rising unemployment and expanding public deficits. This boom-and-bust cycle is visible in the United States, Japan, and the United Kingdom and the Nordic countries, of which it is particularly prominent in Sweden and Finland.²

Movements in asset prices have played a more pronounced role in the most recent cycle than during previous fluctuations in the post World War II period.³ Here we present an account of the central features of the boom-and-bust cycle of 1985–93 in Sweden and Finland, stressing key developments that made this cycle different from earlier cycles.⁴ Section 2 provides background data, briefly outlining the boom and the subsequent depression in the two countries. Section 3 discusses the road into the crisis, with special emphasis on financial market developments. In section 4 we examine the downturn period, focusing on developments we believe contributed to the depth and length of the depression. Section 5 considers the policy response. Conclusions are drawn in section 6.⁵

2. *The Swedish and Finnish Economies 1985–93*

Some of the salient developments of the Swedish and Finnish economies are summed up in *Table 1*, which compares the 1985–90 period with 1991–93. The image of a strong boom phase followed by a very sharp bust phase is brought out clearly for both countries.

² Schinasi and Hargraves (1993) survey the global experience of asset market inflation and deflation in the 1980s. See also the study by Borio, Kennedy and Prowse (1994), and, for a discussion of the role of credit in the transmission process, Bernanke (1993).

³ This point is stressed by Schinasi (1994).

⁴ Asset market boom-bust cycles are well known from economic history (Kindleberger 1978) and did receive early attention (Fisher 1933). However, such cycles have not been prominent in the postwar experiences of industrial countries and were largely neglected in contemporary macroeconomic literature.

⁵ The discussion partly follows Söderström (1993) and Jonung and Stymne (1996).

The late 1980s was characterized by consumption-led growth. In Finland, real GDP growth was rapid, averaging more than 3 percent per year in 1985–90 and reaching almost 6 percent in 1989. In Sweden, GDP growth was not particularly impressive even during the boom years. It exceeded 3 percent only in one single year, 1987.

The development of asset prices was more striking than the pattern of income growth. To take one example, the annual growth in stock prices during 1985–90 was over 13 percent in Finland and over 17 percent in Sweden. Property markets as well as markets for other assets experienced similar booms. Many investments were highly leveraged. Annual growth in total lending was in the neighborhood of 20 percent in both countries.

The contraction that followed was unprecedented in the post-World War II period, both in magnitude and length. Real GDP fell during three consecutive years 1991–93 in both countries: in Sweden by 5.0 percent and in Finland by 12.6 percent. Even nominal GDP contracted, for three years in Finland and for two in Sweden.⁶ Many other variables displayed extreme deterioration: unemployment exploded, private consumption contracted, asset prices declined, lending became negative, and bank credit losses swelled as business bankruptcies multiplied. Developments were very similar in the two countries, even though the swing tended to be somewhat more pronounced in Finland.

Looking from the demand side, private consumption gave the strongest contribution to growth in both countries in the 1985–88 period. Toward the end of the decade, the contribution from investment increased in importance. On the other hand, the contribution from net exports was negative until 1989. The downturn manifested itself through a sharp decline in the domestic demand components. In Sweden, income growth eased in 1990, when all demand components except public consumption were more or less stagnant. The turnaround occurred

⁶ A comparison of the deepest recessions in Sweden during the 20th century shows the downturn of 1990–93 to be almost as severe as that of 1921–22 and 1931–33 (Jonung 1994).

Table 1. Macroeconomic indicators for Sweden and Finland, 1985–90 and 1991–93

	Sweden		Finland	
	1985–90	1991–93	1985–90	1991–93
	Average annual percentage change			
Real GDP	2.3	-2.0	3.4	-4.5
Nominal GDP	9.4	1.8	9.2	-2.9
CPI	6.2	5.4	5.0	3.1
Private consumption	2.7	-1.6	3.7	-4.4
Exports	3.1	2.3	1.9	6.3
Stock market, total index*	17.1	1.9	13.1	-2.4
Total lending*	20.5	0.0	17.9	-5.2
Commercial property prices	18.2	-26.5	10.8	-13.2
	1985–90	1991–93	1985–90	1991–93
	Annual averages			
Fixed investment/GDP, %	20.6	18.7	25.9	19.9
Unemployment, %	2.1	5.5	4.5	12.9
Current account/GDP, %	-1.1	-1.2	-2.9	-3.8
Household saving/disposable income %	-1.9	6.6	1.3	5.7
Business bankruptcies, no	6698	19109	2708	6744
Credit losses, % of bank lending	0.4	4.3	0.4	4.0
Public saving/GDP, %	1.3	-7.1	3.8	-4.8

Sources: Statistics Sweden, Swedish Institute for Economic Research, Affärsvärlden, Ministry of Finance, Bank of Finland, own calculations.

* End-of-year changes

in 1991, when investment contracted sharply. The joint contribution from fixed investment and inventory investment was -3.6 percent of GDP. Private consumption did not fall yet.

In Finland as well as in Sweden, the fall in investment demand preceded that of private consumption. Finland was ahead of Sweden on this count: investment demand turned negative already in 1990 and collapsed in 1991. The contribution from investment demand to GDP was -5.5 percent in 1991, an extraordinary contraction. Although Finnish trade with the Soviet Union all but disappeared in 1991, with exports to the former empire declining from 13 percent of total exports to 5 percent, the contribution from net exports was actually positive that year.

To sum up, in both Sweden and Finland growth was led by domestic demand in the late 1980s. Rapidly falling investment demand, which started in 1990 in Finland and 1991 in Sweden, preceded a contraction of private consumption. Very weak domestic demand until 1993 was counteracted partly by strong net ex-

ports. Net exports in fact moved countercyclically throughout the boom-bust process of the two countries. This is contrary to the typical historical experience of these countries, where changes in net exports have traditionally led the cycle.

3. *The Road Into The Crisis*

Macroeconomic events of the 1970s and 1980s set the stage for the crisis of the early 1990s.

3.1 »Traditional» Nordic problems

Unemployment was low in Sweden and Finland for a longer period than in most other European OECD countries (see *Figure 1*). Low unemployment rates led to inflationary pressures, which at a fixed exchange rate gave rise to recurrent profitability and employment problems in the tradables (internationally competing) sector.



Figure 1. Unemployment and inflation. Sweden and Finland, 1985–95.

The policy route chosen to respond to these problems differed between the two countries prior to OPEC I. Sweden's main course of action during the first two post-World War II decades was fiscal accommodation coupled with a fixed exchange rate⁷ during the Bretton Woods period. Recurrent cost push inflation problems squeezed production and employment in the tradables sector, which was counteracted by increased demand for non-tradables via a tax-financed expansion of the public sector. In fact, the public sector acted as an employer of last resort, and with the dual commitments to a fixed exchange rate and full employment domestic wage-cost pressures resulted in an endogenously determined growth of the public sector (Söderström and Viotti 1979).

Finland, on the other hand, embarked early on a route of monetary accommodation. Deteriorating profitability in the tradables sector was repeatedly countered by exchange rate adjustments. The Finnish markka was devalued (relative to the US dollar) no less than nine times

between the end of World War II and 1973. The result was a more positive development of investment, employment and output in the tradables sector, but at the price of a higher average inflation rate than in Sweden.⁸

The divergence of macroeconomic regimes between the two countries was eliminated as a consequence of the Swedish policy response to OPEC I. The squeeze on the tradables sector (resulting both from the terms of trade loss and from domestic wage inflation) was met by a very rapid expansion of public spending. Tax revenue did not follow suit, however. In the wake of growing budget deficits, Sweden had to shift to a policy of monetary accommodation. A devaluation cycle – not unlike Finland's – soon developed, with devaluations in 1976–77 and 1981–82.

Thus, in the 1970s and 1980s Sweden and Finland displayed quite impressive records of exchange rate adjustments. This was the instrument used to keep unemployment low by lowering real wages and raising profitability in the

⁷ Or, more correctly, a pegged exchange rate.

⁸ This series of devaluation cycles has been analyzed by i.a. Kouri (1979).

private sector.⁹ The price paid for low unemployment in Sweden and Finland was comparatively high inflation and low credibility of the pegged exchange rate.

Domestic saving is another »traditional» problem. During the 1980s up until 1990, the investment ratio of Finland always exceeded 24 percent of GDP. This high ratio was not matched by an equally high aggregate saving ratio. With the exception of three insignificant surpluses, the Finnish current account was in deficit every year after 1960. By the end of the 1980's Finland had accumulated a net foreign currency debt amounting to 200 billion markka or 40 percent of GDP. On top of this growing *net* foreign indebtedness came increasing *gross* foreign indebtedness as a result of increasing financial integration and growing direct foreign investment.

Sweden's investment ratio was less impressive than Finland's: with the exception of 1989 and 1990, it ranged between 18 and 20 percent every year after 1980. Still, as in the Finnish case, this tended to be less than national saving, even though the Swedish current account deficits were mostly smaller.

Both countries thus experienced problems with recurrent cost crises in the tradables sector as well as insufficient domestic saving in the 1970s and 1980s. These problems had been on the agenda long enough to deserve being called »traditional». By the late 1980s, it became increasingly clear that these macroeconomic imbalances were unsustainable. Breaking the trend required a fundamental change in the strategy of economic policy. Inflationary expectations had to be stabilized at a low level by a shift from the previous monetary accommodation regime into a »hard currency» regime. Stronger incentives for private saving needed to be introduced in order to reverse the trend of growing foreign indebtedness.

⁹ *The timing of exchange rate adjustments often coincided closely between the two countries. Sweden and Finland compete on some export markets where price competition is sharp, in particular in the markets for forestry products. Thus, exchange rate changes in one country has a significant impact on the export earnings of the other. The coincidental timing indicates similar structural problems in the two economies as well.*

The policy change required to achieve stability in face of these »traditional» problems would by itself have had initial contractionary effects. But the late 1980s also saw developments that were not on the road map of the traditional Nordic issues. Important developments took place on asset markets. These had an impact on the future course of stock and flow variables.

3.2 Financial liberalization and asset markets

A number of factors that were at the time not well understood contributed to an unsustainable increase in asset prices during the second half of the 1980s. The asset market boom was driven by changes in credit supply as well as credit demand. On the supply side, two interrelated but nonetheless distinct developments were of importance. The first was the deregulation of the financial markets and its consequences for the behavior of financial intermediaries and the appearance of financial innovations. The second was the effect on credit supply from expansionary fiscal and monetary impulses. On the credit demand side, both household and business demand for credits increased as former liquidity constraints were relaxed, real interest rates were low or negative and investment opportunities seemed to be expanding.¹⁰

Starting from the *credit supply* side, Sweden and Finland were both countries with heavily regulated financial markets. Deregulation came later than in most OECD countries (Åkerholm 1994). The most important steps were taken in the second half of the 1980s. The significance of deregulation as an unshackler of the supply of credit is emphasized by *Figure 2*, which exhibits total lending from all credit institutions as a share of GDP. In Sweden, lending as a share of GDP was almost constant prior to deregulation. It then grew from less than 80 percent of GDP to over 130 percent in just four years.

Finland experienced a similar expansion but

¹⁰ *Factors driving the change in the financial market policy of the Swedish Riksbank are examined in Jonung (1993).*

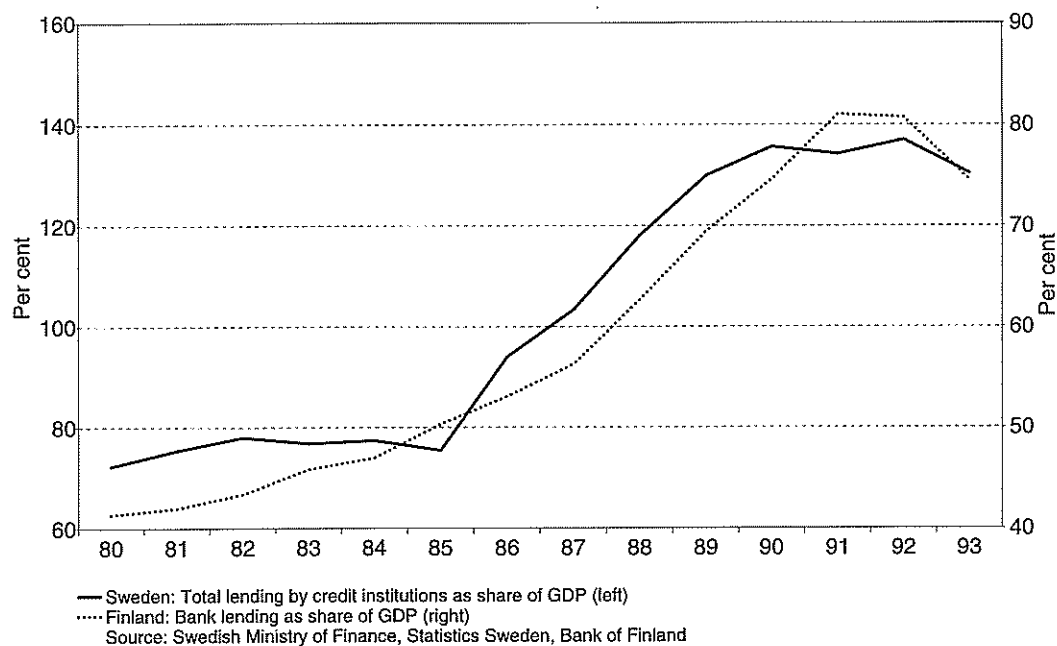


Figure 2. Lending as a share of GDP. Sweden and Finland, 1980-93.

on a somewhat smaller scale. *Figure 2* traces lending by banks to the public as a share of GDP in Finland. Between 1986 and 1991, lending increased by 30 percentage points. This was approximately half of Sweden's increase, but starting from a lower base. Thus, the magnitude of the increase relative to the base was similar in the two countries.¹¹

A second factor affecting the supply of credit was the conduct of monetary policy. As mentioned above, both countries were experiencing competitiveness problems in the tradables sectors prior to the mid 1980s. The gains from Sweden's large 1981-82 devaluations gradually dissipated as a result of increasing domestic prices and wages. The positive oil price shock of »OPEC III» in 1986 made it possible to postpone the choice between disinflation and devaluation. Oil prices plummeted, and Swedish terms of trade improved by 9.4 percent. The immediate consequence was that the current account improved in spite of rising

wage costs. The oil price drop proved to be a mixed blessing. Since employment in Sweden was already full at 2.7 percent unemployment and capacity utilization was high, the reduction in oil prices helped to hide inflationary pressures in the economy without defusing their causes.

Finland also experienced a sharp improvement in its terms of trade. It changed in Finland's favor by 8.5 percent in 1986 and by another 12 percent over the following three years. In Finland, this made it possible to avoid checking an even stronger boom in domestic demand than in Sweden and by 1989 the current account deficit was equal to 5 percent of GDP.¹²

Monetary policy in the two countries was in principle subordinated to the fixed exchange rate commitment. With increasingly free capi-

¹¹ In Sweden, lending by mortgage institutes accounts for a significant share of lending to households. In Finland, such lending is mostly undertaken by banks.

¹² Bordes (1993) concludes that the effect of the improvement in Finnish terms of trade on consumption was unimportant. This may be the case if attention is limited to its potential effect on the estimate of permanent income. However, to the extent that the improvement in terms of trade allowed the authorities to postpone macroeconomic stabilization its effect may, in fact, have been to allow demand expansion to continue for a longer time than would otherwise have been the case.

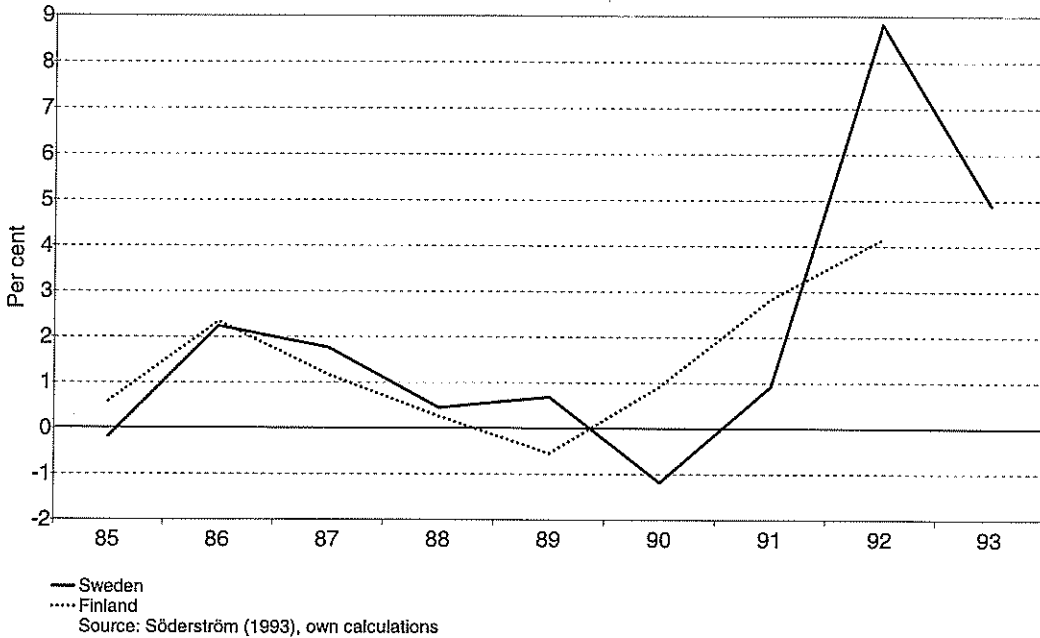


Figure 3. Real after-tax borrowing rates. Sweden and Finland, 1985–93.

tal movements, tighter monetary policy was not an option to contain demand pressure. Attempts at monetary contraction would only manifest themselves in large capital inflows. Sterilization of very large inflows is problematic. Here, Sweden and Finland eventually chose different paths: Sweden maintained the fixed exchange rate until 1992 while Finland revalued the markka by 4 percent in 1989.

Turning from factors affecting credit supply to *credit demand*, interest rate developments made borrowing significantly cheaper. *Figure 3* exhibits the ex post after tax real interest rate for households. This rate was low and declining throughout the late 1980s, before it turned sharply upwards after 1989 in Finland and after 1990 in Sweden. Other measures of the ex post real interest rate show similar developments for the two countries.

When the credit markets were deregulated the political systems had not convincingly demonstrated a firm commitment to disinflation. Instead, there were proven inflationary credentials. Inflationary expectations at the time were persistent and rather high. There are therefore reasons to believe that ex ante real interest rates

were, in fact, even lower than the ex post rates during the 1980s, which stimulated credit demand further.¹³ The low and often negative real interest rates of the late 1980s are consistent with the strong credit demand of the period.

Both the household sector and the corporate sector increased their demand for credit. To begin with *household credit demand*, credit market deregulation led to a relaxation of household liquidity constraints. Borrowing against property – or for that matter, borrowing with little or no collateral – for consumption purposes became significantly easier. Homes could be bought with a small down payment – or with none at all.

During this period, incentives for precautionary saving were weak. In Sweden, with unemployment of less than 2 percent, jobs were easy to find, and increasingly generous transfer systems promised to maintain household incomes if household members temporarily chose to exit from the labor market. The commitment by the

¹³ Survey data from Sweden indicate that inflationary expectations were significantly higher than realized inflation in 1986 to 1988, lending support to this argument.

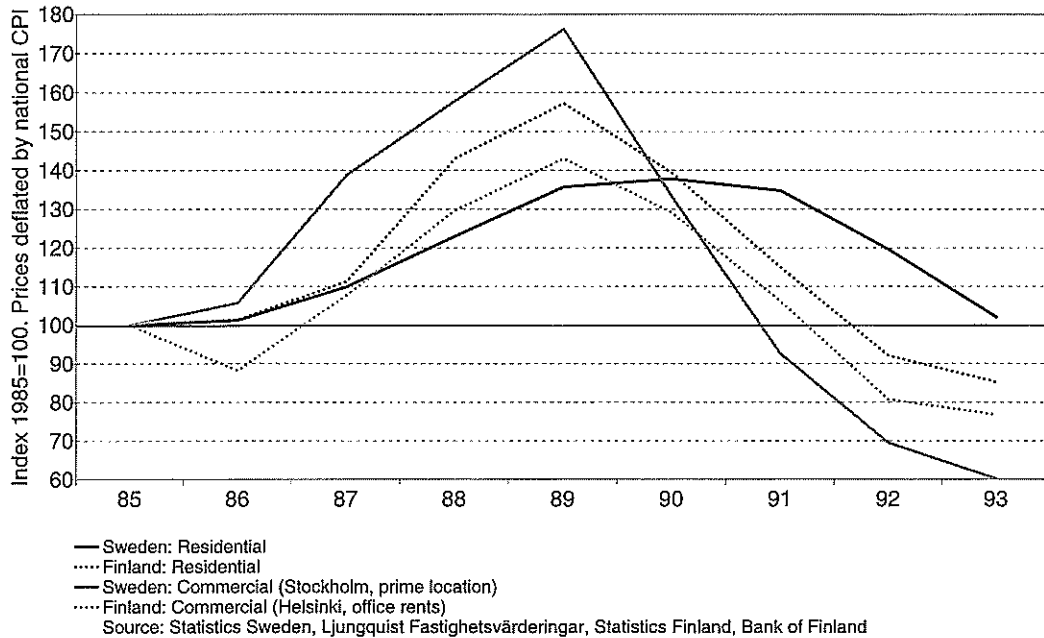


Figure 4. Real property prices. Sweden and Finland, 1985–93.

political system to finance the welfare programs appeared credible as the public finances improved rapidly and showed a surplus from 1987 and onwards.

Also, a wealth effect was evident. For example, real prices of residential property started rising after 1985, in particular in urban areas (see *Figure 4*).¹⁴ In the Stockholm area, real residential prices rose by more than 50 percent in four years. To the extent that housing price increases were seen as permanent, this led to an increase in permanent consumption. In addition, with positive feedback loops, increases in housing prices led to higher collateral values against which increased borrowing for further real estate purchases could take place. The result was strong growth in private consumption in spite of a marked slowdown in growth of disposable income after 1986 in Sweden. Dissaving reached close to 5 percent and gross indebtedness of households increased rapidly.

¹⁴ See *Jaffee (1994)* for an analysis of developments on the real estate market in Sweden during the period under consideration.

Once again, developments were similar in Finland. Domestic credit market deregulation began in 1983 and restrictions on bank lending rates were completely removed by 1986 (Åkerholm 1994). Private saving declined throughout the decade. By 1988 saving turned negative. Housing prices increased more rapidly in Finland than in Sweden and peaked earlier (see *Figure 4*). Deflated by CPI, the price of residential property rose by about 20 percentage points more in Finland than in Sweden between 1985 and 1989. Thus, any wealth effects on consumption are likely to have been even stronger in Finland than in Sweden.

Table 2 constructs household balance sheets for Sweden and Finland. Measures of gross wealth more than doubled in Sweden between 1985 and the peak year, and rose by about 70 percent in Finland. The accumulation of assets was partly debt-financed. In nominal terms, household debt more than doubled in Finland between 1985 and 1989. In Sweden the increase was over 80 percent from 1985 to the peak in 1990. But as a result of the increase in asset prices, this only led to small increases in debt-

Table 2. Household balance sheets, current prices.

Sweden (billion kronor)

	Houses	Apart- ments	Total real wealth	Financial wealth	Debt	Net financial wealth/ net wealth	Debt/ assets	Financial assets/ financial debt
1985	574	45	619	721	469	28.9%	35.0%	153.7%
1986	607	57	664	888	557	33.3%	35.9%	159.4%
1987	690	74	764	934	631	28.4%	37.2%	148.0%
1988	818	109	927	1104	755	27.4%	37.2%	146.2%
1989	975	138	1113	1196	819	25.3%	35.5%	146.0%
1990	1146	169	1315	1153	861	18.2%	34.9%	133.9%
1991	1257	185	1442	1202	859	19.2%	32.5%	139.9%
1992	1060	156	1216	1245	847	24.7%	34.3%	147.0%
1993	1019	150	1169	1406	827	33.1%	32.1%	170.0%

Finland (billion markka)

	Houses	Apart- ments	Total real wealth	Financial wealth	Debt	Net financial wealth/ net wealth	Debt/ assets	Financial assets/ financial debt
1985	335	396	731	165	108	7.2%	12.1%	152.6%
1986	358	429	787	186	123	7.5%	12.6%	151.7%
1987	380	514	894	217	146	7.3%	13.1%	148.3%
1988	462	750	1212	274	187	6.7%	12.6%	146.1%
1989	456	827	1282	283	213	5.1%	13.6%	132.6%
1990	476	793	1269	275	224	3.9%	14.5%	123.1%
1991	446	670	1116	267	226	3.5%	16.4%	118.0%
1992	439	578	1017	258	220	3.6%	17.3%	117.0%

Sources: Ministry of Finance, Sweden, Bank of Finland

Note: Real household wealth in Sweden does not include land in this table.

The value for apartments 1991–1993 in Sweden is a particularly rough estimate.

asset ratios.¹⁵ Thus, in spite of the very rapid accumulation of debt in a short period of time it appeared from the point of view of the household that debt burdens had not increased.

Turning to the business sector, the late 1980s also saw an increase in *corporate credit demand*. Favorable corporate profit developments, strong growth of domestic demand, and competition for market share among financial intermediaries following financial deregulation all set the stage for asset market expansion. In both countries, capital controls were fully removed

only by 1989 (Sweden) and 1991 (Finland). This helped creating domestic hothouse economies during the period when domestic investors had become more liquid but the purchase of foreign assets were restricted.

Commercial property prices rose even more rapidly than residential property (see *Figure 2*). In Sweden, real commercial property prices almost doubled between 1985 and 1989. Lending to the property and construction sector accounted for more than half of the lending by banks and credit institutions during the period. Between 1985 and 1989, the price of commercial property in Stockholm rose by about 160 percent. Rents, however, rose only by about 40 percent during the same period. (In Finland's case, *Figure 2* only outlines commercial office rents which rose at the same rate as Swedish rents.)

¹⁵ The large difference in levels between the key ratios in Sweden and Finland is accounted for by the fact that Sweden's estimate of real household wealth only includes housing. Finland's household wealth also (correctly) includes ownership of land. This means that the series are not directly comparable.

The stock markets also took off. From 1985 to 1990, the stock market indexes in both Finland and Sweden more than doubled in real terms (deflated by CPI). The growth in stock prices was even more rapid in Finland than in Sweden toward the end of the decade.¹⁶

As was the case with household behavior, the behavior of investors in commercial property seem to have been under the influence of positive feedback loops: borrowing for investment in assets took place against rising collateral values as well as expectations of future increases in asset prices, which further inflated these prices.

Thus, in addition to the »traditional» macroeconomic imbalances outlined above, gross indebtedness in the private sector increased very rapidly in both countries as new developments affected the behavior of both lenders and borrowers. In spite of significant household dissaving there were only small changes in debt-asset ratios. The implications of the high leverage of households and corporations were not well understood prior to the downturn.

4. The Downturn—Why Was It So Deep?

A number of factors contributed to the severity of the crises in the two economies. We focus on five, not necessarily exhaustive nor mutually exclusive, aspects:

(i) *Overheated starting point.* Macroeconomic imbalances were significant by the end of the 1980s even if asset market developments are disregarded. GDP growth was above trend in both countries. In Sweden, the annual growth trend was 1.9 percent 1976–90. By 1989, the GDP level exceeded the trend level by 2.1 per-

cent. In Finland, trend growth was 3.5 percent during the same period, and by 1989 the GDP level exceeded the trend level by 3.4 percent. Thus, returning to trend in each country after 1989 required a cumulative growth deficit compared to the trend rate approximately equal to one year's GDP growth.

As discussed above, there were a number of manifestations of the overheating. In both countries, household saving rates were negative, unemployment was lower than at any time for more than a decade and the rate of inflation was higher than that of important trading partners. Relative unit labor costs increased by about 10 percentage points in both countries in a few years' time after 1986.

Restoring macroeconomic equilibrium required disinflation and an increase in saving rates. In itself, this process would lead to a reduction in economic activity. However, measures to counteract the overheating were not put in place until economic activity had peaked, implying that the downturn was accelerated.¹⁷

(ii) *Real interest rate shock.* The downturn coincided with a sharp increase in real interest rates (see *Figure 3*). Disinflationary policies, international interest rate developments, and changes in domestic tax systems all contributed to increasing after-tax ex post real interest rates. This real interest rate shock frustrated the inflationary and real growth expectations that lay behind the asset price inflation. It increased borrowing costs for both households and businesses, reducing demand for loans both for investment and for consumption. This effect in itself slowed down consumption and investment.

The increasing real cost of capital contributed to the turnaround in asset prices. 1989 was the peak year for both stock markets and property prices (see *Figure 4*).¹⁸ As a result of the disinflationary commitments in the two countries, the option to adjust fiscal and monetary policies in order to stem the downturn in asset prices did not appear to be open.

¹⁶ The overheating during the second half of the 1980s led to a resource pull into the production of non-tradables. In particular the construction sector was favored by these developments. Businesses in the sheltered sector, such as banking and construction, did much better than the manufacturing industry on the stock market. In Sweden, between 1985 and 1989, the (nominal) index for shares in real estate and construction rose by 350 percent, in banking by 250 percent, and in the manufacturing industry by 150 percent.

¹⁷ The policy response is discussed further below in section 5.

¹⁸ Except residential property prices in Sweden, which peaked somewhat later.

(iii) *Balance sheet adjustments.* In response to increasing real interest rates and declining asset prices households and businesses adjusted their balance sheets. For households, this implied an increase in household saving rates and a reduction in consumption as well as in leverage. In Sweden private consumption began stagnating in 1990 and fell from 1992 while disposable income increased well into 1993. In Finland, private consumption remained flat in 1990 and then declined sharply for the following years. This took place although disposable income did not start declining until after 1991.

Table 2 indicates the effects on the household balance sheets. In Finland, the household debt-asset ratio was still increasing in 1992, although nominal debt was kept almost constant between 1989 and 1992. Swedish households were a bit more successful in that they managed to reduce nominal debt and thus also to avoid an increasing trend in the debt-asset ratio. The business sector went through a similar process of balance sheet consolidation. In both countries, the fall in fixed investment accounted for a large share of the downturn in GDP during each of the bust years.

(iv) *Financial disruption.* In spite of, but also partly as a result of, attempts at balance sheet consolidation, bankruptcies started growing quickly. In both countries, the number of bankruptcies increased by a magnitude of about 50 percent in each of the years 1990, 1991 and 1992. The amount of non-performing loans in the banking system also increased rapidly. Credit losses as a share of bank lending rose to levels that threatened the banking system.

Did the disruption in financial intermediation have effects on the real economy? Furthermore, did debt-deflation of the type described by Irving Fisher (Fisher 1932, 1933), whereby falling asset prices forces the liquidation of collateral for debt which in turn depresses asset prices further, contribute to the downturn? Bernanke (1983) has argued that the bank failures in the US of the early 1930s precipitated the Great Depression through a resulting large reduction in the volume of bank credit.

In both Sweden and Finland, the governments decided to support ailing banks on a very large scale, with direct financial support as well

as with blanket guarantees, thus avoiding the very serious disintermediation that would have resulted from outright bank failures. The lending activities of banks were as a result not discontinued, which is likely to have increased the severity of the downturn considerably. Yet, the requirement to strengthen capital adequacy ratios by itself made it necessary for banks to restrict lending while balance sheets were improved, implying a credit crunch.

(v) *Slow structural adjustment.* The relative price structure of the Swedish and Finnish economies underwent fundamental changes 1985–93. First, the upward shift in the real interest rate may be expected to be permanent, to the extent that changes in the tax system, international developments, and disinflationary policies have contributed to the change.

Second, the relative price between tradables and non-tradables has changed. The domestically overheated economies in combination with the fixed exchange rate regime resulted in an excessive increase in the relative price of non-tradables which was restored via the floating exchange rate.

Both of these shifts should lead to structural adjustment in the sense that resources should move out of previously profitable sectors into sectors with higher profitability. The real interest rate shift leads to a movement of resources out of highly capital-intensive activities. The real exchange rate shift leads to a shift out of non-tradables generally. On balance, these two developments can be expected to lead to a permanent decline in the construction sector.

In the short run, the Nordic labor markets have not displayed the flexibility necessary to meet much smaller relative price shocks. In previous downturns in economic activity, negative disturbances have been met by fiscal and monetary accommodation, not by structural adjustment. This time, lack of flexibility, particularly in the labor market, in combination with the magnitude of the shocks is part of the explanation of the depth of the recession.

As relative wages have not responded quickly, government expenditures supporting unemployed have risen dramatically. Other types of government transfers increased due to the depression while tax revenues dropped, causing a

sharp increase in public deficits, particularly in Sweden. On the one hand, this fiscal reaction dampened the negative impact of the depression on national income. On the other hand, the acceptance of an increase in the budget deficit reduces the pressure for structural adjustment. In the longer run, there is a risk that fiscal accommodation and thus rising public debt will have worked as a substitute for structural change – and not as a complement to it.

5. The Policy Response

In Sweden as well as in Finland, both monetary and fiscal policy underwent exceptional developments in response to the crisis of the 1990s.

Sweden maintained a fixed exchange rate up to 1992. The political commitment to such a regime was expressed more forcefully than in Finland. The large devaluations of 1981 and 1982 were seen as the last in a series of undesirable monetary adjustments, and there existed a political determination across party lines to avoid accommodation in the form of further devaluations. Finland had a longer history of mon-

etary accommodation with no less than nine exchange rate adjustments during a little over a decade. In 1989, the Bank of Finland demonstrated that it was prepared to adjust the exchange rate for stabilization purposes.

However, when Sweden announced a unilateral peg to the ECU in May 1991, Finland followed suit within a few weeks (see *Figure 5*). By this time, the economies were already contracting, unemployment was rising, and relative unit labor costs were becoming increasingly unfavorable. Nevertheless, it was felt that monetary accommodation would be harmful since it would imply yet another defeat in the attempts to fight inflation and attack the structural problems of the economies.

The Finnish ECU-peg was maintained for only five months, until November 1991, when the markka was devalued by 12.3 percent. Part of the reason was the strains imposed on the currency by the breakdown of Soviet trade. During the period preceding the devaluation, Finnish short term interest rates were allowed to rise in response to speculative pressure on the markka (see *Figure 6*). The development of long term interest rates during the period indicated deteriorating confidence in the monetary policy commitment, however. *Figure 7* shows

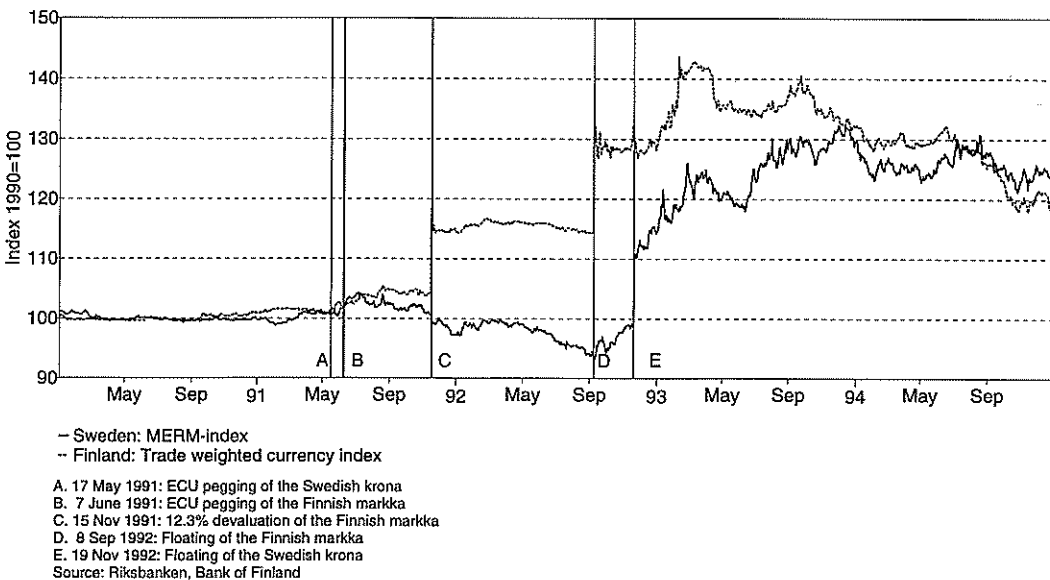


Figure 5. Trade-weighted exchange rates. Sweden and Finland 1990–94.

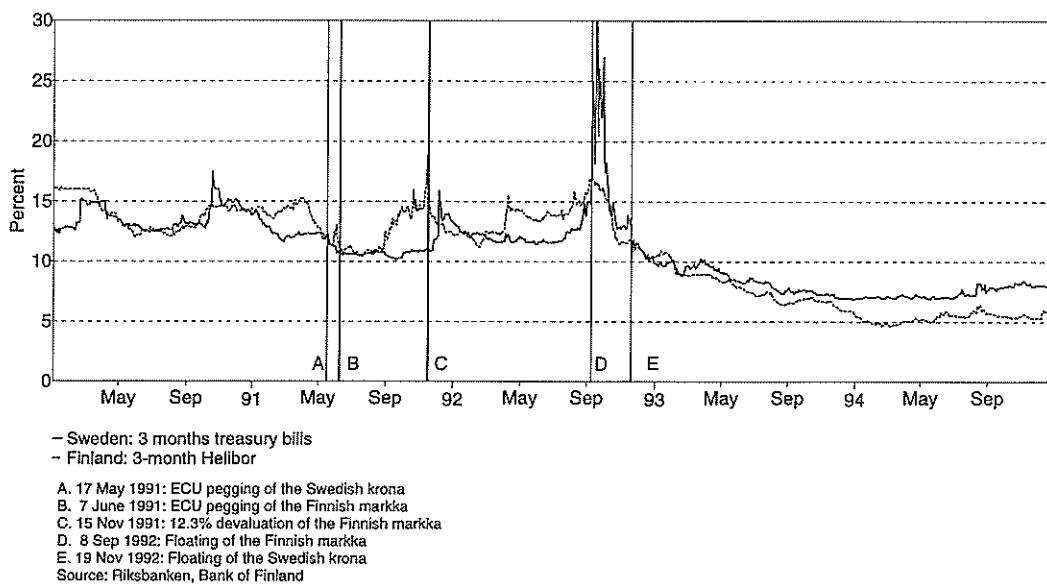


Figure 6. Three-month interest rates. Sweden and Finland 1990–94.

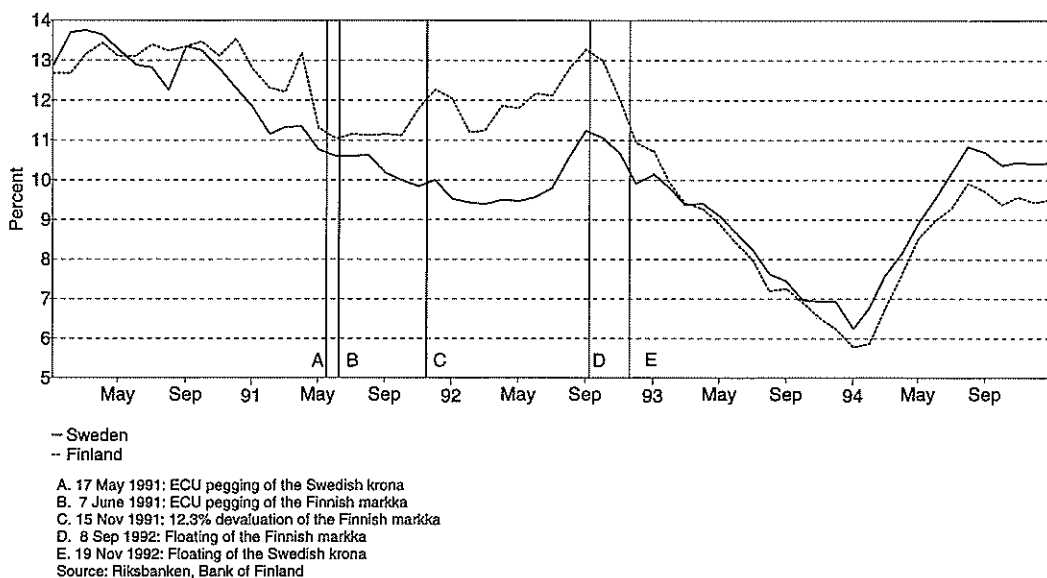


Figure 7. Five-year government bond yields. Sweden and Finland 1990–94.

how Finnish and Swedish long term interest rates diverged during the period preceding the Finnish devaluation in November.

At the time of the Finnish devaluation, pressures increased on the Swedish krona, and monetary

policy was tightened. *Figure 8* demonstrates that the slope of the Swedish yield curve became much more negative after the Finnish devaluation, whereas the opposite development took place in Finland.

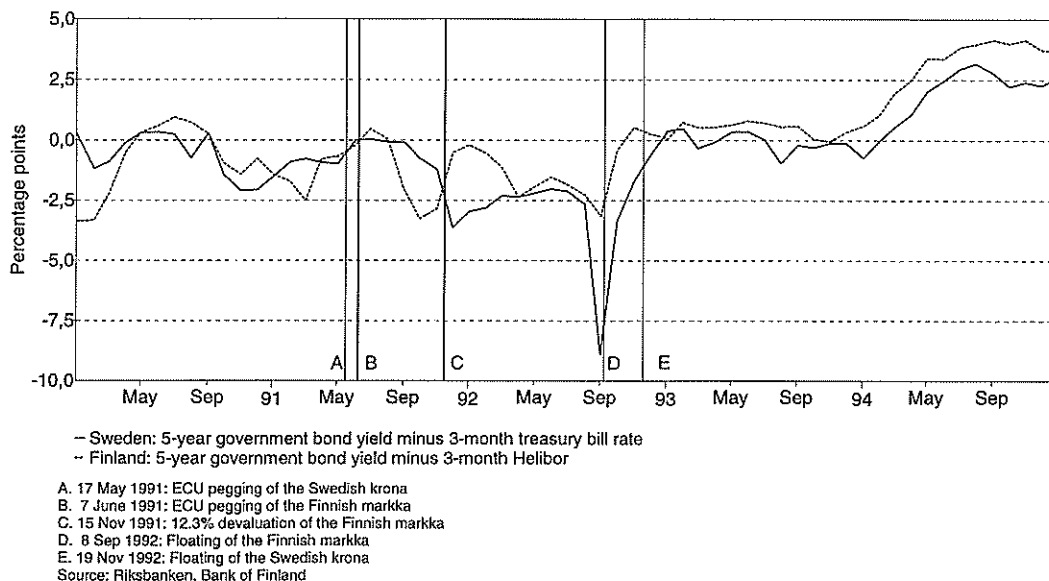


Figure 8. Spread between long and short rates. Sweden and Finland 1990–94.

In mid 1992, a period of turbulence on European currency markets began. It was triggered partly by the negative outcome of the Danish referendum about the Maastricht agreement and partly by an interest rate hike by Bundesbank, signalling a tighter monetary policy stance. The markka was floated on September 8 as the Italian lira was devalued, thus causing the first realignment within the ERM for several years.

When later in September sterling and the lira were floated and the Spanish peseta devalued, the pressure on the Swedish krona became exceptional. The defense of the fixed exchange rate involved raising the overnight interest rate to 500 percent for five days. Later in September the Swedish government and the opposition agreed on two consecutive »crisis packages» to tighten fiscal policy and shift part of the tax burden from firms to households. As a result, short term interest rates could gradually be lowered and the hurricane seemed to wane.

The krona was subjected to a new speculative attack in November. This time the overnight rate was increased only to 20 percent. On the other hand, the Riksbank carried out sterilized intervention on the currency market

amounting to no less than 160 billion kronor in six days before the krona was finally left to float on November 19. The European currency unrest continued until August 1993 when intervention bands within the ERM were widened to 15 percent.

Ex post, it is clear that the Swedish exchange rate peg could hardly have survived these international developments. Instead, the question is whether Sweden gained anything in the long term by its stronger commitment to the fixed exchange rate compared to Finland. Finland's currency initially fell more rapidly and deeply, but *Figure 5* shows that the total nominal deterioration from 1991 to early 1994 was the same in Sweden and Finland. Short term interest rates behaved in a similar way after the currencies began to float. Inflationary expectations also seem to have converged after the floating of the currencies in the two countries judging from *Figure 7*. Thus, Sweden does not appear to have been awarded any immediate bonus by the financial markets as a result of the more tenacious commitment to a fixed exchange rate policy.

As regards fiscal policy, both countries underwent extremely sharp reductions in public

sector financial saving during the crisis years, although the drop was larger in Sweden. To a large extent, this reduction is automatic, a result of the sensitivity of both revenues and expenditures to the level of economic activity. Still, it can be argued that even »automatic stabilizers» include a certain amount of discretion, since it is up to policy makers to decide whether the rules that automatically affect the public finances are to be adjusted or not in response to changing economic conditions.

It is of particular interest to study the extent to which fiscal policy softened the blow to household disposable income during the current crisis. *Table 3* calculates the contribution of the public sector to disposable income. Disposable income is divided into two components; factor income from the private sector and net public sector income. Factor income from the private sector includes both wages and capital income. Net income from the public sector is defined here as wages earned in the public sector plus net transfers from the public sector. »Transfers paid» consists mainly of direct taxes. In *Table 3* these components are expressed as index numbers, with 1990 disposable income as the

base. The index numbers refer to real magnitudes.

The results are striking in several respects. First, household real disposable income had a more positive development in Sweden than in Finland after 1990. Second, the total contribution of the public sector is significantly larger in Sweden than in Finland. This is due to two factors: a larger public sector and a smaller net tax burden on household income in Sweden. Third, although private sector factor income fell sharply in Sweden, this drop is dwarfed by the 25 percent decline in Finland. Fourth, net public sector income as a share of 1990 disposable income increased very significantly in both countries, somewhat more in Finland.

Thus, the reason for the weaker development of household disposable income in Finland than in Sweden is, absolutely speaking, not that the Finnish public sector has been less generous in increasing transfers and public employment. The weakness in Finnish disposable income growth instead originates from a larger decline in factor income from the private sector. The deeper fall in Swedish public saving is partly a result of a larger reliance on indirect taxes in Sweden, and thus a larger budget sensitivity to the drop in private consumption expenditures.

The policy problem of both Sweden and Finland has changed considerably over the past half decade. At the end of the 1980s, monetary policy was subordinated to the fixed exchange rate commitment. Relative prices discriminated against the production of tradables and against saving. Now, there are more degrees of freedom in monetary policy and relative prices have changed in favor of previously disadvantaged activities. Two major problems have appeared instead. The first concerns the resolution of the large imbalances in public finances and the consequent rapid growth of public debt. The second concerns the slow movement of resources, especially labor, into tradables. Unemployment will remain permanently high unless labor that has been shed from unprofitable activities is absorbed by expanding sectors of the economy.

Table 3. Decomposition of real disposable income in Sweden and Finland, 1990-1993

Sweden	1990	1991	1992	1993
Disposable income	100.0	104.9	107.8	103.5
Factor income from private sector	67.3	65.2	64.1	60.4
Net income from public sector	32.7	39.6	43.7	43.1
Finland	1990	1991	1992	1993
Disposable income	100.0	101.2	96.8	92.5
Factor income from private sector	101.0	91.5	80.7	76.7
Net income from public sector	-1.0	9.7	16.2	15.9

Source: Statistics Sweden, Bank of Finland, own calculations.

All data expressed as index numbers with 1990 disposable income as base. Factor income from private sector includes both wages and capital income. Net income from public sector consists of net transfers from public sector plus wages earned in public sector.

6. Concluding Remarks

The boom and bust periods in Sweden and Finland have remarkably many factors in common. During the 1980s, both countries carried out policies that led to unsustainable increases in asset prices as well as unsustainable movements of resources from the tradable to the non-tradable sectors. Both countries experienced sharp downturns when the unsustainability of the processes were revealed. Asset prices fell, demand plummeted, unemployment skyrocketed and budgets went into large deficits. The process became cumulative, ending only after the floating of the krona and the markka. It is a noteworthy fact that Sweden and Finland are among the last industrialized countries to deregulate their financial markets while also being the countries that went through the severest crises following deregulation.

We have shown that net transfers from the public sector to households plus wages paid in the public sector have exhibited similar increases (as a share of 1990 disposable income) in Finland and Sweden. The Swedish budget has been more sensitive to the level of economic activity, leading to a more severe budgetary problem in Sweden, however.

Finnish domestic demand fell more deeply than in Sweden, contributing to significantly higher Finnish unemployment rates. On the other hand, the comparatively worse budgetary problem in Sweden provides a particularly difficult problem to the Swedish political system. The years following the onset of the crisis have shown a more rapid return to low deficits in Finland than in Sweden but with an unemployment rate stuck at a higher level. So far, financial markets have rewarded the Finnish state of affairs rather than the Swedish.

To sum up, the depressions in Sweden and Finland should be understood as the unexpected outcome of an attempt of changing the monetary regime from a regime of strongly regulated financial markets, low realized real rates of interest and monetary accommodation, to a regime based on internationalized financial markets, market-determined real rates and monetary non-accommodation, that is, on the adherence to a fixed exchange rate. In the transition from

the old regime to the new regime, real rates of interest first declined sharply, then rose dramatically bringing about far-reaching effects on interest-sensitive segments of the two economies.

This late-coming regime transition turned out to be extremely difficult to implement in a successful way as policy-makers and policy advisers lacked experience and understanding of the processes unleashed as the economies became the subject of a unique combination of negative developments: an »ordinary» cyclical downturn, a real interest rate shock, asset price deflation with balance sheet consolidation, and financial fragility.

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