

Chapter 3

The Nordic banking crises in the early 1990s – resolution methods and fiscal costs

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In the early 1990s, Finland, Norway and Sweden all went through a systemic banking crisis. In this paper we analyse and compare resolution methods, fiscal costs and post-crisis bank performance in the three countries, and discuss whether these factors are interrelated. The three economies and their banking sectors recovered relatively quickly from the crises. To some extent, this could be down to luck. However, there may be some general lessons to be learnt from the way the authorities handled the crises. Common features were prompt and broad-based government intervention with severe conditions attached. However, there were also differences, e.g. in the treatment of private shareholders, the issuance of blanket creditor guarantees, the role of private guarantee funds and the use of asset management companies or "bad banks". The main divide runs between Norway on the one side and Sweden and Finland on the other. The paper also presents new estimates of the fiscal costs of the banking crisis in Norway that are the first to include all public expenditure and income. Net fiscal costs have been significantly smaller in Norway than in Finland and, to a lesser extent, Sweden. This was partly due to the method of crisis resolution, as well as the magnitude of the crises. After the crises, state ownership of banks was greater in Norway than in the other two countries. The Norwegian state's income from the gradual sale of shares has been substantial. However, from a financial perspective, it could have sold its shares much quicker and still done well. There can be several objections to state ownership of commercial banks. However, the Norwegian banks with significant state ownership have not performed very differently from other banks after the crisis.

1 Introduction

In the early 1990s, three of the five Nordic countries - Finland, Norway and Sweden – all suffered a systemic banking crisis.¹ The development and causes of the three crises were quite similar. In a nutshell, deregulation was followed by boom and bust in all three countries.² However, the methods the authorities employed to resolve the crises were quite different, as were the fiscal costs of the resolutions.

Arguably, the crises consisted of five parts: increased fragility, negative shock, crisis, resolution and effects of the resolution. Our focus is on the two latter parts: We analyse and compare resolution methods, fiscal costs and bank performance in the three countries, and discuss whether these factors are inter-related.

One important issue we discuss (focusing on Norway) is the extent and duration of government take-overs and their effect on the net fiscal costs and bank performance. State ownership – as a last resort form of crisis resolution – represents significant financial outlays for the taxpayer. However, ownership also means that the state may be able to recoup (part of) its outlays through re-privatisation. Pure lenders, on the other hand, are excluded from this potential "upside". Most economists agree that state ownership of commercial banks is a bad idea, and may have a negative influence on bank results. However, intermediate state ownership with a gradual selling off at prices not significantly lower than "underlying value" may ensure that the budgetary cost of the crisis resolution is kept at a minimum. Thus there may be a trade-off between bank performance and the net fiscal costs of crisis: a quick privatisation may improve bank performance rapidly but at the cost of increasing the budgetary cost (and vice versa). Ultimately this is a question of the optimal timing of privatisations.

The Nordic banking crises were the first systemic banking crises in developed countries since the 1930s (not counting WW2-related problems).³ As such, it should come as no surprise that the crises have been the subject of numerous studies. Given the extensive literature, what new insights can this paper

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¹Note that also a fourth Nordic country, Denmark, suffered significant banking problems due to many of the same causes as in the three other countries. However, these problems did not reach systemic proportions, even though loan losses were as high as in Norway. This is partly due to the fact that Danish banks had relatively large buffers of capital and reserves and because loan losses were more spread out in time (see Vastrup, 2002, and Koskenkylä, 2000, for more details).

²However, note that a particular shock, the breakdown of exports to the former Soviet Union, exacerbated the banking and economic crisis in Finland.

³There have been several non-systemic crises, for instance the Savings & Loans-crisis in the United States in 1984-91 and the small banking crisis in the United Kingdom in the early 1990s (classification according to Caprio and Klingebiel, 1999).

bring? First, while many studies either focus on individual countries or present a "Nordic" crisis resolution model, we compare resolution methods and point out that there are important differences. Second, we present new estimates of the gross and net fiscal costs of crisis resolution in Norway. Earlier estimates are incomplete and not on a present value basis. We also compare the fiscal cost of resolving the banking crises in the three countries. Third, we deal more extensively with the effects of government ownership.

The paper is organised as follows: Section 2 lays out the key facts about the development and causes of the crises. Section 3 presents and compares the various crisis resolution methods. Section 4 compares estimates of gross and net fiscal costs of the crisis resolutions in the three countries. Section 5 discusses the effects of government ownership, and section 6 concludes.

2 Why and how did the crises develop?

The type and scale of a crisis may explain why different resolution methods were chosen and why different levels of fiscal costs were incurred. Some understanding of the causes and the development of the Nordic banking crises is thus necessary. However, due to space constraints, the following overview is brief and somewhat simplified.⁴

Initially, three broad observations can be made. First, the causes of the crises in the three countries were quite similar, although there were also some differences, for example regarding the types of exogenous shocks. Second, there was not one single reason for the crises, but rather a mixture of different causes. Third, the crises followed the typical build up and eruption of banking crises (mostly experienced by countries outside the OECD, see e.g. IMF (1998)).

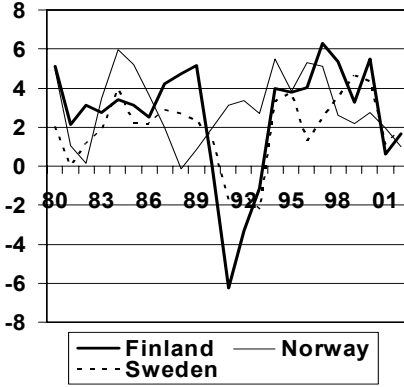
Figures 1-9 contain selected macroeconomic indicators for the three countries and data for banks' loan losses. In short, the scenario of the crises was the following: Solid economic growth and very rapid credit and asset price growth – in the mid-1980s for Norway, mid-to-late 1980s for Finland and Sweden – were followed by a cyclical downturn and heavy loan losses that exhausted the capital of many banks that had over-extended themselves. As a result, the authorities stepped in to maintain the functioning of the banking system.

2.1 Strong credit and asset price boom

What caused the strong credit boom in the 1980s? Due to quantitative regulations (e.g. on bank lending and on the foreign funding of banks), credit had been rationed. Credit demand was thus very high when regulations were lifted

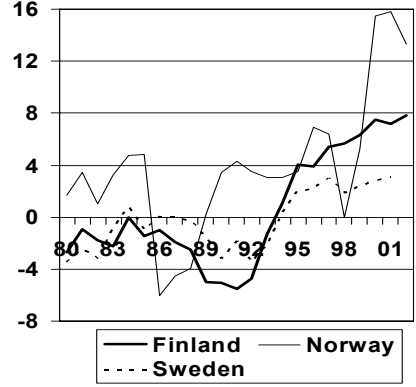
⁴For a more detailed discussion, see Drees and Pazarbaşıoğlu (1998), Daltung (2004), Englund (1999) and Steigum, Chapter 2 in this publication.

Fig. 1 Annual change in real GDP (in %)



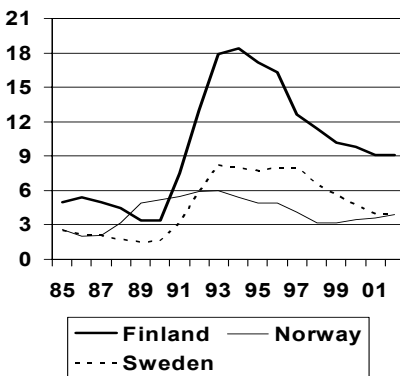
Source: IMF Int. Fin. Statistics

Fig. 2 Current account balance in % of GDP



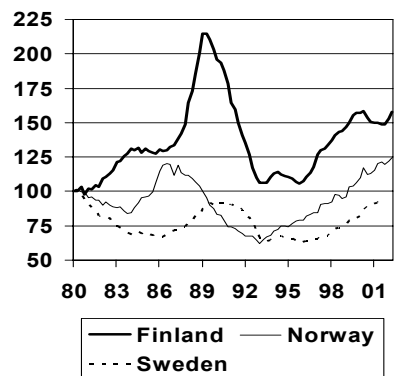
Source: IMF Int. Fin. Statistics

Fig. 3 Unemployment rate (in %)



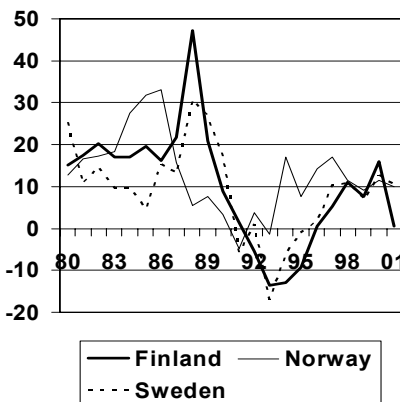
Source: IMF Int. Fin. Statistics

Fig. 4 Real (infl.adj.) residential property price indexes. 1980 = 100



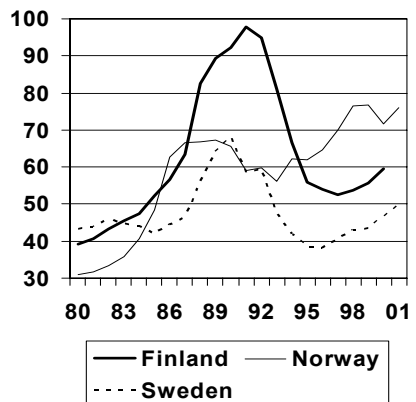
Source: BIS (using national data)

Fig. 5 Annual growth in loans (in %). All banks



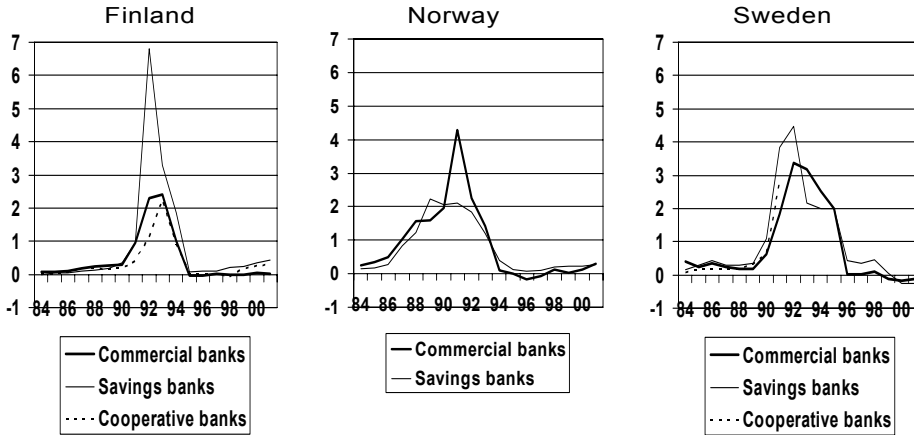
Source: OECD (2002a, 2003)

Fig. 6 Loans in % of GDP. All banks



Source: OECD (2002a, 2003) and IMF

Fig. 7-9 Loan loss provisions in % of balance sheet total



Source: Drees and Pazarbasioglu (1998) and OECD (2002a, 2003)

in all three countries in the early to mid-1980s. In addition, tax systems encouraged borrowing through very generous rules for deducting interest expenses from taxable income. After allowing for inflation, the cost of borrowing was very low or even negative. There was thus a perception that borrowing was kind of a "free lunch". A booming economy and optimism about future prospects led to increasing property prices. Higher collateral values facilitated borrowing, which in turn contributed to increasing prices. As a result of this spiral, property prices increased sharply.⁵ Stock markets also boomed, but they were (and still are) far less important to private sector wealth than property markets in the Nordic countries.

2.2 Weak risk management

Credit supply was very accommodating to the strong demand. Financial deregulation enabled banks to strongly expand lending. Why banks chose to make loans that ultimately proved very unprofitable is perhaps more difficult to understand. However, banks found themselves in a new competitive environment, and were uncertain how to react. In the regulation period, credit was rationed and credit risk was limited. Increasing lending volume (when possible) was thus a "fool-proof" way of increasing profits. Many banks, but far from all, did implicitly assume that this was still the case in the new deregulated environment, and chose to prioritise "selling" loans and competing for market shares far higher than ensuring adequate internal controls and risk management. Promotion of staff was based on volume expansion, not risk-adjusted return over time.

⁵There are indications that commercial property prices increased even more than residential property prices, but good data are scarce.

Banks also entered into new areas of lending, both by geography and sector, of which they had less than adequate knowledge. These expansionary strategies may partly have been the result of herding, i.e. banks copied the strategy of a leading (aggressive) bank.

2.3 Inadequate supervision and macroeconomic policies

The supervisory authorities did not do enough to correct the situation. They lacked resources and qualified staff and did not prioritise on-site inspections. The authorities also allowed the lending boom to develop by accepting that low-quality instruments were included in the capital base or by allowing circumventions of requirements by semi-artificial accounting (Halme, 2002). The poor quality of capital was of course a major problem when loan losses actually materialised.⁶

Macroeconomic policies were not adequately tightened to offset the strong impulses stemming from the lifting of credit regulations. Fiscal policy was too lax, and monetary policy was tied to the mandate of keeping exchange rates stable. Although nominal interest rates were high compared with German rates, they were not high enough to discourage borrowing. The fixed exchange rate regime created an additional problem that has also been seen in later crises, e.g. the Asian crisis: Both the non-financial sector and the banks assumed that the fixed exchange regime would continue, and borrowed heavily abroad (typically intermediated by the banks) in foreign currencies at rates lower than domestic interest rates. As a result, exchange rate and liquidity risk was high. This effect was particularly strong in Finland and Sweden. For example, lending in foreign currency constituted almost half of total bank lending in Sweden in 1990 (Englund, 1999).

2.4 "Accidents waiting to happen"

During the 1980s, the non-financial sectors in all three countries had significantly increased their leverage. They were thus vulnerable to shocks. The same can be said about many banks, which were dependent on the soundness of their borrowers (many of which had not been adequately evaluated) and on continued access to foreign funding. In addition, the banking sectors, particularly in Finland and Norway, had relatively weak capital bases. With the benefit of hindsight, the Nordic banking sectors were thus "accidents waiting to happen". And sure enough, when the Nordic economies were hit by strong negative shocks and a cyclical downturn, loan losses and non-performing loans soared, wiping out the capital of many banks.

⁶Indeed, e.g. Stortinget (1998) stresses that the key lesson from the Norwegian banking crisis is the importance of banks being well-capitalised.

2.5 Negative shocks

The type and timing of shocks hitting the three countries were slightly different. Oil-exporting Norway suffered from the fall in oil prices already in 1986. The effective cost of borrowing later increased due to changes in tax law, lower inflation and higher interest rates influenced by higher German rates. Finland and Sweden experienced the same interest rate hike, and Finland was also badly hit by the collapse of exports to the former Soviet Union around 1990. In addition, both Finland and Sweden suffered from a currency crisis in the autumn of 1992, with volatile interest and exchange rates. Although their banking crises had already surfaced by then, there was clearly some feedback from currency crises to the banking crises (and vice versa) (Englund, 1999). The currency depreciation after the collapse of the fixed exchange rate regimes led to many bankruptcies in companies that had borrowed heavily in foreign currencies, resulting in loan losses for their creditor banks. The dependency on foreign funding also led to bank liquidity problems.

In Norway, the currency depreciation was smaller and came largely after the banking crisis. Note also that it took several years from the start of the economic downturn (around 1987, see figure 1) to the peak of the banking crisis (1991) in Norway, whereas it happened relatively quickly in Sweden and Finland. Steigum, Chapter 2 in this publication, argues that the oil price shock in 1986 may have prevented a longer-lasting boom in Norway (which eventually would have resulted in a larger bust), and that later increases in oil income permitted a more expansionary fiscal policy from 1991, which contributed to the economic recovery. Steigum also argues that since all three countries were hit by the same interest rate shock from Germany, it is very likely that this shock is crucial in explaining why the banking crises happened at about the same time in all three countries.

Table 1 summarises some facts regarding the size and duration of the crises. The economic downturn was considerably deeper in Finland than in Norway, and, to a lesser extent, Sweden. In total, real GDP fell over 10% in Finland, whereas it hardly fell at all in Norway. This is interesting, given that the lending boom was of similar size in all three countries (see figure 5). However, leverage was much higher in Finland (see figure 6). As discussed above, the exogenous macroeconomic shocks were also particularly large in Finland. Finland experienced a soaring unemployment rate. Finland also had the highest loan losses in the peak crisis year, and the largest cumulative fall in bank lending. Finland's savings bank sector in particular suffered heavy losses. However, there were loan losses on a large scale in the two other countries too (see figures 7-9).

The recovery of the banking sector took somewhat longer in Finland than in the two other two countries. Whereas the banking sectors in Norway and Sweden returned to profitability just two years after the peak of their respective crisis, it took four years in Finland. Obviously, the size of a crisis influences its

length. However, the point is perhaps not that Finnish banks recovered slowly, but rather that Norwegian and Swedish banks recovered remarkably quickly from the crisis peak. On the other hand, the total period with negative profits was quite long, particularly in Norway, where there was a fairly long build-up to the crisis.

It has taken considerable time for nominal bank lending to recover in Finland and Sweden.⁷ Swedish banks have at the same time shifted their asset structure away from loans. This could indicate that the banks are not performing their credit intermediation role to the same extent as before the crisis. However, Englund (1999) argues that in Sweden, this is more likely to be due to weak loan demand than weak loan supply. Steigum, chapter 2 in this publication, reaches the same conclusion for Norway, where the decline in lending was fairly modest anyway.

Table 1: Duration and seriousness of the crises

	Finland	Norway	Sweden
Crisis period	1991-93	1988-1993	1991-93
Peak year of crisis (acc. to bank profitability)	1992	1991	1992
Cumulative fall in real GDP (%)	10.4 (1990-93)	0.1 (1987-88)	5.3 (1990-93)
Loan losses in peak year (% of GDP)	4.4	2.8	3.8
Non performing loans in % of GDP*	9	9	11
Cumulative fall in bank lending (%)	35.5 (1991-95)	4.9 (1990-91)	26.4 (1990-95)
Number of years before bank lending was back to pre-crisis level	9	4	10
Number of years from crisis peak to profitable bank. sector	4	2	2
Currency crisis as well	Yes	No	Yes

Sources: crisis period: IMF (1998), row 2-7: Drees and Pazarbaşıoğlu (1998), Lumpkin (2002, Ch. IV), OECD (2003) and own calculations, cumulative fall in GDP: IMF (2001) and own calculations, currency crisis as well: Hoggarth and Saporta (2001).

*Data for non-performing loans may not be comparable due to different accounting methods etc.

⁷If we had studied real figures, the recovery period would probably have been even longer.

3 How were the crises resolved?

The banking crises in Finland, Norway and Sweden were clearly systemic, as all the largest banks experienced serious solvency problems. The five largest banks in Finland, the four largest banks in Norway⁸, and three large banks in Sweden all received government capital support. In addition, some other large banks received capital support from their private owners, and there were a number of smaller banks in trouble. Although the government was heavily involved in the crisis resolution in all three countries, quite different resolution methods were used. In the following, we will first describe the measures taken in each country and then make some comparisons.⁹

3.1 Finland¹⁰

In Finland, the first bank in difficulties was *Skopbank*, a commercial bank that acted as a central bank for the savings banks. The bank had been under intense surveillance by the authorities since autumn 1989, and in October 1990 a restructuring programme was drawn up which included a capital injection of FIM 1.8 bn from the owners, a group of savings banks. However, this programme was not sufficient. In September 1991, Skopbank faced an acute shortage of liquidity. Bank of Finland took control of Skopbank with immediate effect, in order to retain confidence in the Finnish banking system. However, existing shareholders were not wiped out completely. Quite atypically for a central bank, Bank of Finland injected substantial equity capital into Skopbank. The bank's bad assets were transferred to two separate, newly established asset management companies ("bad banks") owned and capitalised by the central bank. Bank of Finland sold its shares in Skopbank to the Government Guarantee Fund (GGF) (see below) in June 1992. In total, the central bank used around FIM 15 bn (3.0% of GDP in 1991)¹¹ in the operation, of which 4 bn FIM was not recovered. The central bank lost a further FIM 0.9 bn in foregone interest income. GGF also bought the shares of the existing private owners for a nominal sum. The owners thus took a hit, but did receive something. Skopbank continued to operate, but in late 1998 the government decided to start winding up the bank.

The take-over of Skopbank by the central bank was clearly an ad-hoc measure. The central bank's injection of equity was due to the lack of alternative

⁸Of the four largest Norwegian banks, it was mainly Den norske Bank, Christiania Bank and Fokus Bank (all commercial banks) that experienced serious problems. However, the largest savings bank and third largest private bank, Union Bank of Norway, also received some support in the form of government purchases of primary capital certificates.

⁹Although our discussion is fairly detailed, it is far from complete. See references for a fuller picture.

¹⁰In this section we draw extensively on Nyberg and Vihriälä (1994). Other sources include Koskenkylä (1994 and 2000), Halme (2002), Drees and Pazarbaşıoğlu (1998) and Stortinget (1998).

¹¹The FIM/USD exchange rate was 4.15 at the end of 1991, and 5.23 one year later. FIM 15 bn thus equals USD 3.6 bn at the former rate.

authorities in Finland with the necessary competence and financial resources to handle the situation at the time. Later, the Finnish government approached banking problems more systematically. All political parties were committed to the crisis handling (although the precise measures were debated). Three measures can be highlighted:

First, in March 1992 the government provided the banks with a total capital injection of FIM 8 bn, in order to increase bank capitalisation and avoid a credit crunch. It was offered to all banks, and virtually all banks applied and received a share. The capital injection was made in the form of preferred capital certificates, which could be converted into voting stock if certain conditions connected to repayment and bank solvency were violated. However, conversions did not take place. It can perhaps be argued that capital support in this form represented a subsidy to the existing shareholders.

Second, the GGF was established in late April 1992 as an operational crisis management institution. The fund was financed over the state budget (i.e. subject to parliamentary approval), and its actions were subject to governmental approval. Support was given on transparent terms, and in the form of share capital, capital notes and guarantees. In theory, the GGF could give support either directly or indirectly through the security funds administered by the banking groups. However, support was usually given directly. Furthermore, financial support was given as part of a programme which also included conditions such as balance sheet restructuring, cost cutting, management changes and improvements in internal controls.

Third, the Finnish government announced in August 1992 that the stability of the Finnish banking system would be secured under all circumstances. In January 1993, this promise was confirmed and made more explicit by parliament. It guaranteed that Finnish banks would be able to meet their commitments on time under all circumstances. This thus amounted to a blanket creditor guarantee. However, equity holders were not protected. The guarantee was maintained for more than six years, until December 1998.

Support from the GGF was given in four instances, focusing primarily on the savings banks sector (and related banks) where the largest problems were. First, the GGF acquired Skopbank from the central bank in June 1992. Second, in the same month it decided to support 41 savings banks that were to merge into the *Savings Bank of Finland* (SBF). Support was given in the form of shares, preferred capital certificates and loans. In total, FIM 14.5 bn was used. Stringent conditions were set for the support. Owners of the merging savings banks, which were primarily savings bank foundations, lost virtually all their capital. As part of the programme, the SBF was turned into a joint stock company, of which the GGF held most of the voting stock. The bank also had to reduce risk-taking and the size of its balance sheet, and cut costs by reducing staff and branches. However, many parties in Finland, not least SBF's competitors, felt it was unfair that the SBF should be allowed to compete in

the banking market while receiving so much government financial support. In addition, there was a need to reduce excess capacity in the banking sector. It was thus decided to split the SBF into four parts and sell it to competitors of the bank. As a result, the savings bank sector was greatly reduced. The non-performing assets were transferred to an asset management company, Arsenal Ltd, owned and capitalised by the GGF and the state.

Third, the GGF conditionally agreed to manage the problem loans in *STS-Bank*, a troubled small commercial bank that had recently been organised as a savings bank. The majority of the shares in STS-Bank had earlier been bought by KOP, a large commercial bank, at market prices (which were low). This purchase was part of a restructuring plan that in the end was not accepted by parliament. In the event, good assets were transferred to KOP and bad assets remained in STS-Bank. STS-Bank was thus owned by KOP, but was effectively a "bad bank" managed by the GGF.

Fourth, the GGF provided guarantees in connection with the recapitalisations of KOP, the Union Bank of Finland and the security fund of the co-operative banks. The guarantees were not utilised.

3.2 Norway¹²

In Norway, the first major sign of crisis surfaced in the autumn of 1988, when Sunnmørsbanken, a medium-sized commercial bank, was hit by loan losses and lost more than 25% of its equity capital. The Commercial Banks' Guarantee Fund (CBGF) guaranteed all claims on the bank, and it was later merged with Christiania Bank. Shortly afterwards it became clear that two regional savings banks had lost all their equity. The Savings Banks' Guarantee Fund (SBGF)¹³ gave capital support by buying primary capital certificates, and the banks were later merged into Sparebanken Nord-Norge. The central bank, Norges Bank, provided liquidity loans, on which it suffered losses of NOK 0.5 bn as part of a resolution package coordinated by the authorities. In 1989, Norion Bank, a small commercial bank, also lost its equity capital and was placed under public administration. All non-bank depositors were fully compensated. However, other bank creditors (including Norges Bank) only received a dividend of 70%.

During 1989–90, a further 11 banks, all local or regional savings banks, received support from the SBGF. The banks were merged with larger, still solvent banks. The SBGF issued guarantees or infused capital to facilitate the mergers. The SBGF considered this to be a cheaper solution than to liquidate the banks. Thus, until the winter of 1990–91, the crisis was handled by the

¹²In this section we draw heavily on Karlsen (1998) and Wilse (1995).

¹³Both the CBGF and SBGF were (and still are) privately funded through annual contributions from member banks. Membership in the relevant fund is compulsory for Norwegian banks. Under normal circumstances, the board of each of the funds consists of five members from the participating banks and two members from the authorities. The banks thus hold the majority of the board.

banking sector and the private guarantee funds (capitalised by the banks). No government contributions other than temporary liquidity support and the above mentioned loss of NOK 0.5 bn were given at this time. However, by then the guarantee funds had lost a lot of their capital, and increasing bank losses during 1990, also among the largest commercial banks, indicated that the funds' resources were soon to be exhausted.

The government thus proposed in January 1991 the establishment of a crisis management institution, the Government Bank Insurance Fund (GBIF), with a capital of NOK 5 bn (0.6% of GDP in 1991).¹⁴ The GBIF was an independent legal entity, but was obliged to put cases of particular importance to the Ministry of Finance before a decision was made. Initially, the mandate of the GBIF was to provide loans to the two private guarantee funds to enable them to perform their roles. Conditions could be imposed on both the guarantee fund and the bank that benefited from the support, with the intention of helping the bank to improve its earnings and capital position. During 1991, a further 8 small to medium sized banks received support from the two private funds.¹⁵ However, in the autumn of 1991, it became evident that the debt burden of the two funds would become unsustainable. Capital support from the GBIF was thus increasingly injected directly into problem banks.

After the establishment of the GBIF, a division of responsibility was established whereby Norges Bank contributed loans when these institutions experienced liquidity problems, but where underlying solvency was satisfactory, while the GBIF provided solvency support. The liquidity loan quota reached its peak of NOK 32 bn in autumn/winter of 1991–92. The highest amounts drawn were then about NOK 25 billion, see the appendix in Moen (2003) prepared by Henning Strand.

In the autumn of 1991, *Christiania Bank* and *Fokus Bank*, the second and third largest commercial banks, recorded large loan losses and needed capital support. *Den norske Bank*, the largest commercial bank, also suffered significant losses. Assets in these three banks represented 54% of total assets in the banking sector in 1991. The crisis had thus reached systemic proportions. Against this background, the parliament supported a government package which included an increase in the capital of the GBIF of NOK 6 bn and the establishment of the Government Bank Investment Fund (GBF) with a capital of NOK 4.5 bn. The purpose of the GBF was to contribute subordinated capital to banks based on commercial evaluations. Banks that were not (yet) in crisis were often unable to raise capital in the private market due to a general lack of confidence in banks. The GBF was thus to participate together with private investors in these banks'

¹⁴The NOK/USD exchange rate was 5.98 at the end of 1991. Thus NOK 5 bn equals USD 0.84 bn.

¹⁵In total, the CBGF made payments to crisis banks of NOK 7.2 bn, of which NOK 2.5 bn was financed with support loans from the GBIF. The SBGF made payments of NOK 3.9 bn, of which NOK 0.5 bn was financed with support loans from the GBIF. In comparison, the GBIF made direct payments of NOK 13.2 bn (source: Wilse, 1995).

issues of capital instruments. Amendments were also made to the banking law, enabling the government under certain conditions to write down a bank's shares to zero. This ensured that share capital really was written down to the extent that capital was lost.

It was soon realised that Christiania Bank and Fokus Bank had lost their entire share capital.¹⁶ The share capital in Den norske Bank was written down by 90% according to losses. The banks needed more capital, but private investors were unwilling to invest. All three banks thus received a substantial capital infusion from the GBIF at the end of 1991. Conditions were established regarding balance sheet restructuring/downsizing, cost cuts and other measures to improve results. Share capital was written down to cover estimated losses. In both Christiania Bank and Fokus Bank the share capital was written down to zero by government decision (after shareholders had refused to do so). The existing shareholders thus did not receive anything for their shares, and the GBIF became the sole owner of the two banks. The boards and the top management were replaced. The banks received further capital support from the GBIF in 1992.

In Den norske Bank, which still had private owners at this time, the injection from the GBIF was made in the form of preference capital. This capital ranks between (ordinary) share capital and subordinated debt, and could be converted into shares *on the GBIF's notice* (which was later done). Support in this form would ensure that the bank's shareholders would bear all losses as long as the share capital still had any value according to the bank's accounts. In the spring of 1992, the GBIF underwrote an issue of preference shares that largely became effective. Late that year, in connection with further capital infusions from the GBIF, it was decided that the bank's old shares would be written down to zero according to losses.

The Norwegian authorities did not issue a blanket guarantee. However, spurred on by the crisis in Christiania Bank and problems in other banks, the Ministry of Finance announced on 14 October 1991 that the government would implement the necessary measures to secure confidence in the Norwegian banking system. On the same day, Norges Bank announced that it would secure the necessary supply of liquidity to Christiania Bank and the rest of the banking system. Later the same month, the government announced that it would implement the necessary measures to secure depositors and other creditors of Christiania Bank against losses and to ensure confidence in the Norwegian banking system in general. Norwegian banks' conditions improved markedly in 1993. With the exception of problems in Oslobanken, a small commercial bank which was later liquidated, the banking crisis was over.

After the banking crisis, the government has gradually sold its bank shares.

¹⁶This conclusion was questioned by certain quarters, not least former shareholders. However, a commission established by parliament has later supported it, see Stortinget (1998) or Appendix A.

During the autumn of 1995, all the shares in Fokus Bank were sold in a public issue. The bank was later bought by Danske Bank from Denmark. The shares in Christiania Bank were sold more gradually. For several years it was government policy to keep at least one-third of the shares in the bank. However, an offer from the pan-Nordic group Nordea for the remaining shares (35%) was eventually accepted and Christiania became part of this group (as a subsidiary of the parent bank in Finland) in 2000. Similarly, shares in Den norske Bank were gradually sold. The government now holds 34% of the shares in DnB NOR, the result of a merger between Den norske Bank and Union Bank of Norway in late 2003/early 2004. The government policy is to keep the ownership share at 34%. This floor, which represents a negative majority, is partly motivated by a wish to keep head office functions and financial competence in Norway. The government has throughout stayed away from the daily running of the banks it had/has an ownership position in. However, it is fair to say that the political environment in Norway has been more sceptical to domestic mergers and acquisitions (with a resultant increase in market concentration) than governments in neighbouring countries. As a result, Norwegian banks may not have been able to implement structural changes that they deemed favourable for their long-term development.

3.3 Sweden¹⁷

The first Swedish bank in difficulties was *Första Sparbanken*, the country's largest savings bank, which reported heavy loan losses and inadequate capital levels in the autumn of 1991. The Swedish government provided a lending guarantee of SEK 3.8 bn to the savings bank foundation that owned the bank. In the spring of 1992, the guarantee was changed into a loan, and an additional loan of 4.2 bn was given to the foundation. The interest rate on the loans was below market rates. In total, these interest subsidies represented around SEK 1 bn. As part of the solution, it was decided to merge the bank into the new Sparbanken Sverige, together with several other savings banks.

Later in the autumn of 1991, *Nordbanken*, the country's third largest commercial bank, reported heavy loan losses and the need for more capital. At the time, the Swedish state owned 71% of the bank's equity. The state thus faced these problems both as a majority owner and as a body responsible for ensuring financial stability. The state chose to guarantee an equity issuance of SEK 5.2 bn, of which it bought an amount equivalent to SEK 4.2 bn. As a result, the state's ownership share increased to 77%. In the spring of 1992, problems reoccurred. The parliament authorised the use of SEK 20 bn (1.3 % of GDP in 1992)¹⁸ to restructure the bank (the sum was later increased), of which 2 bn

¹⁷In this section, we draw heavily on Ingves and Lind (1996, 1998). Other sources include Andersson and Viotti (1999), Bäckström (1998), Daltung (2004), Finansdepartementet (1994, 1995) and Jennergren and Näslund (1998).

¹⁸The SEK/USD exchange rate was 5.56 at the end of 1991. One year later it was 7.06 and two years later it was 8.34. SEK 20 bn thus equals USD 2.83 bn at the 1992-rate.

was used to buy out the private shareholders. The share price in this operation was equal to the share price in the earlier equity issue. Existing shareholders were thus not penalised. This is partly due to the fact that the government felt responsible for the bank's problems as the major shareholder. The government also feared a lawsuit from private shareholders on the grounds of misrepresentation of the financial situation in Nordbanken in connection with the equity issue in 1991. As part of the restructuring programme, most of the bad assets were transferred to a separate asset management company, Securum. Securum was capitalised by the state with equity capital of SEK 24 bn and loan guarantees of 10 bn.

In April 1992, problems were experienced in *Gota Bank*, the fourth largest commercial bank (but significantly smaller than Nordbanken). Its owners, an insurance company, had earlier injected new capital, but now announced that it was only willing to inject a limited amount of capital in a planned equity issue. This led to a significant loss of investor and creditor confidence. The authorities considered that the future prospects of Gota Bank as an independent entity were not viable. The chosen solution was to transfer bad assets to an asset management company, Retriva, which was capitalised (by SEK 3.8 bn) by the state. The healthy part of the bank received SEK 20 bn capital support from the state, and was offered to other banks. In the end, the state-owned Nordbanken was the only "bidder", and it took over Gota Bank at the end of 1993. Former private shareholders in Gota Bank did not receive anything for their shares.

Until the summer of 1992, problems were significant but not yet systemic, and were treated in an ad-hoc manner. However, from then on, credit losses increased significantly due to the economic recession and collapsing property prices. The interest rate and currency turmoil in the autumn of 1992 was the final straw. Funding costs increased and foreign creditors withdrew their foreign currency funding. By then, all the seven largest banks, representing 90% of total banking assets, were hit by heavy credit losses.

Thus from the autumn of 1992, the Swedish authorities treated the crisis as a systemic crisis and implemented several additional measures. The measures had broad political support. This contributed to their credibility, as the market knew that the measures would not change/be withdrawn if there was a change of government. An immediate concern of the government, a potential liquidity crisis, was avoided mainly through two measures. First, the government announced on 24 September that it would propose to parliament that the state guaranteed that all banks would be able to meet their obligations in a timely manner. This amounted to a blanket creditor guarantee (equity holders were not covered), and was later supported by parliament. The guarantee was maintained until July 1996. Second, the central bank, Riksbanken, used a large share of its foreign currency reserves as liquidity support through currency deposits in the banks. At the peak, foreign currency equivalent to SEK 57 bn was utilised. In addition, banks could borrow SEK freely without secu-

rity in Riksbanken's normal liquidity system (due to the government blanket creditor guarantee, Riksbanken faced no credit risk). These measures resolved the immediate liquidity problems.¹⁹

A crisis resolution agency, Bankstödsnämnden (BSN), was founded and started operations in May 1993. The task of the BSN was to implement the public sector's capital support to crisis banks. The guiding principle was that support was open to all banks and on the same criteria, based on applications from the individual banks. The BSN would then evaluate the size of support needed - based on estimates of loan losses - and whether the bank would eventually recover as an independent entity. If the latter was not the case, more severe measures, including liquidation or a take-over (of parts of the bank) by another bank, had to be considered. Gota Bank is an example of the latter. Support was transparent, and given in the form of equity capital, guarantees and loans. Several conditions regarding risk reductions, improvement of internal controls and risk management, cost-cutting etc. were linked to the support. All large banks apart from Svenska Handelsbanken applied for support. However, S-E-Banken and Sparbanken Sverige later withdrew their applications and issued new equity (bought primarily by existing owners) instead. Föreningsbanken received a guarantee that the state would buy preference shares if the capital adequacy in the bank fell under certain levels. The guarantee was not utilised.

Overall, 98% of the state's capital support was directed to two banks, Nordbanken and Gota Bank. However, these and other measures taken, including the blanket creditor guarantee and the various forms of liquidity support, benefited all banks as it improved their liquidity position and increased their opportunities for attracting new loan funding and equity capital. As a consequence, many banks did not need public capital support.

The BSN represented the state as the owner in Nordbanken and Gota Bank. The parliament had ordered that the state should not interfere in the daily running of the banks as long as the banks fulfilled certain solvency criteria. However, an important task for the owner representative was to make sure that the conditions that were set in connection with the granting of state support were met. Already from the start of the state ownership, the plan has always been to privatise Nordbanken as soon as it could be done in an economically viable way. However, this plan has progressed rather slowly and gradually. In 1995, the state sold 34.5%, and further shares were sold in 1996. At the end of 1996, the state ownership share was 59.4%. Later, Nordbanken entered the pan-Nordic group Nordea. The Swedish state currently (end of 2003) has an ownership share of 19% in Nordea, and is still its largest shareholder.²⁰

¹⁹ There were also two other instances of central bank support which are somewhat "related" to a "lender of last resort" role. First, during the short period in the autumn of 1992 of extremely high interest rates (the key rate reached 500%), Riksbanken bought newly issued bonds from a large mortgage institution. Second, during the same period, Riksbanken let banks borrow money through the normal liquidity system at subsidised rates.

²⁰ The fact that the Swedish state has kept such a significant ownership of a large commercial

3.4 Comparing the three countries

When comparing the handling of the three crises, the perhaps most obvious observation is that the public sector played a very prominent role both in terms of emergency measures and longer-term measures (to improve bank profitability) in all three countries. The measures had broad political backing, which enhanced their credibility. Another common theme is that measures were rather ad hoc at first, before it became clear that the crises were systemic. A reason is that there was a lack of relevant regulation, institutions and systems to deal with banking crises before the crises actually happened. Later on, more systematic approaches were applied. Table 2 compares the main features of the crisis resolutions in the three countries.

Blanket creditor guarantees

Finland and Sweden issued blanket creditor guarantees (shareholders were not covered). Norway did not. Although the purpose of the above-mentioned statements from the Norwegian authorities was the same – to secure confidence in the banking system – there was no juridical guarantee to bank creditors in the same way as in Sweden and Finland.

A blanket creditor guarantee is a short-term cure with potential long-term problems in the form of moral hazard, because creditors face no credit risk and so have no incentive to monitor or discipline banks. There is good reason to believe that the size of the problems and particularly the level of foreign funding in Finland and Sweden made the blanket creditor guarantees necessary. However, the guarantees were maintained until 1996 in Sweden and 1998 in Finland. Four and six years respectively is a long time, perhaps too long given that the banking sectors had clearly recovered some time before the guarantees were lifted. However, it is possible that the two governments wanted to make absolutely sure that they did not end up in a situation where they had to reinstate the guarantees shortly after they had been lifted.

Lender of last resort

In all three countries, the central bank provided liquidity to domestic banks. However, only Norway gave emergency liquidity support, *in a strict sense*, to *individual* banks. The Swedish central bank provided SEK-liquidity freely through its normal operations. In addition, it injected a significant part of its foreign

bank over so many years is often overlooked by the international literature on the Nordic banking crises. In general, the pace of privatisation is dependent on several factors. One factor is the success of other state privatisations. In Sweden, the calamity of the privatisation of Telia, a large telecom company, may have delayed matters. The Finnish state is the major shareholder (40% ownership share) of Sampo, a large Finnish financial group, and has a 0.4% ownership share in Nordea. However, this ownership position is not a direct result of the Finnish banking crisis.

Table 2: Crisis resolution measures

	Finland	Norway	Sweden
Emergency measures			
Introduction of a blanket creditor guarantee	Yes	No	Yes
LLR-assistance (% of annual GDP at peak)	No, not in a strict sense	Yes (3.6%) – some losses	No, not in a strict sense
Institutional measures			
Creation of a separate bank restructuring agency	Yes	Yes	Yes
Creation of asset management companies	Yes	No	Yes
Restructuring measures			
Private sector merger or purchase & assumption	Yes	Yes	Yes
Support from private deposit insurance funds	Yes, but limited	Yes, in early stages	No
Liquidation (% of banking system assets)	No	Yes (1%)	No
Government open bank assistance	Yes	Yes	Yes
Public take-over	- Skopbank - Savings Bank of Finland*	- Den norske B. - Christiania B. - Fokus Bank	- Nordbanken** - Gota Bank
Shareholders eliminated or diluted	Yes, but mixed	Yes	Yes, but mixed
Losses to creditors	No	No, with one minor exception	No
Managers and board sacked	Yes	Yes	Yes
Strict targets for balance sheet restruct., impr. risk management and cost cuts	Yes	Yes	Yes
Other measures			
Steps to improve prudential supervision and regulation	Yes	Yes	Yes
Description of resolution			
Speedy	Yes	Yes	Yes
Transparent	Yes	Yes	Yes

Source: Nordic central banks and own evaluations based on a variety of sources. Format inspired by Lindgren et al. (1999).

*SFB was newly established, based on the mergers of problem savings banks.

**The Swedish state had a majority share in Nordbanken before the crisis.

exchange reserves into the banks in the form of foreign currency deposits. However, although they represented liquidity support, neither of these operations are lender of last resort-assistance in a strict sense. The same applies to Bank of Finland's take-over of Skopbank.

Resolution agencies and "bad banks"

As regards institutional measures, all three countries established a bank restructuring agency, controlled by the government and financed over the state budget.

Finland and Sweden established separate companies ("bad banks") that managed non-performing assets in some crisis banks. The purpose was to enable the healthy parts of the problem banks to continue normal operations (Koskenkylä, 2000), and let specialists work on recovering as much from bad assets as possible. Norway did not use this approach. However, similar structures were established within some of the banks.²¹

New regulation for write-downs

Both Norway and Sweden introduced regulations that allowed the government to write down a bank's equity capital against losses. Apart from ensuring that equity capital was valued correctly, this was done to make sure that existing shareholders could not delay a rescue operation and thus put themselves in a bargaining position against a government that was concerned with systemic stability.

Sweden introduced a legal framework where the correctness and legality of the write-downs could be tested. Norway did not. As a consequence, there has been considerable debate over several years about whether the write-downs in Norway were correct or not (see Stortinget, 1998). That being said, unhappy investors did have the opportunity to promote their cases through the regular legal channels.

The role of deposit guarantee funds

In Norway, and to a small extent in Finland, private deposit guarantee funds provided support in the first part of the crises. Particularly in Norway, the guarantee funds played an active part in facilitating solutions, often through capital support and/or guarantees to healthier banks that took over or merged with problem banks. In Sweden, there was no deposit guarantee scheme and consequently no guarantee funds.²²

²¹ Vale, Chapter 1 in this publication and Karlsen (1998) discuss why Norway did not choose to establish separate asset management companies. For a general discussion of advantages and disadvantages of using such companies, see e.g. Klingebiel (2000).

²² A deposit insurance scheme was introduced after the crisis in 1995.

Liquidations, open bank assistance and government take-overs

Only two small banks (both Norwegian) were liquidated during the three banking crises. It is difficult to liquidate large banks for a number of reasons, not least systemic. However, there may have been other, smaller banks in all three countries that could have been liquidated. Governments in all three countries provided some open bank assistance.²³ The Finnish capital injection of FIM 8 bn in 1992 and the Swedish support loans to Första Sparbanken in 1991-92 are perhaps the clearest examples. However, in the case of large banks, government take-overs were more common. This is partly due to the fact that the sheer scale meant that private solutions were more difficult to facilitate. Indeed, governments always tried (in vain) to find a private solution before a public take-over was decided. Government ownership was the largest in Norway, where the state took over the country's three largest commercial banks.

Consequences for existing shareholders, creditors and bank leadership

In Norway, existing share capital was written down to zero before the state took over the three large banks. In Finland, existing (private) shareholders did take a hit in Skopbank, but were not completely wiped out. The shareholders of other banks benefited from open bank assistance. The same applies for Sweden's Första Sparbanken. Furthermore, private shareholders did not suffer losses in Nordbanken. However, that was perhaps a special case due to the large initial state ownership. Existing shareholders in Gota Bank lost everything. As regards creditor losses, the lack of losses in Finland and Sweden is related to the blanket creditor guarantees. With one minor exception, no creditors suffered losses in Norway either. The boards and top management of crisis banks were largely replaced.

Supervisory changes

The supervisory authorities have been given significantly more resources and the competence of their staff is much higher now than before the crises. In addition, the supervisory authorities have adapted their practices after the crises, with more focus on internal controls and risk management. The legal framework and operational procedures for crisis handling have been strengthened. Due to the increase of cross-border operations, co-operation between Nordic supervisory authorities and central banks is evolving. Systemic stability considerations receive more attention, e.g. through the production and publication of financial stability reports by the central banks and some supervisory agencies. In 1997, the central banks in Norway and Sweden were the first central banks world-wide

²³Open bank assistance means that government provides financial assistance without taking over the bank or eliminating entirely the current shareholders' position (Hoggarth, 2002).

to publish financial stability reports.²⁴

3.5 Structural changes and post-crisis bank performance

As a result of crisis restructuring, the number of savings banks fell quite dramatically in Finland. The number of savings banks also decreased in Norway and Sweden, but more in line with the long-term trend. Swedish co-operative banks disappeared altogether. All three governments used their position – both as creditor and as bank owner – to force through cost cutting and other efficiency measures in order to improve results in their respective banking sectors. The three banking sectors were clearly suffering from over-capacity before the crises, and the crisis resolutions contributed to the consolidation process, see figures 10-12.

Particularly Finnish banks went through a striking transformation.²⁵ The fact that the Norwegian banking sector went through fewer structural changes (i.e. mergers and acquisitions) both in connection with the crisis resolution and in the years afterwards, has probably contributed to Norwegian banks being somewhat less cost efficient than Finnish and Swedish banks.²⁶ Less domestic consolidation in Norway is partly due to the rejection by government (in the capacity as owner or regulator, or both) of some domestic structural initiatives. This may also have contributed to the eventual take-overs of Christiania Bank and Fokus Bank by other Nordic banks.

Judged by the recovery time from the peak of the crises, banks returned to profitability quite rapidly, particularly Swedish and Norwegian banks.²⁷ Following Dzobiek and Pazarbaşıoğlu (1997), we can separate improvements in bank performance into stock and flow improvements. Stock improvements emanate chiefly from financial restructuring operations (i.e. balance sheet restructuring), while sustainable flow improvements (income, costs and results) result from operational restructuring measures. Dzobiek and Pazarbaşıoğlu find that countries have been more successful in addressing stock problems than flow problems. They point out that achieving positive flow effects is more difficult and takes more time than achieving positive stock effects. Furthermore, they find that the design of restructuring packages typically focus more on financial restructuring measures at the expense of operational restructuring measures.

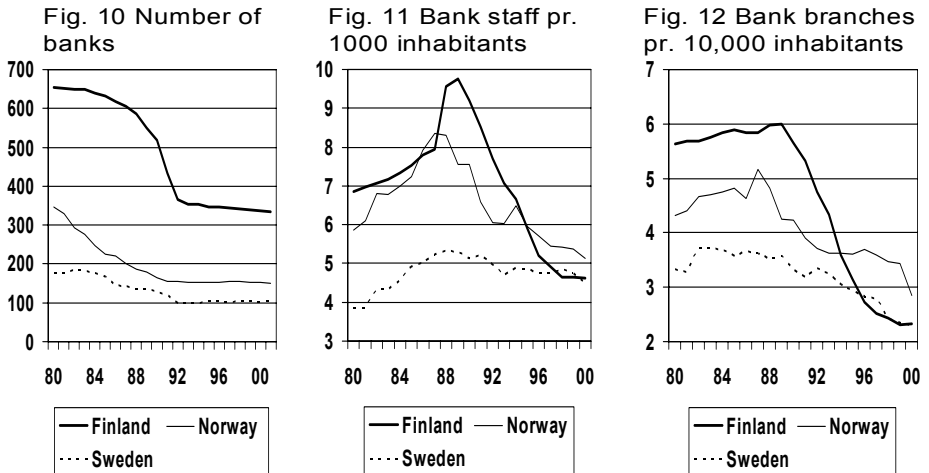
²⁴The Bank of England has published its Financial Stability Review since 1996. However, the first few years the publication was a collection of articles and did not contain a financial stability outlook.

²⁵Indeed, this had contributed to Finnish commercial banks achieving a cost/income-ratio in the region of 53-60% and a return on equity in the region of 18-26% in each of the years 1997-2000 (source: Bank of Finland). These are very competitive numbers in an international context.

²⁶However, all three banking sectors are clearly more “efficient” than the Danish banking sector (Koskenkyla, 2000), possibly because there was no major crisis in Denmark with a subsequent need to cut costs.

²⁷If judged by the recovery time from the first year of negative profits, the recovery was not that quick in Norway and Finland.

However, banks in the three Nordic countries seem to have achieved both stock and flow improvements. Again, this is probably due to the fact that the Nordic restructuring programmes put a lot of weight on cost cuts and other operational restructuring measures.



Source: OECD (2002a, 2003). Note: Excl. foreign banks

3.6 How successful were the resolutions?

Overall, were the Nordic resolution strategies successful? Apparently so, as creditors' confidence in the banking systems was quickly restored, banks returned to profitability fairly quickly and the impact on the economies of the banking problems seemed fairly modest. However, it is possible that this was mainly due to the quick economic recovery and not the resolution strategies. The fact that the Nordic crises, albeit significant, were much smaller than a number of other crises (e.g. the Asian crises), should also be taken into consideration when evaluating the success of the resolution strategies.

A perhaps more accurate question is how the handling of the Nordic crises measures up to best practice. Although there is consensus in the literature that different crises should not necessarily be resolved in the same way (see e.g. OECD, 2002), some guidelines for best practice exist:

- IMF (1998) points out: "Studies of banking crises have shown [...] that countries that are quickest to diagnose the underlying problems, assess losses and take measures to ensure macroeconomic stability and restructure their banking sectors are generally the most successful in recovering from the crisis."

- Hoggarth (2002) points out that "key principles in any restructuring are that only viable institutions are kept open; the costs of restructuring are transparent and those to taxpayers minimised; losses are allocated to existing shareholders, creditors and perhaps large depositors; the resolution preserves incentives for new private capital and discipline is maintained on bank borrowers".

In most respects, the crisis resolutions in the three Nordic crisis countries followed (what has later become) best practice. All three countries handled their respective crisis quickly and resolutely and in a transparent way. Government support had severe strings attached which ensured that costs were cut in order to return the banks to profitability. Private shareholders were largely "whipped", particularly in Norway. As we shall see in the next section, fiscal costs were reasonably controlled. However, with one minor exception, creditors were not disciplined.

I will end this section with some quotes from Allen and Gale (1999), who compare the handling of the banking crises in Norway and Japan. They argue that "the Norwegian government's prompt action in restoring the banking system meant that it was quickly able to revert to performing its normal economic function. [...] The return to robust economic growth in turn reinforced the recovery in the banking sector." Furthermore, they point out that although the details of the handling were different in the Nordic countries, "the effect was the same in the sense that the macroeconomic impacts of the banking collapse were short-lived and the economies resumed growing again quite quickly [...]"²⁸

4 What were the fiscal costs of the resolutions?

4.1 Fiscal costs and methodology

The choice of resolution methods can influence both the economic ("output") costs and fiscal costs of a crisis. However, first we need to define these types of costs.

Output costs and fiscal costs

If the banks' ability to process payments and intermediate credit is reduced, a banking crisis may reduce income and wealth in an economy as a whole. Indeed, the danger of such situations occurring - and the resulting economic or "output" costs - are often the reason why governments choose to intervene to resolve a crisis. The quicker the banks' ability to perform their core functions is restored,

²⁸Quotations taken from Steigum, Chapter 2 in this publication.

the smaller the output costs.²⁹³⁰

However, the focus here is on another type of costs: fiscal costs. They are the financial costs that the public sector incurs when it attempts to resolve a crisis. More precisely, they "reflect the various types of expenditure involved in rehabilitating the financial system, including both bank recapitalisations and payments made to depositors [...]" (Hoggarth and Saporta, 2001).

Hoggarth and Saporta (2001) point out that estimates of fiscal costs may simply measure a transfer of income from current and future taxpayers to bank "stakeholders" rather than the overall impact on the economy of a banking crisis. Note also that the relationship between fiscal and output costs is not clear. Intuitively one may think that they are positively related. However, large fiscal costs may be incurred to limit the effects of a crisis on the economy. On the other hand, if little is done, fiscal costs are small whereas output costs may be large. However, these qualifications do not mean that the size of fiscal costs is uninteresting. Indeed, positive fiscal costs means that the taxpayer takes a hit and that fewer resources are available for other government expenditure.

The measurement of fiscal costs focuses on public expenditures in a direct sense. Effects on the tax base of the crisis are not included. Neither are various costs to taxpayers, such as costs from increases in banks' interest rate margin as a result of the crisis.³¹ Private sector outlays, such as costs to depositors, other creditors (including private deposit insurance funds) and borrowers that are not compensated by the public sector, are also excluded.

It is also important to distinguish between gross and net costs. This is not always done in the literature. Gross fiscal costs are total public outlays. Net costs are gross costs minus income from re-privatisation and repayments (e.g. due to loan recoveries). Both income already received and an estimate of future income from e.g. the future sale of state-owned shares should be included. (Obviously, the latter is difficult to estimate, but an attempt should be made.) It follows that if the government manages to recoup a significant share of its outlays, net costs will be much smaller than the gross costs.

Both gross and net costs depend on the size of the crisis, how it is resolved and the speed and strength of the economic and banking sector recovery.³² All else equal, gross costs would be expected to be larger in a severe crisis than in a more modest one. But the size of the problems can also affect *net* costs,

²⁹Note that if the method of resolution increases moral hazard (e.g. by being too lenient towards important stakeholders in the banks), this may increase the likelihood of future crises, representing additional output costs.

³⁰See Hoggarth and Saporta (2001) for a discussion of output costs and estimates of output costs in various countries, including Finland, Norway and Sweden. Schwierz, Chapter 4 in this publication, contains a new estimate for Norway, whereas Jonung and Hagberg (2002) focus on Finland and Sweden.

³¹Note, however, that the net interest margins in the Nordic countries have been steadily falling since the banking crises.

³²For a discussion of these factors in the context of the Asian crisis, see Lindgren et al. (1999).

as some resolution methods may not be available if a crisis is very large. For example, it is more difficult to arrange private solutions through mergers and acquisitions if the crisis bank is very large. On the other hand, a large banking crisis may also be difficult to handle for a government if it is in a weak fiscal position. More generally, fiscal costs are influenced both by the availability of potential merger partners/private investors and the instruments chosen for public support. Support given through equity capital has low priority if the bank does not regain profitability, but there is also a potential "upside" in the form of future share price increases if the bank recovers. Loans have a higher priority and may be preferable if the lender for some reason (e.g. political) does not want to become a holder of bank equity. However, loan support does not offer any "upside".

Methodological issues

Table 3 presents estimates of gross and net fiscal costs for Finland, Sweden and Norway. However, there are important issues regarding estimation methodology that should be clarified before we discuss the numbers.

First, what type of costs should be included? The estimates in Table 3 include both direct payments and interest rate subsidies. Norges Bank's loan losses and interest rate subsidies on deposits from Norges Bank are thus included.³³ However, the cost of state guarantees given to individual banks that were not utilised are not included.³⁴ Clearly, the guarantees may have had a value to the banks and represented a cost for the state *ex ante*. However, the calculations here are *ex post* and these guarantees are thus not included. The blanket creditor guarantees in Sweden and Finland, however, did indeed represent an *ex post* gift to the owners of some crisis banks. Protected by the guarantee, many banks were able to recover without a public take-over, and the value of the owners' shares increased. Jennergren and Näslund (1998) point out that Swedish taxpayers incurred an *ex post* loss on the blanket creditor guarantee compared to an alternative strategy of nationalisation. However, it is difficult to estimate this loss. Note also that we do not include costs of increases in moral hazard. Blanket creditor guarantees may reduce investors' incentive to monitor banks and thus reduce market discipline. This may increase the likelihood of future crises, which over time increases fiscal costs.

Second, fiscal costs should be calculated on a net present value (NPV) basis. Expenditures and repayments connected with crisis resolution usually happen over a period of time, and any repayments will occur some time after the expen-

³³No interest rate subsidy on LLR-loans has been included, as the effect on Norges Bank's results and transfers to the Treasury of supplying liquidity through the LLR-facility instead of the ordinary lending facilities was fairly limited, see appendix in Moen (2003).

³⁴Guarantees of FIM 32 bn were not utilised in Finland (Drees and Pazarbaşıoğlu, 1998). In Sweden, guarantees of SEK19 bn were not utilised (Jennergren and Näslund, 1998).

diture. In a NPV calculation, a calculation date has to be chosen.³⁵ The date may matter e.g. if the state still owns bank shares from the crisis resolution, which is the case for Norway and Sweden, and to a small extent for Finland. As the value of the shares varies over time, so will the calculated value from the future sale of the shares.³⁶ It can also be difficult to decide the time that the crisis started. The timing is important e.g. in the Swedish case, as the Swedish state was a major shareholder in one bank that was hit by the crisis, and the valuation of those shares is obviously dependent on the time chosen.

Third, what discount factor should be used in the NPV calculations? The Swedish calculation uses the 1 year T-bill rate. This is meant to reflect the state's funding cost. The choice of maturity is a simplification, as the average maturity of the state's debt was longer than 1 year during the relevant years (Jennergren and Näslund, 1998). The Norwegian calculation uses two different approaches. The first (main) alternative uses the 1 year T-bill rate plus a 4 percentage point risk premium when the state is still involved in a bank.³⁷ When the state is not involved anymore, the sums are discounted with the 1 year T-bill rate. In the second alternative, the 1 year T-bill rate is used throughout (with a few minor exceptions which are described by Moen in Appendix B in this publication). The question of discount factors is not relevant for Finland, as a present value calculation does not exist.

Finally, when dividing by (nominal) GDP to get comparable numbers, what year for GDP should be used? If it is a present value calculation, then you should divide by GDP in the "base" year. This is what we have done for Norway and the PV calculations for Sweden. However, this rule provides no guidance for "simple sums" (i.e. not PV) calculations. Expenditure and income are typically spread out over several years. Ideally, the sums for each year should be divided by that year's GDP, and then added up. However, this may be difficult to achieve in practice if you have not done the exact calculations of expenditure and income yourself. One alternative is to use a year in the middle of the restructuring programme. Another alternative is to use the year which signals the end of the crisis. As indicated, this may understate fiscal costs. For Finland, we have used a very late version of the latter alternative, mainly to achieve some comparability with the simple sums estimations for Sweden. This arguably underestimates costs in Finland somewhat.

Summing up, the estimation methods used for the three countries are far

³⁵This question may or may not overlap with the question of the time of the end of the crisis.

³⁶However, the increase in share prices over time is significantly smaller in present value terms. We will later return to this issue.

³⁷According to Moen (2002), the 4 p.p. risk premium is the "consensus" average risk premium on listed companies in Norway. We thus assume that the risk premium for the crisis banks is the same as the average risk premium. During the peak of the crisis, market participants clearly thought that there was a very high risk connected with investments in the crisis banks. The premium used in the calculations is thus probably too low for the main crisis years.

from identical. We are thus, to some extent, comparing "apples and pears" here, particularly regarding present value estimates vs. simple ones. However, the numbers do provide some insights. Furthermore, comparing different estimates (e.g. gross vs. net costs and at different points in time) for the same country, where the same estimation methodology has been employed, provides additional insights.

4.2 Fiscal costs in the Nordic countries - differences and explanations

The estimates for Norway are new, see Moen (2003) or Appendix B in this publication for details. Earlier estimates (e.g. Finansdepartementet (1994)) were not complete. The Finnish and Swedish estimates are the latest and best available (see the given sources). Studying the numbers in table 3, we can make a number of observations:

- Resolution costs in the Nordic countries are significant, but low compared with many other crisis countries. Honohan and Klingebiel (2003) point to gross resolution costs of a whopping 55% in Argentina in 1980-82 and 50% in the more recent crisis in Indonesia. They also cite a number of other countries with larger costs. With a couple of exceptions (Japan and South Korea), they are all non-OECD countries.
- Net costs amount to 60% of gross costs in Finland. Thus, 40% of gross costs have been recouped. However, 40% is probably misleadingly high, considering that the difference in the timing of costs and income has not been accounted for in these "simple sums" estimates.
- Comparing the "simple sums" estimates (which are the most comparable of the various estimates), costs are significantly higher in Finland than in Sweden, and in particular, Norway.
- Significantly less of the gross costs were recouped in Finland than in Norway and Sweden.³⁸
- Norway had considerably lower net fiscal costs than Sweden and Finland. The version for Norway with a risk-free discount factor is the most comparable to the Swedish estimate, but the conclusion applies for both versions of discount factors. Furthermore, the conclusion applies for both the 1995- and the 2001-estimate. Although share prices were generally higher in 2001, they were lower (also in present value terms) in 1995 than in 1997, the date for the Swedish calculation. The conclusion is thus robust to differences in share prices.

³⁸For Sweden, the same argument about the timing of costs and income applies. A comparison of present values of gross and net costs is unfortunately not possible, as only net costs are available in this form for Sweden.

Table 3: Fiscal costs

	Gross costs (% of GDP)	Net costs (% of GDP)
Finland		
Simple sums, not present value	FIM 56.6 bn (8.9% of GDP 1997)	FIM 33.0 bn (5.2% of GDP 1997)
Simple sums, not pr. val., including interest rate subsidies given by BoF	FIM 57.5 bn (9.0% of GDP 1997)	FIM 33.9 bn (5.3% of GDP 1997)
Sweden		
Present value pr. 01.07.97, risk-free rate as d.f.	n.a.	SEK 35.0 bn (1.9% of GDP 1997)
Simple sums, not present value	SEK 65.3 bn (3.6% of GDP 1997)	SEK 4.5 bn (0.2% of GDP 1997)
Norway		
Present value pr. 31.12.95	NOK 28.6 bn (3.1 % of GDP 1995)	NOK 8.6 bn (0.9 % of GDP 1995)
Present value pr. 31.12.01	NOK 51.1 bn (3.4% of GDP 2001)	NOK -5.7 bn (-0.4 % of GDP 2001)
Present value pr. 31.12.95, risk-free rate as d.f.	NOK 25.2 bn (2.7% of GDP 1995)	NOK 5.4 bn (0.6% of GDP 1995)
Present value pr. 31.12.01, risk-free rate as d.f.	NOK 39.7 bn (2.6% of GDP 2001)	NOK -13.7 bn (-0.9% of GDP 2001)
Simple sums, not present value*	NOK 22.4 bn (2.0% of GDP in 1997)	

Sources: Finland: net costs: Bank of Finland, gross costs: Drees and Pazarbaşıoğlu (1998), Sweden: Jennergren and Näslund (1998), Norway: Appendix B in this publication and Norges Bank (last row), GDP for Finland and Sweden: IMF International Financial Statistics, GDP for Norway: Statistics Norway.

* Calculated by Norges Bank in order to obtain comparable numbers with Sweden and Finland. Gross costs include direct injections into the banks and support loans to the private guarantee funds by the GBIF, direct injections by the GBF into Den norske Bank, an injection by the parliament into the SBGF and subsidised loans and deposits and losses by Norges Bank.

- Net fiscal costs in Norway were very low in absolute terms, and even negative for the 2001-estimate.

What can explain these findings? As indicated, gross fiscal costs are positively influenced by the depth of the crisis in the banking sector and the level of bank intermediation. As banks in Finland suffered the worst results, and the level of bank intermediation was greater in Finland (cf. figure 6), it is perhaps no surprise that gross resolution costs are greater in Finland than in the other two countries.

However, we also observe that Finland was able to recoup much less of its gross costs than Norway and, to a smaller extent, Sweden. Based on the size of *net* fiscal costs in the three countries, the following issues are worth discussing:

- How did the choice of resolution methods affect net fiscal costs?
- Was the timing of the sale of state-owned bank shares important for the net fiscal costs?

How did the choice of resolution methods affect net fiscal costs?

As noted, support through equity or loans may affect net fiscal costs differently. Government ownership of banks after the crisis was (and still is) more extensive in Norway than in the other two countries. As a consequence, the Norwegian state has been able to gain financially³⁹ on the increase in the share prices of the crisis banks after the crisis. The choice of resolution method and the scale of government intervention are clearly dependent on several factors, of which some may force the government's hand. We will mention two.

First, as all the three largest Norwegian commercial banks were in crisis, the banks were judged to be systemically important and no private solution was possible, the state had to step in. It thus became a major owner by force. In Sweden, the two largest commercial banks did not need government support, and one of the two commercial banks that did receive support was already majority owned by the state before the crisis. Thus, as large an increase in government ownership as in Norway was not needed.

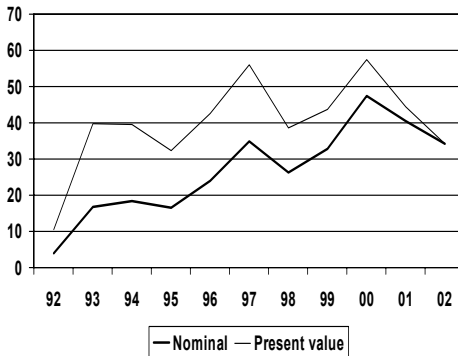
Second, in Finland, the largest problems were in the savings bank sector. A savings bank is not a limited company. One can therefore hardly criticise the Finnish government for not becoming the owner of such banks, although a number of them were merged and converted into a commercial bank. However, Finland did choose to use open bank assistance to some extent.

³⁹As the Norwegian state still holds a large ownership share in Den norske Bank (now DnB NOR), a significant part of the calculated income has not actually been realised.

The importance of the timing of sales

Clearly, the income from the sale of shares is dependent on the development in share prices. In nominal terms, bank shares have increased in value over the years, albeit with a drop since the spring of 2000. However, the differences over time are perhaps not as large as one would think. With an annual discount factor of 10 %, the "present value" share price of DnB would have reached a reasonable level as early as the end of 1993, see figure 13.⁴⁰ At the end of 1995 and 2001, the timing of the fiscal costs-estimates, the present value share price was respectively 19% lower and 12% higher than at the end of 1993.

Fig. 13 Den norske Bank: nominal and present value share price*. NOK



Source: EcoWin and own calculations
 *Basis for PV calculation: end of 2002

The share price thus went up to a reasonable level fairly quickly. Indeed, if we compare the costs the Norwegian state incurred on DnB with the value of its shares, it is possible that the state could have made a profit on its "investment"⁴¹ less than two years after the initial capital injections. From March 1992 to March 1993, the state incurred outlays of NOK 6.4 bn in DnB. Including preference shares that were to be converted to normal shares, the state held around 514 million shares. With income per share of NOK 16.35 (nominal share price of NOK 16.85 minus issue costs of say NOK 0.50 per share), this portfolio was worth NOK 8.4 bn. This thus represents a net profit of NOK 2.0 bn (somewhat lower in present value terms).

We have rather bravely assumed that it would have been possible to sell the

⁴⁰ We assume for simplicity a discount rate of 10%, which e.g. includes a risk-free rate of 6% and a risk premium of 4 p.p. Although this is obviously too simple (and simpler than the actual calculation done for the numbers presented in table 3), such a rate is not completely unreasonable.

⁴¹ "Investment" is perhaps a somewhat misleading word to use, as the government take-overs took place in order to secure systemic stability (and thus limit output costs) after private solutions were exhausted, and not from a normal investing perspective. However, ex post we may look upon the take-overs as investments.

whole of the state's portfolio in one go in a market that in 1993 was rather risk averse and not abundant with available capital. Clearly, it may have been difficult to attract investors. At the very least, it may have been necessary to offer the shares at a significant discount. However, the state could have offered the shares at as low a price as NOK 12.95 and still broken even nominally. The first actual sale (around 10% of the shares) happened in May 1994 at a share price of NOK 16.75.

In general, all the three governments were keen to limit the net fiscal costs of the resolutions, subject to the concern of financial stability. As such, they were not interested in selling shares at fire-sale prices. Rather, they waited at least until prices reached a level which did not seem too far off "underlying value". However, the Norwegian government, and the Swedish government in the case of Nordbanken/Nordea, only started to sell off shares very gradually. They thus kept the majority of their shares even though share prices to a large extent had recovered.

Summing up, net fiscal costs were lower in Norway, and to a lesser extent, Sweden, than in Finland. This is partly due to income from the sale of shares and the value of current portfolios. However, although it is not clear when the market could have absorbed the large amounts of bank shares in question, it is beyond doubt that the shares could have been sold much quicker than what has actually happened, without jeopardising the fiscal consideration.⁴²

Finally, we observed that the 2001-estimate for net fiscal costs in Norway is negative. This means that the Norwegian public sector made a net profit on its crisis support. It may seem that this represents a transfer from old bank shareholders to taxpayers. On the other hand, at the time of the government take-over, losses were larger than the value of the existing share capital. The capital was thus lost. At that point in time, no one knew that the economy would recover so quickly and that some of the bad loans would become "healthy" again. The government was the only party willing to invest in the banks at the depth of the crisis. It is thus reasonable that it should benefit from the (*ex ante* uncertain) recovery.

5 Has government ownership affected bank performance?

We have established that Norway experienced low (or negative) net fiscal costs from the banking crisis, largely due to gains from the rise in value and sale of state-owned bank shares. But are there additional costs that are not captured

⁴²In the United States, "bridge bank" legislation requires that the FDIC, the deposit insurance (and crisis resolution) agency, re-privatises any problem bank it acquires within two years (Hawkins and Turner, 1999). There are no such regulatory time limits in the three Nordic countries.

in the calculations above?

There are at least three potential reasons why government ownership has costs in one form or another:

- There is a potential problem regarding the mixing of the government's roles as supervisor and owner. Although different institutional measures can be implemented in order to separate the roles, the government is ultimately in control of both the supervisor and the supervised. There can thus be problems regarding the objectiveness of supervision, the handling of problems in state-owned banks and the effectiveness of market discipline.
- There is a risk that the government may interfere in lending decisions. As governments may not be driven by profit motives, state-owned banks are less likely to channel funds to those borrowers who will help produce high economic growth (Mishkin, 2001). Bad lending decisions may also lead to higher loan losses.
- The absence of a profit motive also means that state-owned banks are less likely to be efficiently run and maintain sound internal controls.

As Hoggarth (2002) points out, evidence (e.g. Caprio and Honohan, 2000) suggests that countries with higher shares of state-owned banks are, on average, the ones with a higher percentage of non-performing loans and higher operating costs. According to Barth et.al. (2001), there is evidence that suggests that countries with higher initial levels of government ownership of banks tend to have both slower subsequent rates of financial-system development and slower economic growth. Barth et al. (2000) find that greater state ownership of banks tends to be associated with more poorly developed banks, non-banks and stock markets.

Clearly, the effect of government ownership is dependent on how the government actually performs its ownership role. The role chosen by the Norwegian government is to stay away from the daily running of the banks (i.e. now only one bank, DnB NOR). The government's focus is on ensuring national ownership of DnB NOR. This fairly passive role means that the profit motive of other, private owners should be influential. Thus, the second and third argument against state ownership discussed above may not apply here. On the other hand, the fact that the largest owner is passive may give more power to the management. However, it is difficult to say what the effects of that may be, and whether the effects are different from those in a bank with dispersed ownership.

As always, "the proof of the pudding is in the eating". We will thus look at some indicators of bank performance, and compare banks where the state is a major owner with other, fully private banks in Norway. The banks with

major state ownership ("SB") are defined as DnB⁴³ and Christiania Bank (although the state sold its remaining shares in Christiania in 2000). Fokus Bank is difficult to categorise, as it was state-owned until 1995 and privately owned afterwards. It is thus not included anywhere. "Other banks" ("OB") thus includes all banks except DnB, Christiania Bank and Fokus Bank.

We study the following indicators:⁴⁴⁴⁵

- annual growth in lending,
- annual growth in balance sheet total,
- the capital adequacy ratio,
- the ratio of profits (after losses, before taxes) to assets,
- the ratio of loan losses to assets,
- the ratio of operating costs to income.

Based on figures 14-19, we can make the following observations:

- The development in annual lending growth is similar for SB and OB, apart from for DnB in 1999. The jump for DnB was caused by its purchase of Postbanken.
- The picture is roughly the same for balance sheet growth, which is not surprising as lending dominates Norwegian banks' balance sheets.
- For capital adequacy, the development over time is very similar, but SB and OB are on different levels: OB have roughly 2-3 percentage points higher capital adequacy ratios than SB.
- Profits before tax have also developed very similarly, apart from somewhat worse results in DnB in 1998.
- Loan losses in SB and OB have followed a similar pattern.
- After having had significantly higher costs-to-income ratios during most of the 1990s, the SB have now closed some of the gap.

⁴³The merger into DnB NOR happened as late as January 2004. The data presented here thus covers only DnB.

⁴⁴Cf. the aforementioned indicators of "stock" and "flow" improvements.

⁴⁵In addition to these results and balance sheet indicators, we would have liked to include market indicators such as share prices. However, we have declined to do so due to the small number of "liquid" bank shares, the Nordea take-over of Christiania and the strong movements in share prices due to speculation about structural changes.

Fig. 14 Annual growth in lending (in %)

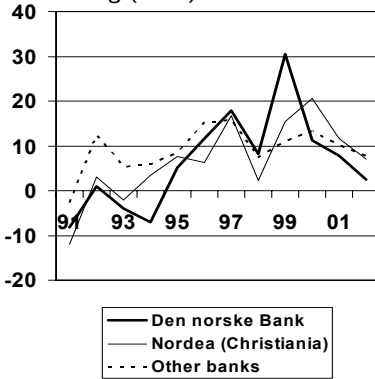
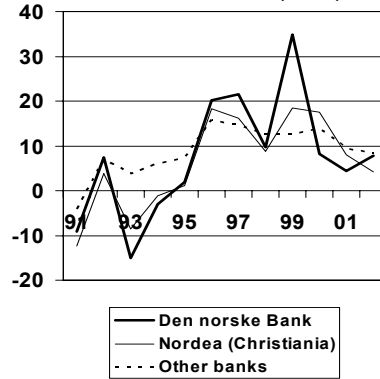


Fig. 15 Annual growth in av. balance sheet total (in %)



Source: Norges Bank. Note: Postbanken is included in Den norske Bank from 1999. Fokus Bank is not included anywhere

Fig. 16 Capital adequacy ratio (in %)

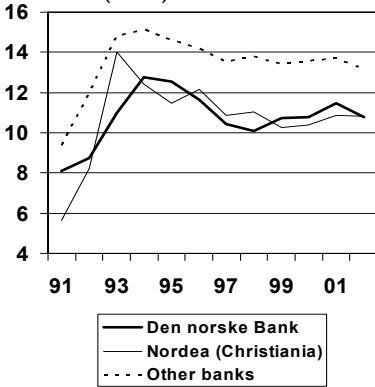
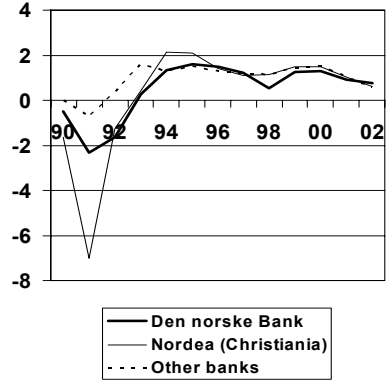


Fig. 17 Profits before taxes in % of av. balance sheet total



Source: Norges Bank. Note: Postbanken is included in Den norske Bank from 1999. Fokus Bank is not included anywhere

Fig. 18 Loan losses in % of average balance sheet total

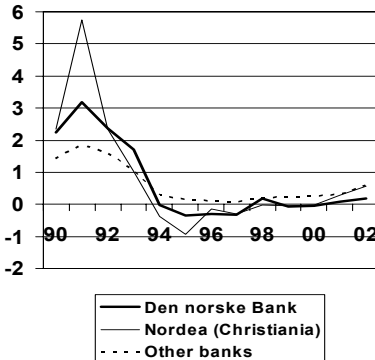
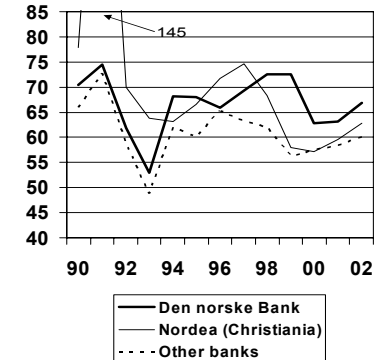


Fig. 19 Operating costs in % of income



Source: Norges Bank. Note: Postbanken is included in Den norske Bank from 1999. Fokus Bank is not included anywhere. Income includes net interest income and other operating income

It is obviously difficult to summarise the findings of several different indicators. However, it does seem that the banks with major state ownership have had a fairly similar post-crisis development to other, fully private banks. Ideally, we would have liked to compare the performance of DnB and Christiania Bank with the counterfactual; how DnB and Christiania Bank would have performed with fully private ownership. This is of course not possible. The second-best alternative studied above indicates that major state ownership has not influenced the financial performance of DnB and Christiania Bank in a major way.

6 Conclusion

Summing up: in this paper we have analysed and compared various aspects of the three Nordic banking crises: the type and scale of the crises, the type of resolution methods, the size of fiscal costs and the post-crisis performance of banks. Our main conclusions are the following:

- All three economies and banking sectors recovered well from the crises. This could to some extent be down to luck. However, the authorities followed several of the policies that are considered "best practice" for crisis resolution: the crises were handled quickly and resolutely and in a transparent way, costs were cut in order to return the banks to profitability and fiscal costs were reasonably controlled.
- Nevertheless, parts of the resolution strategies were quite different in Norway compared to Sweden and Finland. Private shareholders were more heavily punished in Norway, Norway did not issue a blanket creditor guarantee, private guarantee funds played a more important role, and Norway did not establish separate "bad banks".
- Net fiscal costs were significantly smaller in Norway than in Finland and, to a lesser extent, Sweden. This is partly due to the method of crisis resolution.
- The level of state ownership resulting from the crisis was somewhat greater in Norway than in the other two countries, and the Norwegian state's income from the sale of shares has been substantial. However, from a financial perspective, it could have sold its shares much quicker and still done well.
- The initial government take-overs may have been necessary for financial stability reasons. However, the duration of the state ownership in Norway and Sweden (on a smaller scale) is more controversial. One of several arguments against state ownership is that it may adversely affect bank performance. However, the Norwegian banks with significant state ownership have not performed very differently from other banks after the crisis.

Unfortunately it is not possible to study the counterfactual; how banks with major state ownership would have performed if they had been fully privately owned.

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