The financial crises of the 1990s in Finland and other Nordic countries[1]

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The current financial turmoil has now lasted almost two years. In the post-war period, the current crisis is the 19th in advanced economies and the first in the 21st century. In a recent paper, Carmen Reinhart and Kenneth Rogoff (2008) divide the 18 crises before the current US subprime crisis into the 'big five' and a number of smaller crises. The big five include the crises in Norway, Finland and Sweden that occurred mostly in the early 1990s. The Norwegian crisis began already in the late 1980s, but continued into the 1990s.

Nearly all major banks in the Nordic countries got into difficulties and made huge losses, with average loss provisions (expressed as a percentage of lending) in the period 1982–93 ranging from 2.1% (in Denmark) to 1.5% (in Finland and Norway) of bank lending. In the sub-period 1990–93, loss provisions were 2.9% for Denmark, 3.4% for Finland, 2.7% for Norway and 4.8% for Sweden.[2] All of the Nordic countries had to provide public support to their banking systems. In Denmark this support was small, whereas in Norway, Sweden and Finland the level of public support was quite significant, with increasing importance in the indicated order of countries. The financial crises in Finland, Norway and Sweden became systemic, whereas Denmark avoided a systemic crisis.

Even though each financial crisis has its own particular features, experiences and lessons from earlier crises can provide useful insights for understanding later crises. The main emphasis here is on the Finnish case, because it was the deepest crisis of the three.

Overview of the volatile economies[3]

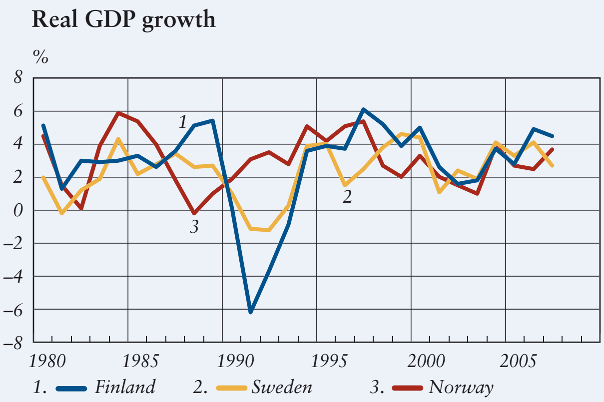
Starting with economic growth, shown in Chart 1, we can see that the Finnish experience was quite dramatic. Finland experienced relatively fast growth in the second half of the 1980s, and the economy

[1] This article is based on a speech delivered in the Global Interdependence Center, Philadelphia, USA on 30 September 2008. The views expressed are those of the author and do not necessarily represent the views of the Bank of Finland. I am grateful to Antti Kuusterä, Jorma Hilpinen, Jarmo Pesola and Juha Tarkka for comments and to Hanna Putkuri for assistance.

[2] These figures are from Møller and Nielsen (1995).

[3] See Honkapohja and Koskela (1999), Englund (1999) and Steigum (2004) for overviews of the three countries.

Chart 1.



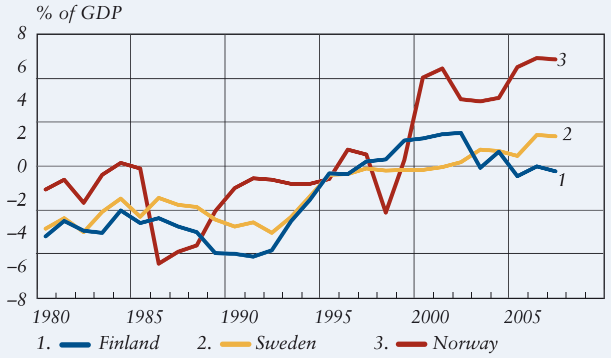
Sources: Eurostat and IMF.

became overheated at the end of the decade. The country then plunged into a deep recession in the early 1990s, with negative growth for about three years. The total cumulative fall in GDP was well over 10% from peak to trough. After that, Finland experienced a fast recovery and growth remained strong until late 2008, with some normal cyclical fluctuations.

The Swedish experience is qualitatively similar but less extreme.

Chart 2.

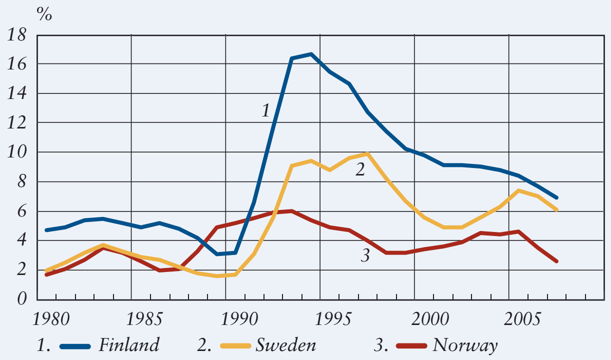
Current account



Source: European Commission.

Chart 3.

Unemployment rate



Source: European Commission.

Growth was relatively rapid in the second half of the 1980s, though more sluggish than in Finland. Sweden, too, plunged into recession with negative growth in the early 1990s, but the recession was not as deep as in Finland. Here, too, the recovery was fast, and since the crisis the Swedish growth performance has been good and, indeed, somewhat better than before the recession.

The Norwegian case is different from the other two. Norway was already experiencing difficulties in the second half of the 1980s, with a growth rate around zero in 1987. This was due to a major decline in oil prices in 1986, which, in view of the big role of oil, led to a slowdown in the Norwegian economy. This lasted well into the early 1990s. Overall, the Norwegian crisis was less severe than the Swedish case (and a fortiori the Finnish one) as it did not experience any significant period of negative growth. The sluggish period in Norway lasted longer than in Finland and Sweden, but the country recovered well.

Looking at the current accounts in Chart 2, we can see that Finland and, to a somewhat lesser extent, Sweden faced major external deficits in the second half of the 1980s. These deficits turned into surpluses after the crises, and the current accounts have remained in surplus ever since. The Norwegian experience was different: the decline in oil prices resulted in current accounts deficits from 1986 to 1988, but the external balance has otherwise been positive. We should note that all three countries experienced speculative attacks during the crisis, and these attacks were quite strong in the case of Finland and Sweden. All three countries eventually abandoned the fixed exchange rate regime.

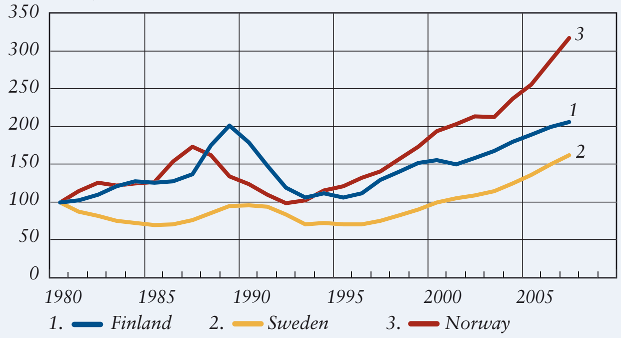
The unemployment trend in the three countries, shown in Chart 3, is broadly a mirror image of GDP developments. All three countries initially had low unemployment, which began to rise as part of the financial crises. Norway experienced the rise earlier than Finland and Sweden. As the Finnish crisis was the deepest, the increase in the unemployment rate was by far the biggest. In all three countries, unemployment fell gradually once the crisis receded.[4]

Financial developments

The developments in residential property prices are qualitatively similar in the three countries, with movements in Norway taking place earlier (Chart 4). Property prices rose rapidly during the booms and declined sharply during the financial crises. Finland had the most extreme movements. Property price movements were also strong in Norway, and we can note that the decline from 1986 lasted quite long, ending only in 1993. The Swedish case is less extreme than the Norwegian one, and Swedish prices also turned around relatively slowly. In contrast, the upswings and downswings in Finnish property prices were faster than in the other two countries.

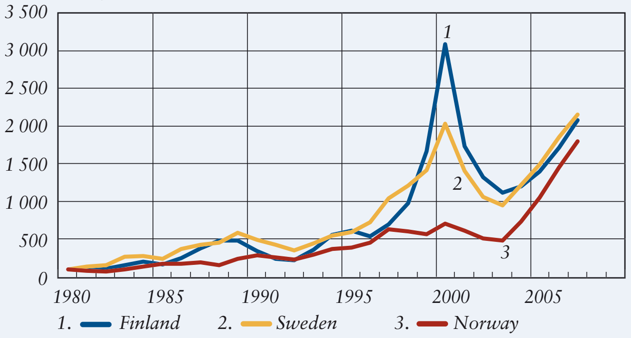
Dynamics of share prices, shown in Chart 5, in Finland and Sweden tell roughly the same story as residential property prices. Share prices rose rapidly from the mid-1980s to the end of the decade, after which they experienced a major decline for about three years. In contrast, Norwegian

Chart 4.



* Nominal house prices deflated using consumer price index
Sources: Statistics Finland, Statistics Sweden, Norges Bank and Bank of Finland.

Chart 5.



Source: IMF.

[4] We should note that unemployment in Finland is systematically higher than in Norway or Sweden.

share prices moved much less during the 1980s and early 1990s.[5]

Next, we turn to bank lending. Chart 6 shows the annual growth rates in bank lending for the three countries. We can see that each country experienced rapid growth in lending during the boom years of the 1980s. The Norwegian boom is seen to happen earlier than those of Finland and Sweden. The boom and bust in lending were most extreme in Finland. Quite remarkably, both Finland and Sweden had negative lending growth for several years. The loans to GDP ratio rose rapidly during boom years and declined by almost the same amount in the recessions in Finland and Sweden. In Norway, the decline was much smaller.

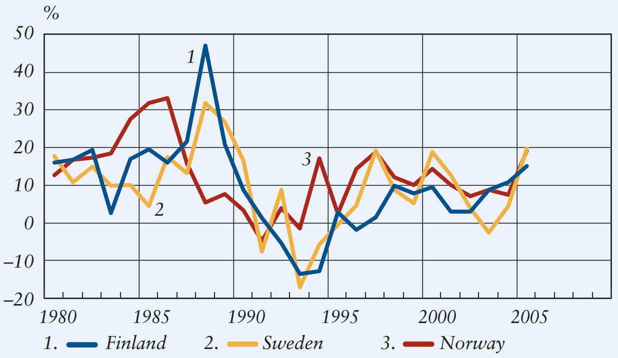
To conclude the overview, we look at realized loan loss provisions of banks in the three countries (Charts 7–9). The charts show loss provisions as a percentage of balance sheet for the major parts of the banking system. We can see that in each country these loss provisions rose rapidly at the beginning of the crisis. In Finland, the crisis was deepest for the savings banks, whereas in Norway commercial banks had the highest loss provisions. In Sweden, the different banking groups had similar loss provision developments. The heavy losses led to a significant restructuring of the banking systems, to which we shall return later.

The macroeconomic and financial developments just described suggest that the nexus of financial deregulation, macroeconomic policies and external economic environment has major consequences for the occurrence of financial crises. These connections are examined further below.

[5] Chart 5 shows huge increases and subsequent falls in share prices in Finland and Sweden (but not in Norway) around the turn of the century. These developments are the result of the IT revolution, as Nokia dominates the Finnish stock market and Eriksson is similarly a very large player in the Swedish stock market.

Chart 6.

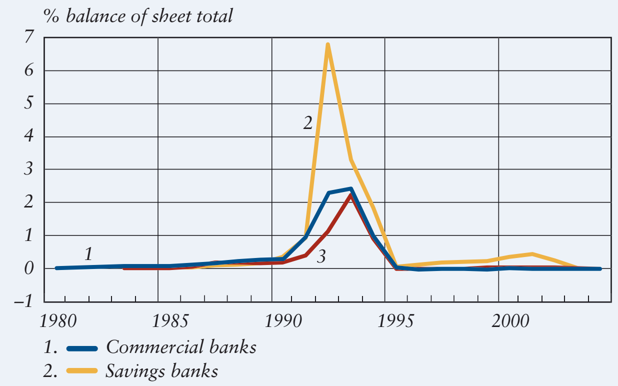
Lending growth



Sources: OECD and Bank of Finland.

Chart 7.

Loan loss provisions in Finland



Sources: Drees & Pazarbaşioğlu (1998) and OECD.

Causes of the crises: boom and bust

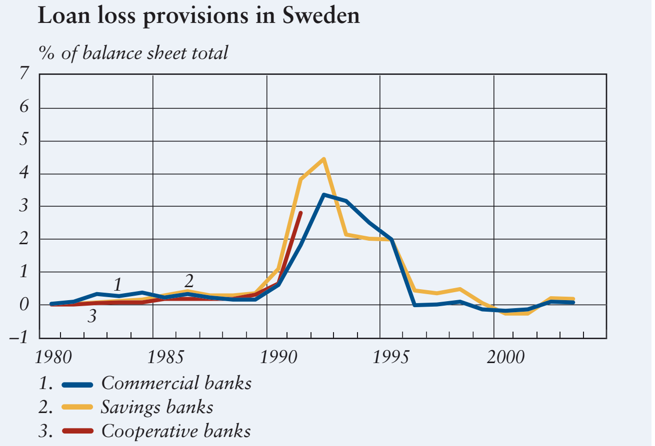
The Finnish economy performed relatively smoothly in the first half of the 1980s. Despite gradual disinflation, the Finnish inflation rate remained higher than the rates of its main competitors and there was a deterioration in the country's international competitiveness. The smooth ride began to get bumpy around 1986–87. Economic growth accelerated significantly and the economy gradually entered a period of overheating. Several factors lay behind this change.

Firstly, financial market deregulation led to an explosion in domestic bank credit, as we saw in the chart above. As will be discussed further below, the process of deregulation was not carried out in the most logical way. Following financial deregulation, banks had to adjust to a new regime of price-competition instead of competition with service provision, as in the regulated era. The new opportunities for competition between banks led to increased risk-taking as a result of moral hazard and myopic behaviour.

Secondly, the freeing of international capital movements led to a huge increase in capital inflows, a significant fraction of which was denominated in foreign currencies and not hedged. Restrictive monetary policy accentuated the capital inflows as a result of the interest rate differential between domestic and foreign interest rates, and partly because investors perceived only a small likelihood of loss from exchange rate movements.

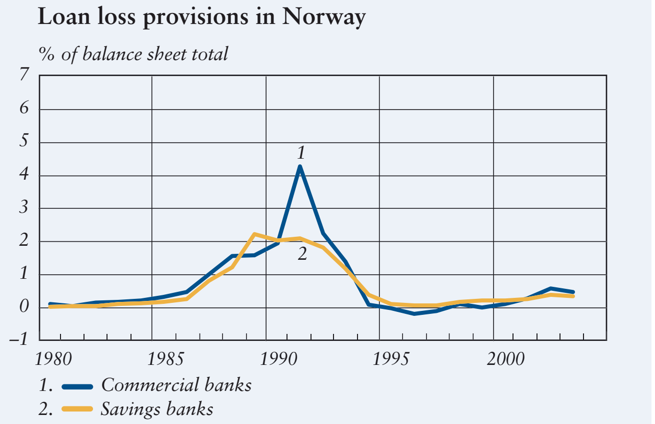
Thirdly, a sharp improvement in the terms of trade resulting from falling energy prices and a rise in world market prices of forest products contributed to the overheating of the economy that was

Chart 8.



Sources: Drees & Pazarbaşioğlu (1998) and OECD.

Chart 9.



Sources: Drees & Pazarbaşioğlu (1998) and OECD.

The general economic trends in Norway and Sweden during the boom years before the crises were similar to in Finland.

already being fuelled by the financial deregulation. The business cycle was in an upswing in many countries, partly as a result of loose monetary policy after the 1987 stock market crisis. This added to the bad luck of overheating in Finland and Sweden. Domestic economic policies were not sufficiently restrictive to counteract the boom.

In the process of overheating, the rate of inflation rose from about 2–3% in 1986 to about 7% in 1989–90. The rate of unemployment declined from about 4% in the first half of the decade to 2.5–3% at the end of 1989. The external balance for Finland deteriorated and serious current account problems emerged. We may note in passing that Sweden experienced less overheating in the second half of the decade. For 1985–90, the average current account deficit-to-GDP ratio was 2.9% for Finland, while the corresponding figure for Sweden was only 1.1%.

The overall developments in the upswing before the Norwegian and Swedish crises in were similar to those for Finland. Financial market deregulation and positive international business-cycle developments were the main factors behind the domestic booms and rapidly rising real asset and share prices. However, for Norway the major fall in oil prices in 1986 was a major negative shock that prevented a longer-lasting boom and a correspondingly bigger bust.

The end of the boom in Finland came in 1990, and a rapid descent ensued. Economic activity, as measured by the growth rate of real GDP, declined swiftly from positive growth of 5.4% in 1989 to negative growth of -6.5% in 1991. Domestic private investment and private consumption fell sharply, while net exports of goods and services started to pick up towards the end of 1991. The decline continued, though at a slower pace through 1992 and most of 1993. A turnaround took place in the autumn of 1993. Price inflation slowed significantly and nearly vanished. The Finnish markka was devalued in November 1991 and then floated in September 1992. After these developments, the current account deficit gradually disappeared, to be replaced by a surplus.

Both international and domestic factors contributed to the onset of the Finnish crisis. Firstly, Finnish exports to market economies declined as a result of slow international growth, the loss of price competitiveness in Finnish industry and a decline in the terms of trade. With the collapse of the former Soviet Union, Finnish exports and imports to Russia quickly dropped by 70% in March 1991. This contributed significantly to the decline in Finnish GDP in the crisis years.

Secondly, after German unification, interest rates rose in Europe and also in Finland as a result of a more expansive fiscal policy combined with tighter monetary policy in Germany.

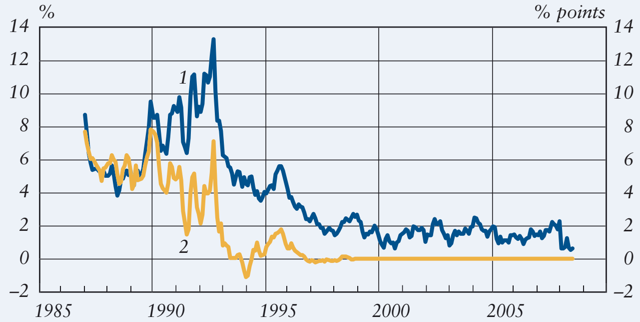
Thirdly, monetary conditions became very restrictive due to an increase in real interest rates and appreciation of the Finnish markka. Real interest rates rose dramatically from the start of 1990 until the end of 1992 as a result of the defence of the Finnish markka against speculative attacks with high nominal interest rates, and because of the fall in the inflation rate at the onset of recession. Chart 10 shows the interest rate differential between Finland and Germany and the Finnish real interest rate. Chart 11 shows the exchange rate for the Finnish markka.

In Sweden, the causes of the onset of the crisis were similar to Finland, namely high German interest rates and speculative attacks against the Swedish krona.[6] There was, however, one major difference to Finland. Sweden had little trade with the Soviet Union, so the disintegration of the Soviet Union had no economic impact on Sweden. Moreover, the lack of trade with the Soviet Union meant that Swedish industry had already been forced to modernize before the 1980s. In contrast, the large Soviet trade had led to a lack of competitiveness in Western markets for parts of Finnish industry. These factors meant that the Swedish crisis was not as deep as the Finnish one. Both economies began to recover in 1993–94.

In Norway, the boom years came to an end as early as 1986 with the decline in oil prices. The Norwegian krona was devalued by 6% in response to this decline and restrictive policies were introduced. Inflation gradually declined from 1987, and by 1990 the rate of inflation went below the average rate of Norway's trading

Chart 10.

Real interest rate in Finland and interest-rate differential relative to Germany (3-months rates)



1. *Real interest rate in Finland* (LHS)*
2. *Interest-rate differential relative to Germany (RHS)*

** Nominal interest rate minus consumer price inflation*
Sources: Reuters and Bank of Finland.

Chart 11.

Bank of Finland currency index*

** Trade-weighted currency index. A rising curve indicates FIM appreciation.*
Source: Bank of Finland.

[6] You may recall that Swedish interest rates briefly reached as high as 500% during the defence of the currency.

partners. The crisis in Norway lasted a fairly long time, with the turnaround in the business cycle occurring in 1993.

Causes of the crises

The emergence of major banking crises was a notable feature of the bust process in all three Nordic crises. A deep financial crisis also emerged in Norway, even though the fluctuations in the real economy were much smaller than those in Finland and Sweden. The latter countries had severe declines in GDP, which in turn contributed to their financial crises.

The roots of the Finnish boom-bust cycle and the financial crisis can be traced back to the deregulation of the financial system in the 1980s. The process of financial deregulation began in the early 1980s, but the greater part of it was carried out in the second half of the decade. Domestic financial markets and international capital flows were liberalized at a time when interest rates in Finland were much higher than elsewhere. This caused a massive capital inflow that led to uncontrolled credit expansion. This effect was also strong in Sweden and, to a lesser extent, in Norway; see Sandal (2004).

Financial market deregulation in Finland at a time when interest rates were high led to uncontrolled growth in lending.

The deregulation process was problematic in several respects. Firstly, its timing in the second half of the 1980s coincided with the upswings of business cycles in Western market economies. As already noted, the big boom led to soaring indebtedness in the private sector, higher relative unit labour costs and a current account deficit. Later on, it led to speculative attacks on the Finnish markka.

Secondly, the prevailing banking law from 1969 was outdated and bank supervision focused on solely legalistic monitoring of banks. The rules and practices in prudential regulation and bank supervision were left unchanged in the deregulation process. These were tightened only later, in 1991, when the depression had already begun.

Thirdly, the tax system favoured debt financing of business and housing investment and was reformed only later. Some reforms were attempted during the boom years, but there was little political support for the reform proposals.

Fourthly, in the context of deregulation, lending rates were liberated before deposit rates, which also helped to ease the banks' position. Finally, monetary policy under a fixed exchange rate with a narrow band sought to maintain some tightness in the wake of the boom. This provided further impetus to the large (in foreign currency terms) inflow of foreign capital. The capital inflows to the private sector were mediated largely by Finnish banks and led to foreign-currency-denominated borrowing also by firms operating in the non-tradable sector.

The financial crisis also had an international dimension for Finland and Sweden. (Norway suffered less in this respect.) For both countries, problems of international indebtedness and illiquidity emerged and, as argued above, these features result from the earlier real appreciation and lending boom after financial deregulation. Next, we shall briefly compare Finland's and Sweden's international indebtedness with those of Mexico, Chile and East Asian countries.

A country may be able to withstand a relatively high level of international indebtedness, provided its economic growth remains solid, the debt is largely long-term and the confidence of international investors remains intact. Nevertheless, a high international debt position means increasing risks should a country run into economic difficulties. Table 1 shows the external debt-to-GDP ratio for Finland and Sweden for the period 1982–2001. For comparison, the table also shows the data for Chile (1984–2001), Mexico (1984–93), Korea (1990–2001) and Thailand (1995–2001).

The build-up of international debt for Finland is seen to be quite significant, because the Finnish current account deficits were large before the crisis. In contrast, Sweden shows a similar but more gradual build-up of foreign debt. This suggests that the external situation for Finland, and to an extent for Sweden, was relatively risky, so that the pressures mounted rapidly once the general outlook became gloomy in 1990–91.

In comparison, international indebtedness for Mexico was very high in the 1980s, and was even higher for Chile in the mid-1980s. Thailand experienced a fairly rapid increase in its foreign indebtedness in 1997–98. These indebtedness problems were a central element in financial crises in these countries.

Table 1.

International indebtedness*

Net foreign debt, % of GDP

	Finland	Sweden	Mexico	Chile	Korea	Thailand
1982	17	19				
1983	20	22				
1984	19	20	48	73		
1985	19	21	46	88		
1986	17	19	58	85		
1987	20	17	53	74		
1988	19	19	41	50		
1989	23	21	31	33		
1990	45	26	30	17	–32	..
1991	50	28	26	17	10	..
1992	53	23	22	14	11	..
1993	54	41	20	16	20	..
1994	63	45		..	23	..
1995	56	39		..	..	32
1996	54	39		..	..	35
1997	46	39		33,7	..	49
1998	87	38		37,7	..	57
1999	180	31		35,4	..	38
2000	140	25		37,1	..	48
2001	74	..		41,7	152	43

Source: IMF.

Crisis: 1992–93 EMS crisis, 1994–95 Mexican meltdown and 'Tequila Hangover', 1997–98 'Asian Flu'.
Source: FRB of San Francisco, Economic Letter, August 1998.

Countries affected by crisis. Source: World Economic Outlook, 1998.

* *The table is from Honkapohja et al (2009). Note that the figures include foreign ownership of equity capital, which in the Finnish case distorts the figures at the end of the 1990s because of the high share prices and large foreign ownership of Nokia corporation.*

Table 1 suggests that the financial crisis in Finland and Sweden had features similar to those in Chile, Mexico, Indonesia, Korea, Malaysia and Thailand. Finland and Sweden went through a 'twin crisis', ie a combined currency and banking crisis.

Management of the crises

The Nordic financial crises required major policy interventions by the governments and parliaments of the countries involved. There follows a description of the main features of crisis management in the three countries, with the focus on the deepest crisis, ie Finland. This is followed by a general discussion of crisis management in Norway and Sweden. Experiences of all three countries are taken into account, as each case can give specific lessons.

Before proceeding these cases, it is worth commenting on the reasons why Denmark avoided a systemic banking crisis even though the loan losses of Danish banks were significant and a few Danish banks had to be rescued by the public sector.[7] One reason for the better Danish performance was good luck with the timing of reforms. Denmark started to deregulate the financial system earlier than the other three Nordic countries, before the boom years in the second half of the 1980s. For example, interest deductibility provisions were reduced in a tax reform that reduced the attractiveness of debt finance. Prudential supervision and disclosure rules and capital adequacy requirements for Danish banks were made stricter than for other Nordic banks. The better condition of Danish banks explains why, in difficult times in the early 1990s, most Danish banks were able to raise new private equity in conjunction with cost-cutting and restructuring operations and little public intervention was needed.

Management of the Finnish banking crisis[8]

Policy actions to overcome the Finnish banking crisis began in September 1991 when the Bank of Finland had to take control of Skopbank, the 'central bank' of the savings bank system, as other banks refused to accept certificates from Skopbank. This was an unusual but necessary step, as no other public institutional arrangement existed for rescuing a bank in major difficulties.[9]

Further policy measures were initiated in early 1992. The

[7] See Koskenkylä (2000) and Moeller & Nielsen (1995) for more details. See Edey and Hviding (1995) for comparisons of financial reform in OECD countries.

[8] Largely based on Honkapohja et al (2009) and Honkapohja & Koskela (1999). See also Nyberg & Vihriälä (1994), Vihriälä (1997) and Koskenkylä (2000) for discussions of the Finnish crisis.

[9] The Bank of Finland sold Skopbank in June 1992 to the newly established Government Guarantee Fund. The operation was quite costly to the Bank of Finland, with a net cost of around FIM 11 billion plus foregone interest income (around USD 2.65 billion using the exchange rate of 4.15 prevailing at the end of 1991.)

government injected public funds, in the form of preferred capital certificates, into the banking system and set up a Government Guarantee Fund (GGF) to manage the banking crisis. Tight conditions were imposed on the public support to the banks, as the capital certificates could be converted into voting stock if certain conditions about repayment and bank solvency were not fulfilled. Moreover, the interest rate on the certificates was set slightly above the market rate. In similar manner, further GGF actions included strict requirements on the banks, including transparency of support, monitoring of banks receiving support, terms to support efficiency and structural adjustment of the banking system, and (in varying degrees) financial responsibility of owners of banks receiving support.

As the crisis continued, the government (in August 1992) and parliament (in the beginning of 1993) made public promises that the obligations of the Finnish banking system would be guaranteed under all circumstances. In early 1993 the GGF was strengthened and given additional capital. Public support of the banking industry continued through 1994. A modest improvement in the banking sector took place in 1993, and further improvements came in 1994 and 1995. Loss making by banks stopped only in 1996; since 1997 the banks have made significant profits. In the end, most of the public support for banks went to the savings banks.

Finnish banks improved efficiency by reducing the number of branches and staff, with staff numbers approximately halved in the eight years from 1990 to 1998. The banking sector underwent a major restructuring during the crisis. Most of the 250 savings banks were combined into the Savings Bank of Finland (SBF) in June 1992. The new bank was, however, not viable and was subsequently broken up, the pieces being merged with the commercial and cooperative banks as well as the government-owned Post Bank. The non-performing assets of SBF were transferred to an asset management company, Arsenal, which was owned by GGF. The small commercial bank STS Bank was merged with a big commercial bank (KOP). In 1995 KOP, one of the two big commercial banks, was in turn merged with the other big commercial bank (SYP) to form Merita Bank.

After the crisis, structural changes continued in 1997 with the merger of Merita Bank, the remaining Finnish commercial bank, with Nordbanken of Sweden. Another restructuring occurred in 1998 between the government-owned Post Bank and Vientiluotto (the Export Credit Institution), which led to the creation of Leonia Bank. More recently, Merita-Nordbanken merged with a Danish bank and a Norwegian bank to form Nordea, a pan-Nordic

As a result of all the restructurings following the banking crisis of the 1990s, about 60% of the Finnish banking system is nowadays owned by foreigners.

Bank. Another merger occurred between Leonia Bank and Sampo Insurance Corporation, which created the Finnish bank-insurance conglomerate Sampo. In 2007, the banking business of Sampo was sold to Danske Bank. As a result of all the restructurings, about 60% of the Finnish banking system is nowadays owned by foreigners.

Lessons

Stability-oriented macro policies that avoid inflation and overheating are crucial in crisis prevention.

Prevention of a systemic financial crisis should be the first priority, even if improved efficiency and faster economic growth can eventually occur after a crisis.[10] Stability-oriented macro policies that avoid inflation and overheating are crucial in crisis prevention. The difficulty is how to diagnose an emerging overheating situation and asset price bubble, as not all business-cycle upswings with major asset price rises lead to a systemic financial crisis. We do not currently have a good set of indicators to diagnose problematic situations, but a rapid expansion of credit and strongly increased leverage are likely signals of future problems. Big external deficits are another probable warning signal, at least for small open economies. Further research into the interconnections between the macro economy, financial system and crises would be most welcome.

Macroeconomic management to prevent the financial crises in the Nordic countries did not work well and thus does not provide lessons for crisis prevention.[11] The weak performance points to an important lesson about the political economy aspects of financial crises. Financial liberalization was a big regime change in the Nordic economies and preventive measures were politically unpopular and could not be pushed through during boom times. It is likely that both the resistance of special interest groups and lack of understanding of the changing economic environment contributed to opposition to the preventive reforms. Naturally, this resistance disappeared during the crises and, more generally, there seemed to be an improved willingness for reform after the economies had become more open internationally.

The Nordic crises have, however, provided good cases to test the importance of the different channels

[10] Tornell and Westermann (2005) suggest that this can be the case especially in emerging economies. The subject is obviously controversial.

[11] See eg Honkapohja et al (2009), Englund (1999) and Steigum (2004) for assessments, respectively, for Finland, Sweden and Norway.

Table 2.

Fiscal costs of bank support*

	Gross cost	Net cost (% of 1997 GDP)
Finland	9.0 (% of 1997 GDP)	5.3 (% of 1997 GDP)
Norway	2.0 (% of 1997 GDP), 3.4 (present value, % of 2001 GDP)	–0.4 (present value, % of 2001 GDP)
Sweden	3.6 (% of 1997 GDP)	0.2 (% of 1997 GDP)

** See Sandal (2004), Table 3 for details.*

for the impact of a financial crisis on the real economy. There is clear evidence for the role of some of the financial channels such as wealth effects, but evidence about the credit crunch, ie lack of bank capital and quantitative financial constraints, in the Nordic crises seems to be weak. See Englund & Vihriälä (2003) and Honkapohja et al (2009) for discussions of the evidence with further references.

Crisis management by the Nordic countries has been viewed in a much more positive light. Several lessons can be drawn from the Nordic crises in this respect.[12]

A key starting point is that it is crucial to maintain confidence in the banking system. Finding broad bi-partisan political support for government action[13] in a crisis is important for maintaining confidence and avoiding phenomena such as large-scale bank runs. Political guarantees for the obligations of the banks were a major step in maintaining confidence, though the Nordic countries used different approaches here. Finland and Sweden introduced formal legal guarantees, which were lifted only in 1998 and 1996, respectively. In Norway the political guarantee was less formal. A blanket guarantee can be risky, as it may increase moral hazard: creditors have no reason to monitor or discipline banks. On the other hand, it must be said that the Finnish and Swedish crises were far more severe than the Norwegian one and these two crises also involved a foreign dimension.

Looking at the role of central banks, Norges Bank explicitly provided emergency liquidity support to individual banks as part of the overall support system. In effect, Sweden's Riksbank also provided liquidity support, though it was not formally of lender-of-last-resort type. In Finland, the role of the central bank was different, as the Bank of Finland had to handle the initial burst of the banking crisis by taking over Skopbank as an ad hoc move.

The governments in all three countries introduced crisis resolution agencies to manage the public support and the restructuring of the banking system. Establishing an agency for crisis management that is administratively separate from the central bank and financial supervision authority is important to avoid conflicts of interest. This also relieves the finance ministry of some 'front-line' duties, even if it must necessarily carry the main responsibility for crisis management. Finland and Sweden also introduced separate asset management companies to deal with the non-performing assets from the banks in trouble. Norway did not introduce such a company, but some of the

Establishing an agency for crisis management that is administratively separate from the central bank and financial supervision authority is important to avoid conflicts of interest.

[12] See Bäckström (1997) and Ingves & Lind (1996) for a discussion of Swedish experiences, and Koskenkylä (2000) and Sandal (2004) for comparisons of Nordic practices.

[13] Or multi-partisan support if there several major political parties in a country.

banks had their own 'bad banks' to manage non-performing assets.

The crisis resolution agencies had several duties to perform. They provided capital injections to the banking system and guided its restructuring. Liquidations were not much used (only two small banks in Norway were liquidated). Mergers and take-overs of banks were a common way to achieve restructuring. A general principle was that private solutions were always tried first before a public take-over. In Finland, capital injections were made to private banks and public take-overs were short-lived. Government ownership was highest in Norway, where the state took over the three largest commercial banks.

The treatment of 'old' private shareholders was mixed. In Norway, the existing share capital was written down to zero before a public take-over. In Finland, shareholders of Skopbank took a hit but were not completely wiped out. Subsequently, support from Finnish authorities took the form of open bank assistance and existing shareholders did not lose their capital, but the terms of support included the risk of future partial state ownership. In Sweden, the shareholders of Gota Bank lost everything, but private owners of other banks did not. In all countries, creditors were protected, except for one case in Norway.

Institutional arrangements in the public provision of bank support are naturally subject to attempts for gain by existing owners and potential future owners. These arrangements can also provide adverse incentives for different counterparties. Prompt action, openness and common yardsticks in the assessment of losses, fair asset valuations by experts, clear guidelines in restructuring, and optimal use of government funds are important to minimize moral hazard and possibilities for manipulation. It is naturally impossible to make any precise assessment of the success of policies by the Finnish, Norwegian and Swedish authorities in these respects. Nevertheless, it can be argued that the crisis resolution pursued in these countries was not far from best practice (see eg Sandal 2004).[14] As emphasized by, for example, Allen and Gale (1999, 2007), the impacts of banking collapses in the three Nordic countries were short-lived, the economies recovered fairly quickly from the crisis and economic growth resumed.

Keywords: central banks, crisis management, banking crisis, Nordic countries, financial crisis, financial supervision

[14] Table 2 gives estimates of the gross and net fiscal costs of the crises.

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