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The Nordic Banking Crises: Pitfalls in Financial Liberalization?

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Abstract

This paper examines the recent banking crises in Finland, Norway and Sweden in an attempt to draw some policy conclusions from their experiences. In all three countries, the timing of deregulation coincided with a strongly expansionary macroeconomic momentum. Delayed policy responses, as well as structural characteristics of the financial systems, and banks' inadequate internal risk management controls were important determinants of the consequences of the transition from tightly regulated to more or less competitive financial systems. In the absence of strengthened prudential banking supervision, these incentives coupled with expectations of government intervention in the event of a crisis prompted many Nordic banks to increase their lending excessively.

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Summary

The banking industries in three Nordic countries, Finland, Norway and Sweden, underwent considerable changes in the 1980s. The period was marked by increased competition in financial services, economic deregulation, the removal of cross-border restrictions on capital flows, and financial innovation. After a sharp credit boom, it also proved to be a period of financial fragility, as lower asset quality and declining profitability deteriorated banks' balance sheets to the point where governments had to support some of the largest banks to preserve financial stability.

A financial crisis in the aftermath of financial liberalization does not necessarily imply that the crisis was caused by the deregulation itself. The paper notes that the Nordic financial crises, similar to experiences in other countries, were associated with macroeconomic circumstances, such as economic downturns, declines in incomes and depressed asset markets, that typically follow domestic credit booms. The parallel developments in the Nordic countries are striking, yet there are at the same time significant differences in the performance of their financial systems and their regulatory environments, and in the macroeconomic shocks that impacted on their economies.

This paper presents a survey of the Nordic banking systems in an attempt to examine competing hypotheses about the causes of the banking problems and to provide some policy lessons. A key conclusion of this paper is that factors in addition to business cycle effects explain the financial problems that the Nordic countries have experienced. Although the timing of the deregulation in all three countries coincided with a strongly expansionary macroeconomic momentum, other contributing factors, such as the delayed policy responses, the structural characteristics of the financial systems, and--last but not least--banks' inadequate internal risk management controls, determined the consequences of the transition from tightly regulated to more or less competitive financial systems.

Against the background of these enhanced competitive pressures, the paper concludes from the Nordic experience that a negative shock may put the stability of the financial system at risk if economic incentives are distorted by policy measures and by the inherent structure of the financial sector. In the absence of strengthened prudential banking supervision, these incentives, coupled with expectations of government intervention in the event of a crisis and a booming macroeconomic environment, prompted many Nordic banks to increase their lending and risk taking excessively, leading to a loss of efficiency in allocating capital. As the distortive tax incentives that strongly favored debt financing were not corrected, borrowers responded to the lifting of credit rationing by incurring debt burdens that, at least ex post, turned out to be unsustainable. Monetary policy was largely unable to stem the credit expansion, owing to pegged exchange rate regimes, while fiscal policy was not tightened sufficiently.

I. Introduction

Banks have special functions; they include the gathering and processing of information, and the monitoring of borrowers. As a result, banks play a central role in the financial system and the economy at large since they are essential for the allocation of capital to uses that are--from the investor's point of view--relatively information-intensive. And even as financial markets develop further, large segments of borrowers will be dependent on banks for their external financing. 1/

Against that background, the banking industries in several industrial countries, including the Nordic countries, underwent considerable change in the 1980s. It was a period marked by economic deregulation, the removal of cross-border restrictions on capital flows, financial innovation and increased competition in financial services. At the same time, distinctions between types of financial intermediaries became increasingly blurred. After a sharp credit boom, it also proved to be a period of financial fragility, as lower asset quality and declining profitability weakened banks' balance sheets. In a number of industrial countries the financial performance of banks deteriorated to the point where governments had to support some of the largest banks to preserve financial stability.

The deterioration of bank balance sheets was particularly marked in the Nordic countries. With the collapse of asset prices and the onset of severe recessions that followed a period of significant domestic overheating, bank loan losses began to mount rapidly in the early 1990s. Given the thin capitalization of banks in these countries, such high loan losses impaired greatly the financial position of the banking system. In Norway, where the crisis first emerged, banks' loan losses climbed from 0.7 percent of total loans in 1987 to 6 percent in 1991. Similarly, in Finland, loan losses rose from 0.5 percent in 1989 to 4.7 percent in 1992. The surge in loan losses was particularly abrupt in Sweden where they jumped from 0.3 percent in 1989 to 7 percent in 1992. While losses on real estate loans represented a significant share of the overall problem, other sectors also experienced financial distress as the recessions deepened. In Norway, credit exposures to the primary, retail, and service sectors created problems, while in Sweden lending backed by commercial real estate proved problematic and in Finland the large volume of foreign-currency denominated loans played a special role. Banks also sustained a significant amount of nonperforming loans to households--less so in Sweden--although write-offs have been relatively small in that market segment.

A banking crisis in the aftermath of financial liberalization does not necessarily imply that the crisis was caused by the deregulation itself. The Nordic financial crises, similar to experiences in other countries, were associated with macroeconomic circumstances, such as economic downturns, declines in incomes and depressed asset markets, that typically follow domestic credit booms. The parallel developments in the Nordic countries

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1/ See Diamond (1984).

are striking, yet there are at the same time significant differences in the performance of their financial systems, their regulatory environments, and in the macroeconomic shocks that impacted on their economies.

This paper presents a survey of the Nordic banking systems in an attempt to examine competing hypotheses about the causes of the banking problems and to provide some policy lessons. A key conclusion of this paper is that factors in addition to business cycles explain the financial problems that the Nordic countries have experienced. Although the timing of the deregulation in all three countries coincided with a strongly expansionary macroeconomic momentum, there were other contributing factors such as the delayed policy responses, the structural characteristics of the financial systems, and--last but not least--banks' inadequate internal risk management controls determined the consequences of the transition from tightly regulated to more or less competitive financial systems.

Against the background of the competitive pressures that are typically enhanced by liberalization, the Nordic experience demonstrates that if economic incentives are distorted by policy measures and by the inherent structure of the financial sector, then a negative shock may put the stability of the financial system at risk. In the absence of strengthened prudential banking supervision, these incentives coupled with expectations of government intervention in the event of a crisis and a booming macroeconomic environment prompted many Nordic banks to increase their lending excessively and thus led to a loss of efficiency in the allocation of capital. In all three countries, financial liberalization did not lead to an increase in savings as the result of the financial deepening. Instead, since the distortive tax incentives that strongly favored debt financing were not corrected, borrowers responded to the lifting of credit rationing by incurring debt burdens that, at least ex post, turned out to be clearly unsustainable.

The paper is organized as follows. The next section discusses the regulatory environment prior to deregulation and its impact on the structure and performance of the banking industries in Finland, Norway and Sweden. This sets the structural and institutional framework, including the competitive conditions, and thus the initial financial sector equilibrium. Section III presents the main steps in the process of financial liberalization, with special emphasis on the sequencing of these reforms. In section IV, the responses to deregulation by borrowers, lenders, and policy-makers are discussed. We put particular emphasis on the factors that contributed to the prevailing incentive scheme, and we conclude that this scheme contributed to a phase of over-reaction. Section V presents an overview of the developments leading to the banking crises in each of the Nordic countries. The main features of the banking crises and the measures taken by the government to support the banking systems are described in section VI. Some lessons from the Nordic experience are discussed in the concluding section VII.

II. Banking Regulation in the Early 1980s and its Impact on the Structure of the Financial System

In the early 1980s, the banking systems in Finland, Norway, and Sweden were heavily regulated. These regulations, which shaped the structure of their financial systems, were motivated largely by the same principles and objectives. Besides securing the stability of the banking system, a high priority was assigned to maintaining low and stable interest rates, and--particularly in Norway and Sweden--to channeling subsidized credit to specific priority sectors, such as the housing and government sectors.

Ensuring a balanced credit flow at low interest rates, however, required far-reaching government intervention to prevent an excessive expansion of lending. As a result, the late 1970s and early 1980s were characterized by widespread credit rationing due to low interest rates that were relatively unresponsive to market forces and due to bank funding that was tightly controlled by regulation. The resulting chronic excess demand for credit fostered close and long-term relationships between borrowers and their banks, and allowed banks to be highly selective in choosing safe credit risks. At the same time, bank profitability was largely assured by restrictions on competition among banks themselves and on competition from other domestic financial institutions and from foreign banks.

In this section, we review the key banking regulations, in particular interest rate ceilings, quantitative lending regulations, and foreign exchange controls that were in effect in the three Nordic countries prior to deregulation. We also discuss the effects that these regulations may have had on the structure of the banking systems.

1. Interest rate regulations

As justification for low-interest-rate policies, it was widely argued that investment in housing and long-term capital was particularly sensitive to the level of interest rates, while consumer loans (which received a low priority) were thought to be largely insensitive to interest rates. It was feared that higher interest rates would have meant a crowding out of investments that were considered more socially desirable.

Lending rate regulations in the early 1980s were similar in the three countries. In Norway, lending rate regulations had been briefly removed in the late 1970s, but in 1980 so-called interest rate declarations that set upper limits on average bank lending rates were introduced. 1/ Initially these limits were meant to be changed by Norges Bank more or less in step with money market and bond interest rates. In practice, however, they were adjusted only infrequently. Limits on average lending rates were also imposed in Finland and Sweden, where limits were tied to the central bank

1/ Market-determined lending rates were not deemed acceptable since it was thought that competition between banks was not sufficiently strong.

base rate, which was changed infrequently since such decisions were heavily politicized.

Since rates on individual loans were not directly regulated, banks retained--at least in principle--the ability to charge different rates on individual loans. It appears, however, that loan rates did not primarily reflect the perceived credit risk of the borrower, but instead depended largely on the closeness of the borrower's relationship with the bank. In effect, artificially low interest rates--reinforced by a generous tax treatment of interest payments that implied sharply negative after-tax real interest rates for borrowers--created strong excess demand for credit. As a result, a close banking relationship was in many cases essential for obtaining loans. 1/

Although explicit restrictions on deposit interest rates had been lifted in Norway and Sweden already in the late 1970s, deposit rates remained low and inflexible. This appeared to have been a manifestation of limited competition between banks because they lacked incentives and opportunities to expand their lending, and thus did not experience a need to aggressively increase their funding through active liability management.

In contrast, Finnish deposit rates remained tightly controlled and closely linked to the base rate until the early 1990s. Banks were allowed to issue only household deposits with interest payments that were exempt from income tax, yet at the same time interest on deposits was tax-exempt only on deposits that offered specific terms which were set by the authorities. 2/ The tax preference of deposit interest provided deposit banks with a competitive advantage by lowering their funding costs and may explain the relatively small role that other institutions, such as finance companies, played in the Finnish financial sector. By requiring that all banks pay the same low interest rate on tax-exempt deposits, the tax rules encouraged banks to form a cartel-like arrangement, which severely reduced competition for private funds. Due to the favorable tax rules, banks could achieve comfortable interest rate margins, while keeping after-tax lending rates relatively low and after-tax deposit rates relatively high.

Lending rate regulations (together with deposit rate controls in Finland) meant that bank profitability was relatively stable in the Nordic countries since price competition--at least on the lending side--was ruled out. Moreover, low interest rate ceilings created "favorable selection" in the credit applicant pool by implicitly excluding risky borrowers. As a result, lending rate ceilings--in combination with credit rationing--implied

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1/ When information is asymmetric, a close long-term banking relationship may also arise because it lowers loan costs. Banks' functions of gathering information and monitoring borrowers are in general discharged more efficiently as part of long-term banking relationship with borrowers. See Stiglitz (1993).

2/ Corporate deposits were not regulated.

that bank lending was directed at the safest investments and there was little need for banks to make provisions for credit losses.

2. Quantitative lending restrictions

Since, as a result of low-interest-rate policies, the demand for bank loans persistently exceeded the level consistent with economic stability, restrictions on the volume of bank lending were necessary. The lending volume was primarily controlled with the help of reserve requirements, and liquidity ratios (i.e, bond investment obligations). In some instances, direct credit ceilings were also imposed. Restrictions on bank lending were supplemented by funding quotas from the central bank and capital controls on short-term capital flows that prevented banks from resorting to foreign funding to finance their lending growth.

To restrict bank lending, a supplementary reserve requirement was imposed on Norwegian banks in the early 1980s that mandated that a prohibitively large part of the lending increase that exceeded the credit ceiling had to be deposited in non-interest-bearing accounts at Norges Bank. In addition, banks were not permitted to pass the extra costs on to borrowers. This requirement, which was in effect from 1981 to 1983, was sufficiently high to restrict bank lending. 1/

Bond investment obligations, that required banks and other financial institutions to invest part of their assets in priority housing bonds and government bonds, were applied in Norway, but played an even greater role in Sweden. These obligations shifted the portfolio composition of banks in favor of government and housing bonds, and thus limited loans to the private sector. Even though the yield on government bonds was often below market levels, private banks--as well as life insurance and pension funds--were required to invest in bonds. As the government debt grew in Sweden, the liquidity ratios were increased, exposing the banks to growing market risk at a time when inflation and interest rates became more volatile.

In addition to these indirect measures, some direct controls on lending were applied in Sweden and Norway. Norwegian state-owned banks were subject to direct control by the Government through so-called credit budgets, which as part of the national budget provided guidelines for the supply of credit. Whereas the Norwegian authorities used credit market instruments to achieve the lending quotas set for private banks and other financial intermediaries, the Bank of Sweden relied on moral suasion and on direct quantitative ceilings on loans from banks and finance companies to control the volume of lending.

In Finland, the volume of bank loans was controlled indirectly by assigning each commercial bank a quota for central bank advances and by adjusting the spread between central bank interest rates and lending rates.

1/ The Bank of Finland imposed supplementary reserve requirements in the late 1980s after financial deregulation to curb the credit expansion.

Since banks relied heavily on the central bank for their marginal funding, the quotas had a noticeable effect on the volume of bank lending. 1/ Similar quotas on central bank funding were in effect in Norway and Sweden.

At the same time as lending rate regulations eliminated price competition, lending quotas ruled out expansionary market-share strategies in practice. As a result, the close banking relationships were cemented further.

3. Capital requirements

Against the background of the stable banking environment, capital requirements remained low and were sometimes not strictly enforced. The requirements were particularly lax in the case of Norway, where they had been lowered successively to 6.5 percent of total assets for commercial banks, while savings banks did not face any statutory equity requirements. In addition, the Norwegian authorities permitted subordinated debt to cover an increasingly larger share of equity capital. 2/ While subordinated debt had been little used in the 1970s, by 1983 almost 40 percent of the capital of commercial banks consisted of subordinated debt, but only 5 percent of savings banks' capital. 3/ Moreover, 90 percent of the subordinated debt was raised in foreign currency. As long as banks' opportunities and capabilities to expand lending were limited, the incentives emanating from low equity ratios were inconsequential. Later, this changed dramatically under the deregulated environment since capital requirements were not tightened until the early 1990s when the Basle standard was adopted.

4. Capital market and foreign exchange market regulation

Although many borrowers were bank credit-constrained, other sources of credit were also restricted. Even the amount of private bond issues and their terms--in particular their initial yields--were tightly controlled in all three countries. 4/ Specifically in Norway, nonfinancial corporations were granted only small quotas for bond issues.

1/ Deposits from the Bank of Finland at commercial banks were equivalent to about 10 percent of deposits from the public in the early 1980s.

2/ The Ministry of Finance set a limit on the use of subordinated debt as capital in 1984 where subordinated debt exceeding 50 percent of equity would no longer be counted as capital. Subsequently a new capital instrument, the perpetual subordinated loan, was employed by the three largest commercial banks. The Ministry accepted that these loans would be counted as capital beyond the 50 percent limit. In 1987, a new limit of 100 percent of equity was introduced.

3/ A large share of subordinated debt represents a considerable dilution of capital. Whereas equity capital can be used to cover any loss, subordinated capital may only be used when the bank is liquidated.

4/ In Sweden, controls on private bond yields were lifted in 1980 and restrictions on the quantity of new issues were discontinued in 1983.

Borrowers also faced foreign exchange controls that were designed to insulate the domestic financial system and to prevent international capital flows from undermining the effectiveness of domestic restrictions and regulations. Whereas foreign short-term bank funding was largely excluded by these controls, the three Nordic countries had more favorable regulations concerning long-term foreign borrowing by corporations. In contrast to Norway and Sweden, where foreign banks were not permitted to establish subsidiaries prior to 1984 and 1986, Finland allowed foreign banks to enter its financial system in 1982.

5. The impact of regulations on the structure of the financial systems

Together with universal banking rules, the regulations supported financial systems that were dominated by the banking sector, while nonbank institutions played a minor role and money and credit markets remained insignificant. The banking sectors, in turn, were dominated by a few large commercial banks that offered wide-ranging financial services and also played a considerable role in the nonfinancial sector due to the predominance of debt financing (as in many other countries with universal banks) and due to the banks' direct equity stakes in nonfinancial companies. At the same time, the markets for bank services (mainly deposits and loans) were largely segmented: commercial banks focused on the corporate sector, while savings and cooperative banks concentrated their attention on households and small businesses.

Prior to the mid-1980s, this basic structure of the financial systems changed only slowly and to a limited extent in the Nordic countries. Competition among banks and from other financial intermediaries was limited and bank profitability was largely assured, resulting in a predictable banking environment with stable market shares of individual banks. As a result of the prevailing credit policy and regulatory system, bank lending grew only slowly and the riskiness of bank lending was not subject to significant change. Yet while the changes within the banking systems were relatively insignificant, nonbank financial intermediaries gained significance in Norway and Sweden by exploiting newly developing market niches and by benefiting from the unregulated credit market that developed with the aim of circumventing banking regulations. The strong market position of deposit banks in Finland, reinforced by the tax advantage of bank deposits, discouraged the development of significant independent nonbank financial institutions. 1/

The development of money and capital markets in the mid-1980s (early 1980s in Sweden) triggered additional changes. In particular, in Norway and Sweden, it allowed a rapid expansion of finance companies that relied on these markets for their funding. Between 1981 and 1985, finance companies increased their credit market share from 6 percent to almost 9 percent in both countries. The emergence of financial markets also facilitated

1/ The majority of Finnish nonbank financial institutions were directly or indirectly owned by the banks.

circumventing banking regulations to some extent and they allowed the rising public debt to be financed outside the banking system, thereby reducing the need for liquidity ratios. Nevertheless, the asset management of Nordic banks was heavily focused on so-called priority sectors. In Sweden, for instance, the share of government bonds in bank portfolios rose sharply in the late 1970s and reached about 1/4 in 1985. The share of bank loans declined at the same time from 2/3 to less than 1/2 by 1985.

As part of banks' liability management, deposits played a pivotal role as a funding source. Since price competition was eliminated in Finland (where deposit rates were still regulated) and remained weak in Norway and Sweden despite liberalized deposit rates, banks competed for market share by building extensive branch networks. More generally, banking regulation appears to have supported cost structures in banking that would not have been viable in a deregulated environment.

In general, the sheltered banking environment, which was characterized by credit rationing and the absence of price competition, fostered a business mentality and strategies aimed at long-term relationships with clients. It also allowed decentralized credit decision making (often at the branch level) and lax credit risk management, and encouraged cross-subsidization between various banking services. Profitability was largely assured and most measures of bank profitability remained quite stable.

III. The Deregulation Process

1. Shortcomings of the regulated system

Regulatory protection usually cannot completely isolate segments of the financial system from market forces. As one would have expected, market participants in the Nordic countries found ways to circumvent interest rate restrictions as the tensions in the financial systems increased markedly in the late 1970s.

Higher inflation--coupled with the reluctance to adjust nominal interest rate ceilings accordingly--made lending rate restrictions more and more binding and thus created ever greater incentives to bypass the regulated sections of the financial system. A parallel market (grey market) developed where lenders and borrowers interacted directly, and thus contributed to disintermediation. 1/ Financial institutions, however, were not bypassed entirely; they participated in the unregulated loan market through off-balance sheet activities, such as guaranteeing and arranging grey-market loans, and by channeling part of their lending through nondepository subsidiaries, such as finance companies that were less

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1/ According to an estimate by the Norges Bank, the amount of grey-market loans increased from Nkr 0.3 billion in 1978 to Nkr 2.7 billion in 1983, or from 1 percent to 6 percent of the domestic credit supply to private sector and municipalities.

regulated. The traditionally close banking relationships started to weaken when borrowers and lenders increasingly turned away from their "house banks" to find funding elsewhere.

It was generally recognized that the grey market did not unambiguously improve the allocation of capital since it created further distortions. By reducing the role of banks with their special function to gather information and to make risk assessments as well as to monitor borrowers, credit flows were increasingly diverted to less information-intensive borrowers, in particular large corporations, to the detriment of bank-dependent borrowers.

Nor did the grey market enhance the quality of monetary policy control. To the contrary, the parallel credit market was seen as undermining the effective conduct of monetary policy, and as money and capital markets developed direct monetary policy instruments became less effective. In this connection, the international trend toward indirect, market-based monetary policy instruments also facilitated the deregulation of the domestic financial system.

In reaction to the rapidly growing unregulated market, the authorities chose to relax some restrictions to bring the unregulated segment back into the traditional banking system. In the process, regulators hoped to increase competition and efficiency in the banking industry. To that end, bank lending and bank funding were deregulated to allow market forces to gain more influence, and foreign banks were permitted to establish subsidiaries.

2. The reform measures

a. The Norwegian experience

By the end of the 1970s (and especially in 1982-83 when credit targets in Norway were grossly exceeded), it became increasingly clear that credit policy had to be reformed to improve the efficiency of the credit market and the allocation of capital in the economy more generally. 1/ Table 1 presents a chronology of selected reform measures.

1/ In July 1978 the government appointed a broad-based Interest Rate Commission to perform three main tasks: (i) to propose fundamental guidelines for interest rate policy, (ii) to study how best to organize interest rate policy with a view to monetary and credit policy control, and finally (iii) to assess how interest rate conditions affect income and wealth in Norway. The study concluded that a deregulation of the credit market would facilitate monetary management and reduce adverse effects of resource allocation. In January 1980, the Interest Rate Commission presented the results of its analysis, mainly advocating the liberalization of the credit controls and market determination of interest rates.

Table 1. Norway: Chronology of Selected Liberalization Measures

1972	Capital adequacy requirements were lowered from 8 to 6.5 percent.
1980	Foreign borrowing by banks were liberalized. Under the new foreign exchange legislation, foreign currency exposure limits were established on banks, however as the Norges Bank provided currency swaps this imposed no constraint on banks' foreign borrowing.
1984	Supplementary reserve requirements were removed. A limit was set on the use of subordinated debt as capital where subordinated debt exceeding 50 percent of equity would no longer be counted as capital. Subsequently, it was accepted that a new capital instrument, perpetual subordinated loan, would be counted as capital beyond the 50 percent limit.
1985	Interest rate declarations were removed and interest rate monitoring was introduced. The bond investment requirement was phased out.
1986	Supplementary reserve requirements were re-introduced in a modified form. The limits on commercial and savings bank borrowing facility at the Norges Bank were increased markedly. Foreign banks were permitted to open subsidiaries in Norway.
1987	The primary and secondary reserve requirements were removed. Perpetual subordinate capital was excluded from the limitations on approved loan capital. Banking, insurance and Securities Commission issued guidelines for entering in accounts and assessment of non-performing loans.
1989-91	Remaining foreign exchange controls were removed.
1990	Foreign banks were allowed to operate in Norway through branch offices.

As a first step toward liberalizing lending rates, the Norwegian authorities switched to interest rate declarations that provided some flexibility in the structure of lending rates since they were only applied to average rates. But the effectiveness of the interest rate declarations was limited. Banks were able to partially get around the loan rate restrictions by manipulating their balance sheets and by requiring the borrowers to hold compensating balances as well as by charging extra fees for some services. More significant was the fact that the development of an unregulated credit market, where market-determined interest rates attracted funds from the regulated segments, led to a rise in the overall level of lending rates. When the authorities switched to so-called interest rate monitoring in September 1985 lending rates were further liberalized. Through moral suasion, the Norwegian Government tried to ensure, with the help of the media, that banks adjusted their lending rates in step with money market rates. At the same time, interest rate monitoring kept lending rates consistently below their market-clearing level; lending rates even stayed below money market rates until 1987.

As they faced supplementary reserve requirements, Norwegian banks had a strong incentive to find other lending channels to reduce the regulatory burden. As a result, finance companies grew rapidly since they were initially not subject to reserve requirements. 1/ In response to the rapid expansion of the grey market, the authorities abandoned supplementary reserve requirements in January 1984, marking the end of lending controls in Norway.

As regards bank funding, new rules concerning the foreign-currency exposure of large Norwegian banks took effect in 1978 on a trial basis and were made permanent in 1980. Under the new regulations, a bank's foreign-currency debt in the spot and forward markets could not exceed its foreign-currency liabilities. As long as currency swaps were being offered, this imposed however no constraint on banks' foreign borrowing.

In a move to open the financial system to foreign competition, in early 1985 the Government granted seven foreign banks permission to establish subsidiaries in Norway. All seven banks were headquartered in countries where Norwegian banks were also allowed to operate through subsidiaries. Foreign banks were, however, neither permitted to open branches in Norway nor to set up nonbank financial institutions.

1/ In 1983, controls of loan guarantees were introduced which led to an increasing proportion of unguaranteed loans on the grey market.

b. The Swedish experience

Prior to 1980, the financial markets were highly regulated in Sweden. As government budget deficits widened and the public debt grew, the obligation on banks (through liquidity ratios) to buy government and housing bonds became increasingly distortionary--in effect, a growing share of deposits was transferred to the Government in exchange for low-interest-bearing long-term bonds. As a result, the share of regular bank loans to businesses and households declined, and institutions that were not covered by regulations gained significance. 1/ The considerable credit flows outside of the regulated market challenged the traditional role of banks. In response, banks attempted to bypass the interest rate regulations by establishing their own finance companies--which formed an important part of the grey credit market in Sweden. 2/

As the regulations were increasingly considered to be largely ineffective, the authorities started a financial liberalization process in the late 1970s and proceeded gradually during the 1980s. 3/ Table 2 presents a chronology of selected reform measures. Credit and bond markets were deregulated first, followed by the removal of regulations on international transactions. The system of liquidity ratios for banks was abandoned in 1983, and the ceilings on commercial bank lending were removed in 1985. At the same time, restrictions on lending rates were lifted, and by 1989 all remaining foreign exchange restrictions had been removed.

In 1986, foreign banks were allowed to establish subsidiaries in Sweden, and in 1990 they were granted permission to operate branch offices. 4/ But their share of the banking market has remained small; in 1992 the assets of foreign-owned banks represented only about 2 percent of the total assets of commercial banks.

c. The Finnish experience

Under the traditional banking regulations in Finland, average lending rates were tightly controlled. Moreover, the lending rate ceilings were unresponsive to market forces and, in particular, could not adjust to banks' funding costs. As higher inflation exerted increasing upward pressure on lending rates, the Bank of Finland allowed part of the banks' unregulated funding costs to be reflected in their lending rates starting in 1983. Finally, in 1986, the restrictions on average lending rates were abolished

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1/ The grey credit market included for the most part loans from nonbank financial intermediaries and trade credits.

2/ Finance companies owned by banks account for approximately one-third of finance companies' aggregate balance sheet. See Biljer (1991) for details.

3/ Various aspects of the regulatory framework and the liberalization process are described in Englund (1990), Gottfries, Persson, and Palmer (1989), Gottfries, Nilsson, and Ohlson (1992), and Jonung (1986).

4/ The first foreign-owned bank branch opened in 1992.

Table 2. Sweden: Chronology of Selected Liberalization Measures

1978	Ceiling on bank deposit interest rates abolished. 1/
1980	Ceilings on issuing rates for private sector bonds lifted. Controls on lending rates for insurance companies removed. Tax on bank issues of certificates of deposits removed. Foreigners allowed to hold Swedish shares.
1982	Ceilings on new bond issues from private companies removed.
1983	Requirement on banks to hold government and housing bonds to meet liquidity quotas abolished. (Use of liquidity ratios to guide bank lending was discontinued and replaced by recommended growth rates for lending.)
1985	Ceilings on bank loan rates lifted. Lending ceilings for banks abolished.
1986	Placement ratios for banks and insurance companies abolished. Foreign banks allowed to establish subsidiaries in Sweden.
1986-88	Relaxation on foreign exchange controls on stock transactions.
1988-89	Swedes allowed to buy foreign shares.
1989	Foreigners allowed to buy interest-bearing assets denominated in Swedish kronor. Remaining foreign exchange controls removed.
1988-91	Cash reserve requirements introduced for finance companies in 1988 and abolished in 1991.
1990	Foreign banks allowed to operate in Sweden through branch offices and entitled to participate in the Riksbank's clearing system on the same terms as Swedish banks.

1/ However, inter-bank agreements linking deposit rates to the discount rate continued for some years.

altogether, paving the way for market forces to dominate the financial system. Table 3 presents a chronology of selected reform measures. 1/

Banks remained, however, constrained with respect to their lending rates in another (admittedly less restrictive) way. Finnish bank loans traditionally carried variable interest rates and all loan rates were tied to the base rate, which was set administratively by the Bank of Finland and tended to be relatively unresponsive to changes in market conditions. To enhance the influence of market forces, after 1985 the Bank of Finland allowed bank loans to be linked to other reference rates. 2/ 3/

Parallel to the liberalization of bank lending, banks' funding sources were expanded. For instance, the quota restrictions on advances from the central bank at the call money rate were lifted in 1984. 4/ To give banks an incentive to trade directly with each other on the interbank money market, the Bank of Finland created a spread between its call money credit rate and its call money deposit rate in 1986. Finally, after reserve requirements on certificates of deposits (CDs) were removed in 1987, a domestic money market developed and gave the Bank of Finland the opportunity to conduct open-market operations (mostly in bank CDs and its own CDs). Like in other Nordic countries, the new money market--besides changing the conduct of monetary policy--provided banks with new funding opportunities, that permitted more aggressive lending policies that were largely financed by bought funds instead of standard retail deposits.

Similarly, the lifting of foreign exchange restrictions allowed banks to acquire funds abroad and to lend them as foreign-currency denominated loans to domestic customers. Restrictions on the long-term foreign borrowing of corporations were removed in 1986-87. Since 1991, even households are not restricted in their foreign borrowing, and all foreign exchange controls have been eliminated. Foreign-owned banks had already been permitted to open subsidiaries in Finland since 1982.

1/ See also Abrams (1988).

2/ By the end of 1985, loans with a term of up to one year could be linked to the call money rate. Gradually, other reference rates were permitted, such that by January of 1988 short-term loans could be linked to the new HELIBOR money market rates, and long-term loans with maturities of more than five years could be tied to the newly introduced three and five-year reference rates, which are based on the market yield on bonds issued or guarantied by banks.

3/ The proportion of loans tied to the base rate has dropped from more than 90 percent in early 1988 to less than 50 percent in 1992. More than 20 percent of banks' markka loans are currently linked to Helibor rates, and less than 15 percent are related to the three or five-year reference rates. Recently a few banks have started to use their own reference rates (including the so-called prime rates), these rates affect less than 10 percent of the outstanding bank loans.

4/ Although in March 1987 quotas were temporarily reintroduced.

Table 3. Finland: Chronology of Selected Liberalization Measures

1982	Foreign banks permitted to open subsidiaries.
1984	Banks allowed to pass on part of their funding costs. Banks allowed to lend abroad and to invest in foreign securities.
1986	The average bank lending rate permitted to be the higher of 1.75 percent over the Bank of Finland base rate or 50 basis points above the average deposit rate on markka deposits. A dual interest rate introduced in the Bank of Finland's call money facility.
	Regulation of average bank lending rates abolished.
	Long-term foreign credits of manufacturing and shipping companies exempted from exchange control regulations.
1987	The Bank of Finland begins open market operations in bank CDs on the money market.
	HELIBOR money market rates introduced.
	Guidelines concerning downpayment requirements on housing loans and consumer loans ended.
1988	Banks permitted to use long-term market rates as loan reference rates.
1989	A supplementary reserve requirement introduced that is linked to lending growth.
1991	The remaining regulations on foreign currency loans abolished, except for households. Private households allowed to raise foreign-currency denominated loans.

IV. The Response to Deregulation

Banks, just like other enterprises, develop their business practices and behavior on the basis of the prevailing regulatory environment, as the preceding section attempted to illustrate. Against that background, financial deregulation, which was accomplished within a few years in the Nordic countries, was a major "shock" to the system and posed new challenges for borrowers and lenders alike to adapt to the new environment. Indeed, the financial systems in the Nordic countries responded quickly. As in other countries that underwent financial liberalization, the most striking development was the significant rise in bank lending and risk taking. 1/ It is the purpose of this section to analyze the incentives that led borrowers and lenders to expand credit, and to describe the shifts in banks' loan portfolios and their funding.

1. The borrowers' response

Since some businesses and particularly households had been credit constrained, a substantial stock adjustment response in private credit was to be expected after liberalization. 2/ Demand for credit was, however, also fuelled by robust economic growth at the time of liberalization. As can be seen in Chart 1, the ratio of bank loans to nominal GDP increased in Norway to 68 percent in 1988 from 40 percent in 1984. The surge in lending in Finland and Sweden took place somewhat later than in Norway, reflecting in part differences in the timing of financial liberalization and in macroeconomic conditions. In Finland, the ratio of bank loans to nominal GDP increased to 90 percent in 1990 from 55 percent in 1984, while it increased in Sweden to 58 percent from 41 percent. 3/ The effect of pent-up demand pressure was visible in all three countries and liberalization resulted in a credit-financed surge both in consumption and investment, particularly in the service sectors (Charts 2 and 3). 4/

a. Household sector

The reaction of households to financial deregulation was similar in the Nordic countries: households began to borrow aggressively and reduced their savings sharply (Chart 4). Net household saving as a percentage of disposable income declined in Norway from 5.2 percent in 1984 to -2.5 percent in 1985. The decline in the household saving ratios in the other two countries--although substantial--was more gradual in Finland it fell from 5.7 to -1.6 percent between 1980 and 1988 and in Sweden from about

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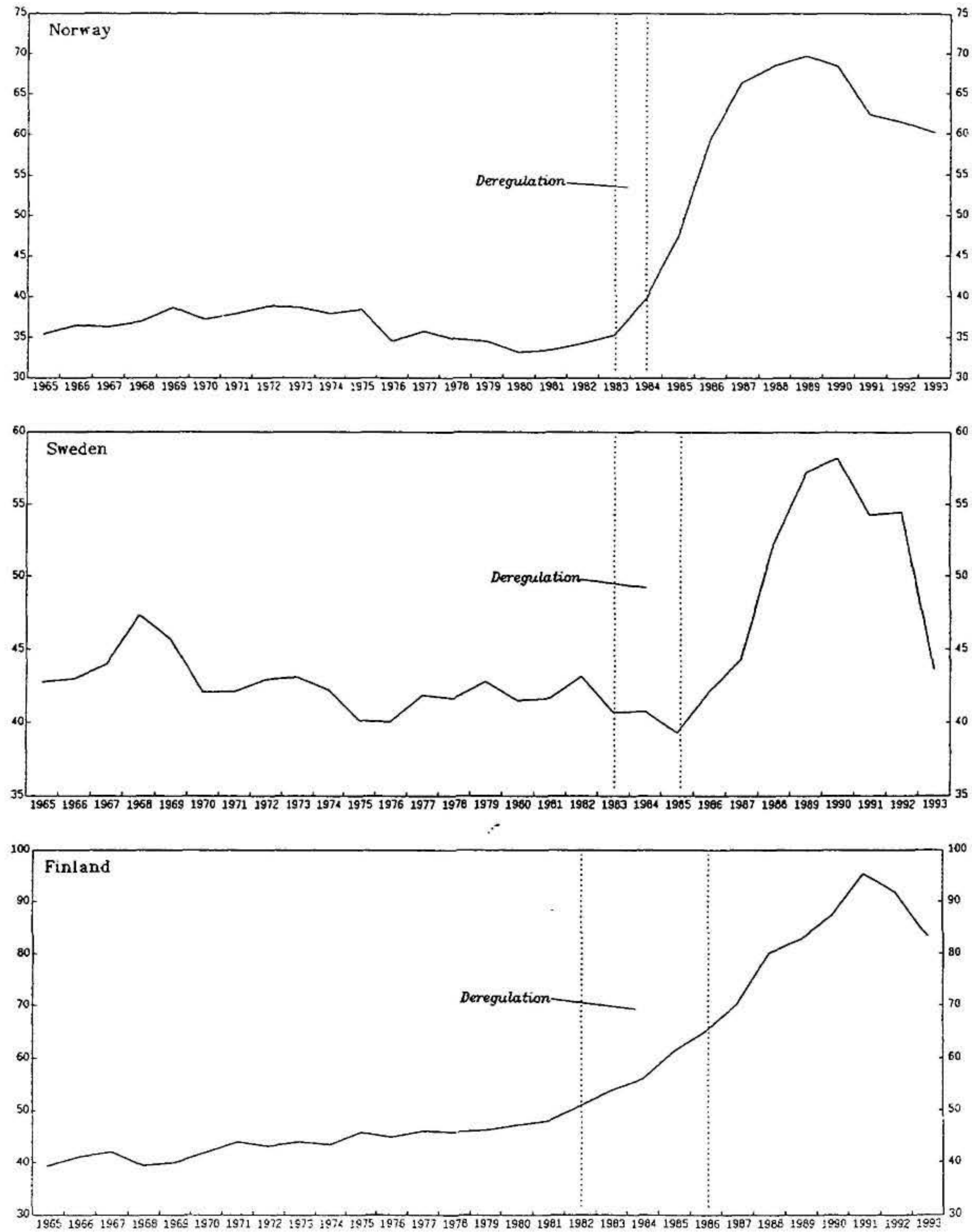
1/ Sundararajan and Baliño (1991) and Bisat, Johnston and Sundararajan (1992).

2/ See Hubbard (1991) and Minsky (1977).

3/ The figures for Sweden are much higher if housing loans from mortgage banks--most of which are subsidiaries to the major banks--are included. In Norway and Finland most of the housing loans are provided directly by the banks.

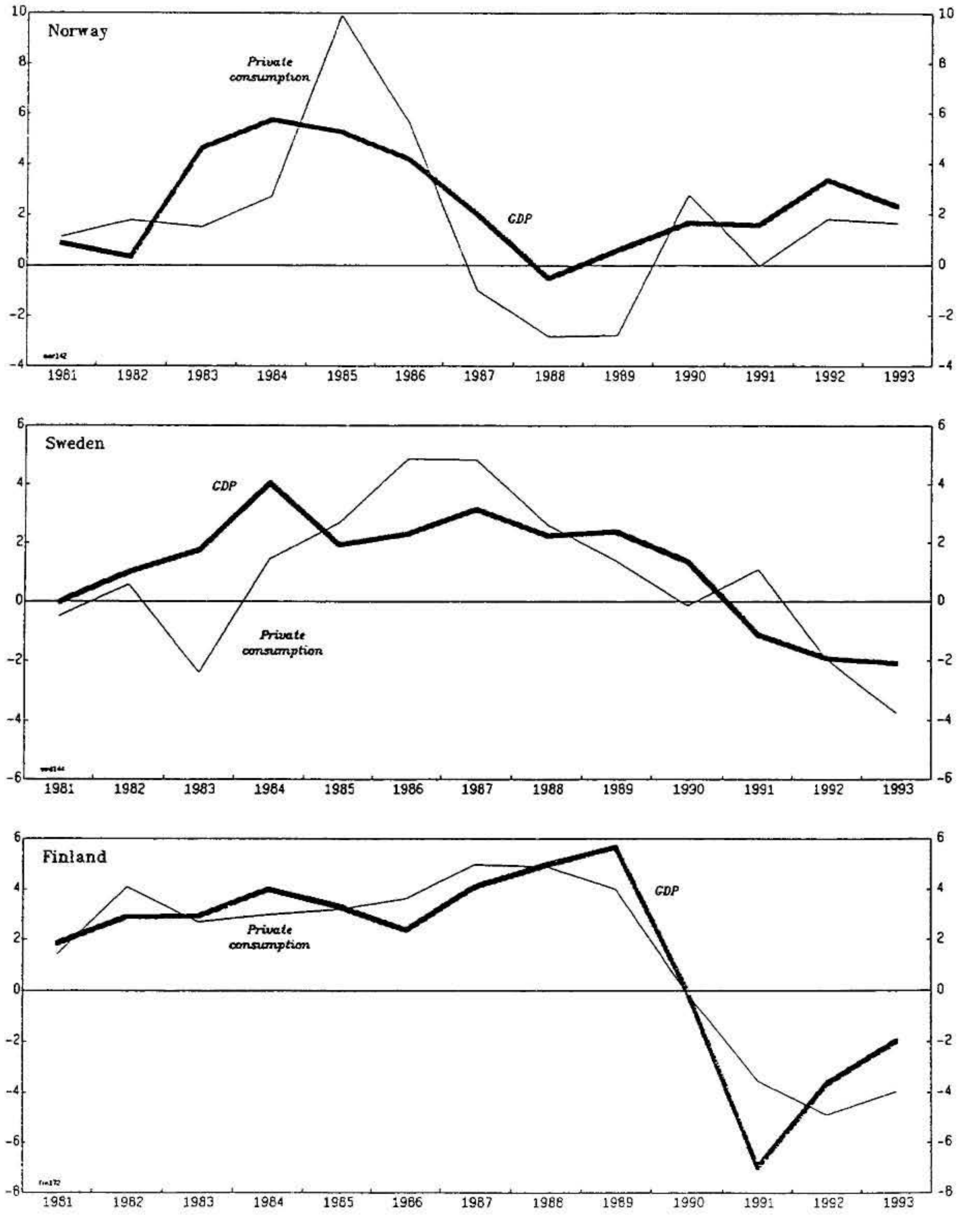
4/ See Lehmussaari (1990).

CHART 1
NORWAY, SWEDEN, AND FINLAND
CLAIMS ON PRIVATE SECTOR/GDP
(In percent)



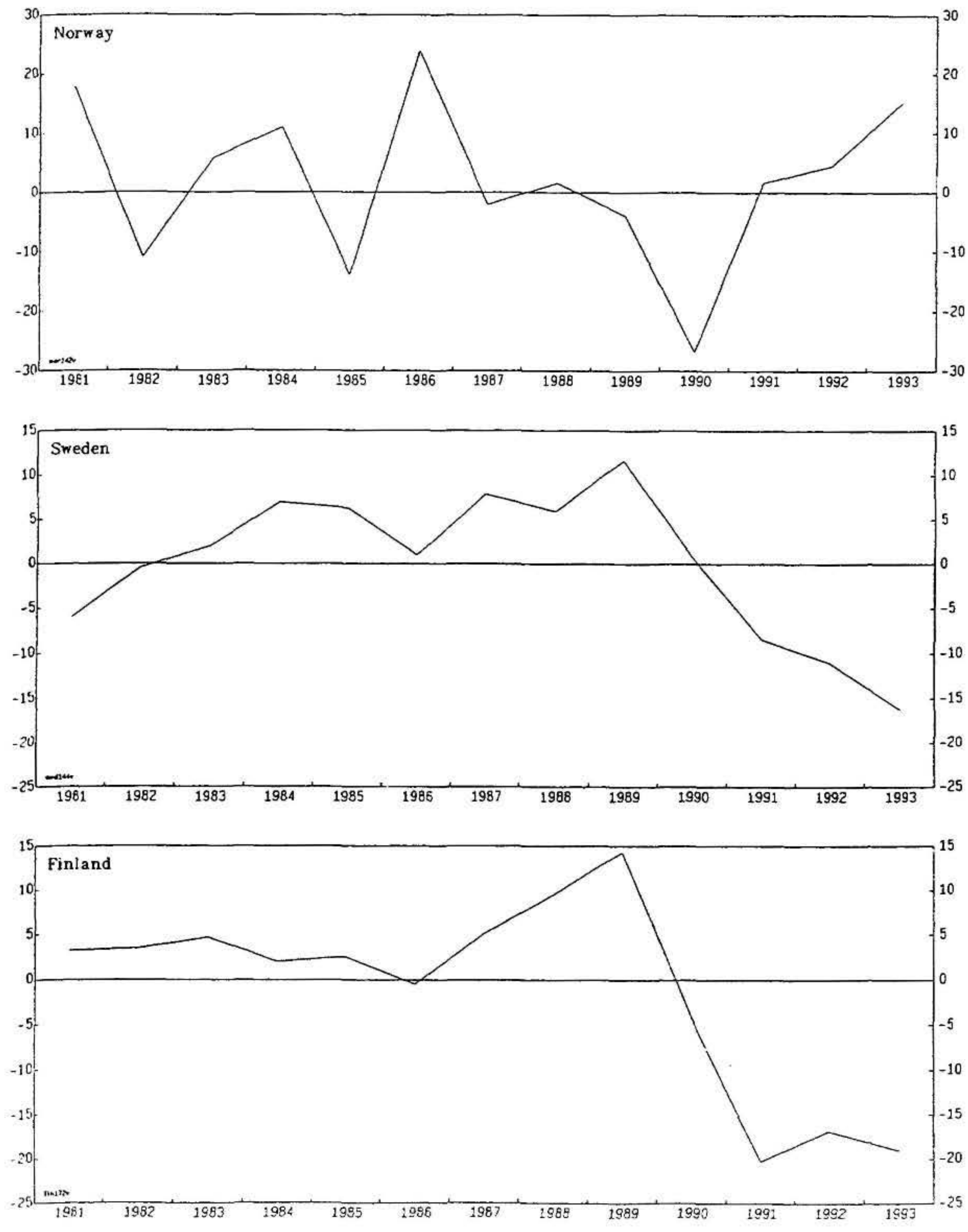
Sources: International Financial Statistics; and national authorities.

CHART 2
NORWAY, SWEDEN, AND FINLAND
GDP AND PRIVATE CONSUMPTION
(In real terms, percentage change)



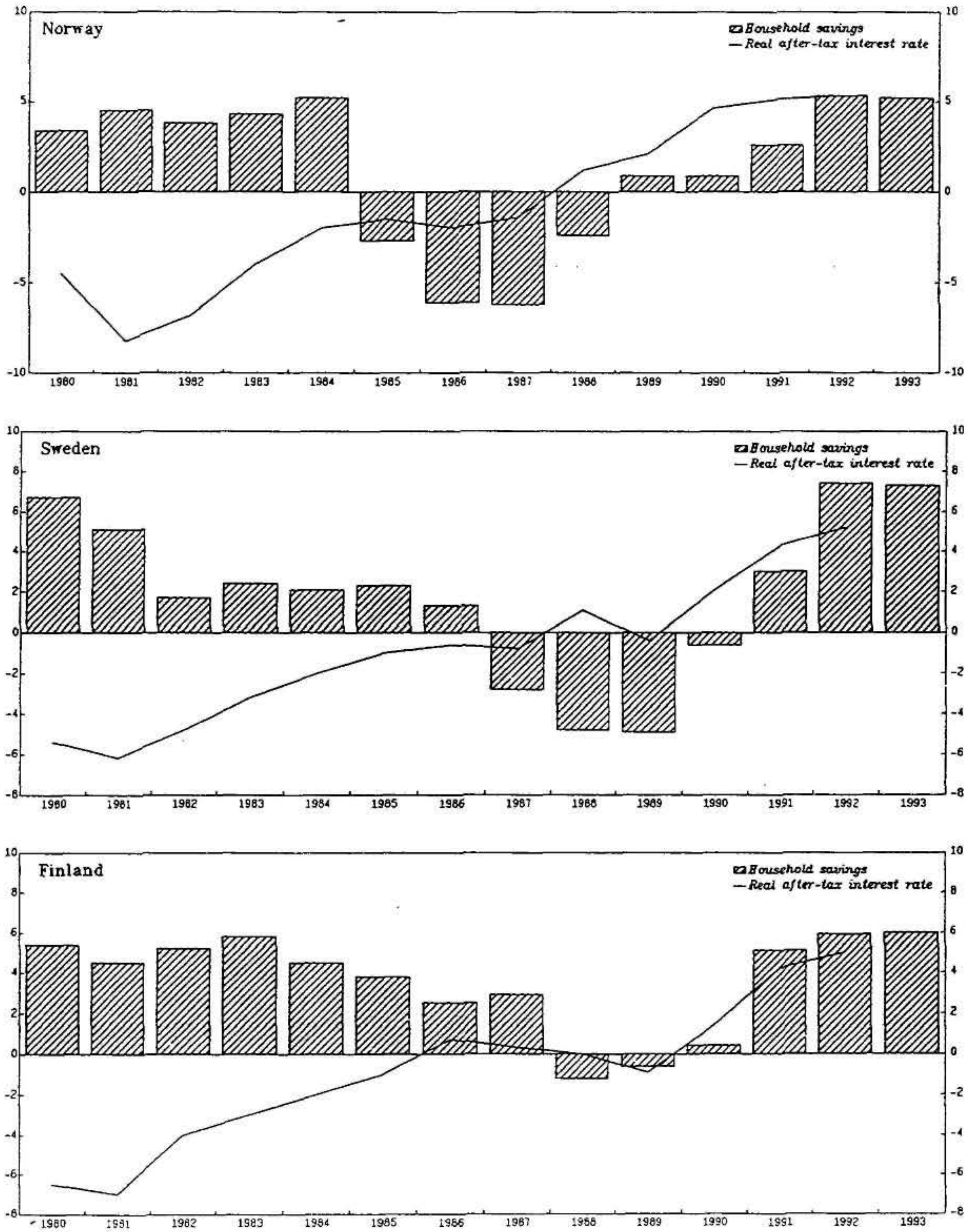
Sources: IMF, International Financial Statistics; and national authorities.

CHART 3
NORWAY, SWEDEN, AND FINLAND
GROSS FIXED CAPITAL FORMATION
(In real terms, percentage change)



Sources: IMF, International Financial Statistics; and national authorities.

CHART 4
NORWAY, SWEDEN, AND FINLAND
HOUSEHOLD SAVINGS AND REAL AFTER-TAX INTEREST RATES 1/



Sources: OECD; and national authorities.

1/ Household savings is as a percentage of disposable household income.

5.0 to -3.4 percent between 1980 and 1987. In all three countries, household indebtedness (defined as the ratio of household debt to net disposable income) reached record levels between 1989 and 1991. In Finland, this ratio increased to about 90 percent in 1990 from 45 percent in 1980, and in the case of Norway, to 175 percent in 1989 from about 90 percent in 1980. Most of the credit was channeled into purchases of consumer durables and real estate.

In addition to an inevitable jump in credit due to the stock adjustment effect, several other factors contributed to the incentives to borrow and the resulting drop in household savings. First and foremost, in all three countries, high marginal tax rates and full tax deductibility of interest payments meant that real after-tax interest rates were excessively low, or sometimes even negative. Due to the generous tax deductibility of interest expenses for both mortgages and consumer loans and due to high inflation, households readily exploited their freer access to credit after financial liberalization. 1/ Higher asset and collateral values also facilitated borrowing. The initial surge in credit contributed to a jump in asset prices, in particular real estate prices. Expecting that the sharp asset price appreciation would continue along the prevailing trend, many investors were willing to incur heavy debt burdens at relatively high interest rates because they perceived considerable upside potential while their downside risk was limited, especially since many financed their investments with high leverage. Moreover, low and declining unemployment combined with strong growth in disposable income (in particular in Finland where economic growth in the late 1980s was strongest among the three countries) fueled the propensity to borrow. In hindsight, it is clear that most borrowers did not anticipate the possibility of high after-tax real interest rates on their variable-rate loans and large interest rate volatility that emerged in the late 1980s when policy was tightened and the tax-deductibility of interest payments was reduced.

b. Corporate sector

The indebtedness of the corporate sectors in the three Nordic countries grew also rapidly after deregulation. Traditionally, corporations had been highly dependent on borrowing from financial institutions and, as in other countries with universal banking systems, relied heavily on debt financing. In 1980, the debt-equity ratios were about 3, 4, and 5 1/2, in Norway, Finland, and Sweden, respectively, compared to less than 1/5 in the United Kingdom and 1/4 in the United States. A major investment boom took place in the Nordic countries following the deregulation process, with the majority of investment activity occurring in residential and nonresidential construction, real estate and services (Chart 5).

1/ After the Bank of Finland removed its guidelines on prior savings requirements for housing and consumer loans in October 1987, lending to households rose sharply.

The lifting of foreign exchange restrictions opened up new opportunities for debtors to borrow from banks at--what they perceived as--low interest rates in foreign currency. The surge in foreign currency borrowing has been particularly strong in Finland, where in the late 1980s about half of the corporate borrowing was denominated in foreign currency. 1/ Given the large interest rate differentials vis-à-vis other European interest rates, a "convergence play" based on the belief that exchange rate parities were unlikely to change provided a strong incentive to borrow in foreign currencies even for corporate borrowers in the sheltered domestic sectors. 2/

2. The lenders' response

Financial liberalization changed profoundly the competitive environment of financial institutions. In particular, the lifting of lending and deposit rate ceilings opened the way to more competition. Whereas previously obtaining a loan was often conditional on a close banking relationship and--as a result--a sizable segment of potential borrowers was credit constrained, now banks could use interest rates as strategic variables. This shift to more price competition triggered a move from "relationship banking" to "transaction-based banking." The breakdown of close banking relationships not only meant a weakening of banks' ability to assess credit risks and to monitor borrowers, but also facilitated entry of banks and nonbank financial institutions into new segments of the credit market. Banks increasingly emphasized the potential role of fee income (at the expense of traditional interest income) which caused them to become much more active in investment banking. 3/

Such heightened competitive pressures created considerable uncertainty about the new banking environment. In particular, the dense branch networks and sizeable bank capacity that had been built up to compete for customers were becoming less viable. To secure their positions in the deregulated environment, many banks felt compelled to aggressively expand their lending by accommodating the surging loan demand. The higher risk taking was supported by strong incentives that in part stemmed from banks' thin capitalization and from moral hazard due to explicit or implicit unlimited deposit insurance coverage and the expectation that no bank would be allowed to fail in case of a financial crisis. 4/

a. Lending growth

In Norway, during 1980-87 the share of state-owned banks in the credit market declined from about 40 percent to 20 percent. This was mainly due to

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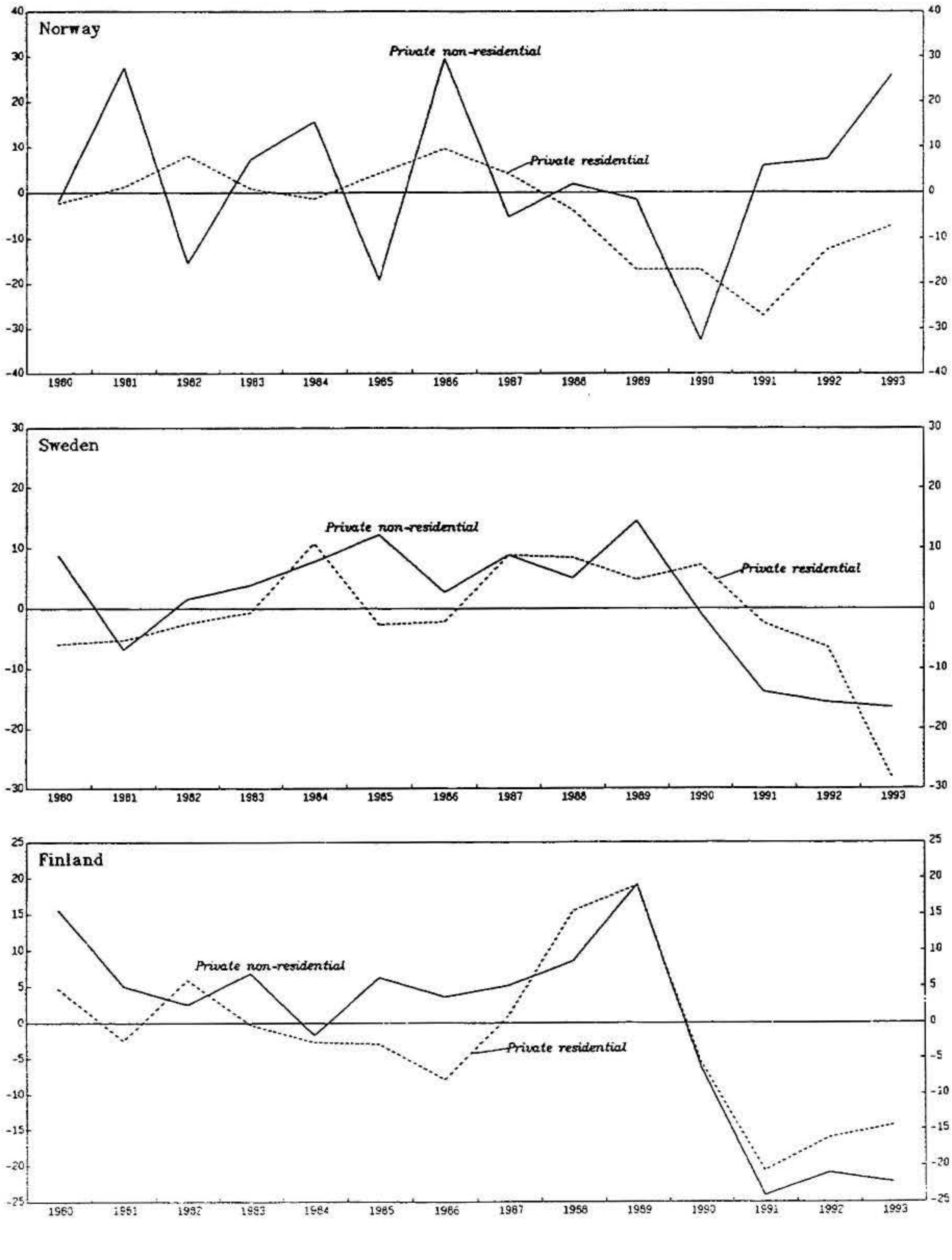
1/ Brunila and Takala (1993).
2/ See Goldstein et al. (1993).
3/ See OECD (1992).
4/ In Sweden, there was no explicit deposit insurance scheme. In all three countries the central bank authorities explicitly acknowledged that no bank would be allowed to fail.

CHART 5
NORWAY, SWEDEN, AND FINLAND
REAL GROSS FIXED CAPITAL FORMATION
(Percentage change)



Sources: OECD; and national authorities.

the strong increase in lending by private credit institutions: the market share of private banks on the credit market rose from about 43 percent to 50 percent, while the share of private nonbank financial institutions increased from 17 to 30 percent.

Similarly, the combined balance sheet for all Swedish banks more than doubled between 1985 and 1990, growing at an average annual rate of over 15 percent. The growth in bank lending, however, even exceeded the growth in banks' balance sheets. From a low of 45 percent in 1985, bank loans as a proportion of banks' balance sheets rose to 57 percent in 1990 and to 60 percent in 1992.

In Finland, commercial banks and cooperative banks increased their lending in 1988 by up to 30 percent; savings banks expanded their lending at an even faster rate (Chart 6). 1/ Particularly rapid was the credit growth by Skopbank, the central institution of the savings banks, which increased its lending by 50 percent in 1987 and maintained high growth rates in 1988 and 1989. 2/ At the same time, deposit banks as a group gained market share from other financial institutions.

b. Changes in loan portfolios

The aggressive bank lending policies were accompanied by a noticeable increase in risk taking, as banks shifted their loan portfolios toward more cyclical sectors, such as real estate and construction as well as services, and toward loans denominated in foreign currency. Significant shifts occurred also in the structure of lending by different financial institutions. In Finland, for instance, savings banks increased their market share on the credit market and moved aggressively into corporate lending. Because large corporations had well-established relationships with commercial banks and increasingly borrowed directly on financial markets, savings banks had to focus on more risky corporate borrowers, including medium- and small-sized businesses that had previously been more or less neglected by the large commercial banks. The share of loans from savings and commercial banks to the domestic service sectors (like trade, restaurants, and hotels) increased moderately, while the lending share to the construction industry, real estate and business services showed the highest increase. 3/

Most commercial banks in Finland (Skopbank in particular) had heavily concentrated loan exposures, mostly to connected nonfinancial corporations. That was possible since prior to 1991 there had been no regulations that

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1/ See Koskenkylä and Vesala (1994), and Koskenkylä (1994) for an analysis of balance sheet growth.

2/ Skopbank was the first bank subsequently to encounter financial difficulties.

3/ Solttila and Vihriala (1994) identify growth of lending as the major factor explaining savings banks' subsequent credit losses during the banking crisis.

limited the exposure to individual borrowers. Although exposure limits were in effect in Sweden, some Swedish banks attempted to circumvent the limits by lending to property developers indirectly through finance companies. 1/

After foreign exchange restrictions had been gradually lifted, foreign-currency denominated lending to domestic firms increased in all three countries, but particularly rapidly in Finland. Finnish commercial banks increased the share of foreign currency loans from about 22 percent of their total loan portfolio in 1986 to almost 43 percent in 1991. Even savings banks, which in 1986 had almost no loans denominated in foreign currency on their balance sheets, by 1990 were lending 12 percent of their loans to the public in foreign currency.

c. Funding of credit expansion

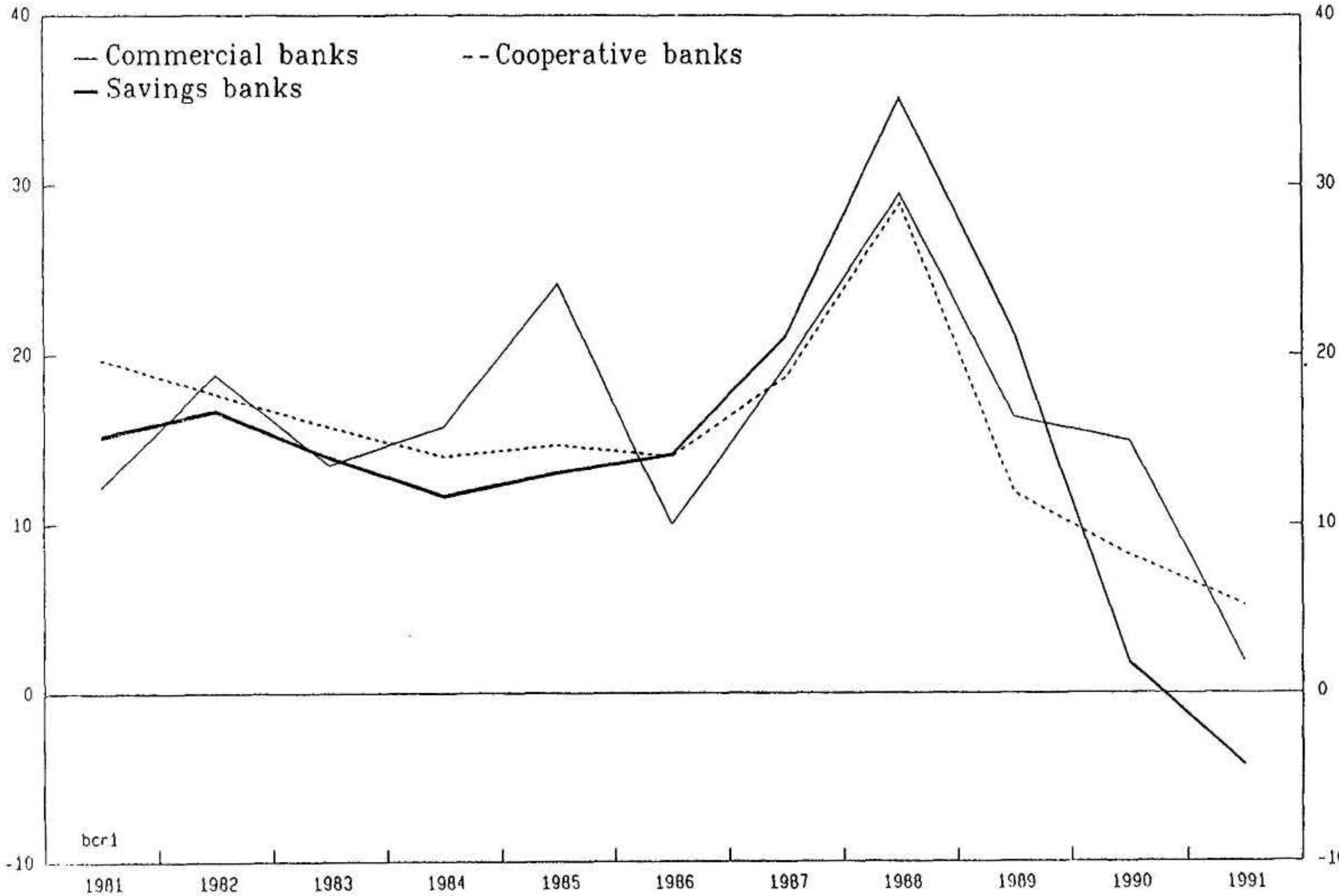
At the same time as bank lending opportunities expanded, banks' capabilities to fund the rapid credit expansion improved significantly. Evidence from other countries suggests that, in the aftermath of financial liberalization, the volume of credit grows significantly faster than the volume of bank deposits. 2/ The same phenomenon happened in the Nordic countries (Chart 7). Traditionally the Nordic banks financed their assets almost exclusively through bank deposits, whereas after financial liberalization banks resorted increasingly to other mostly market-based funding sources. In 1983, the Norwegian loan-to-deposit ratio was 0.9 for commercial banks and 0.8 for savings banks. By 1987, the loans-to-deposit ratios had risen to 1.5 and 1.2, respectively. Bank lending as a percent of total assets expanded in Sweden by about 10 percentage points between 1985 and 1990, whereas the share of deposits shrunk by about the same amount. In Finland, the ratio of bank loans to deposits, which had been rather stable in the past, rose from 1.3 in 1985 to 1.8 in 1990.

To finance their asset growth, banks depended increasingly on the money market and on foreign funding, which tend to be much more volatile than retail deposits. The shift also meant higher funding costs. In Norway, for example, the interbank rate, which reflected borrowing costs in the money market, was more than five percentage points above the average deposit rate during most of the 1980s. Since bank deposits as a percent of total assets declined and the share of money market funding increased, banks' funding costs rose sharply. In Norway, the lending boom was also partially fuelled by liquidity from the central bank.

1/ Bank Support Authority (1993).

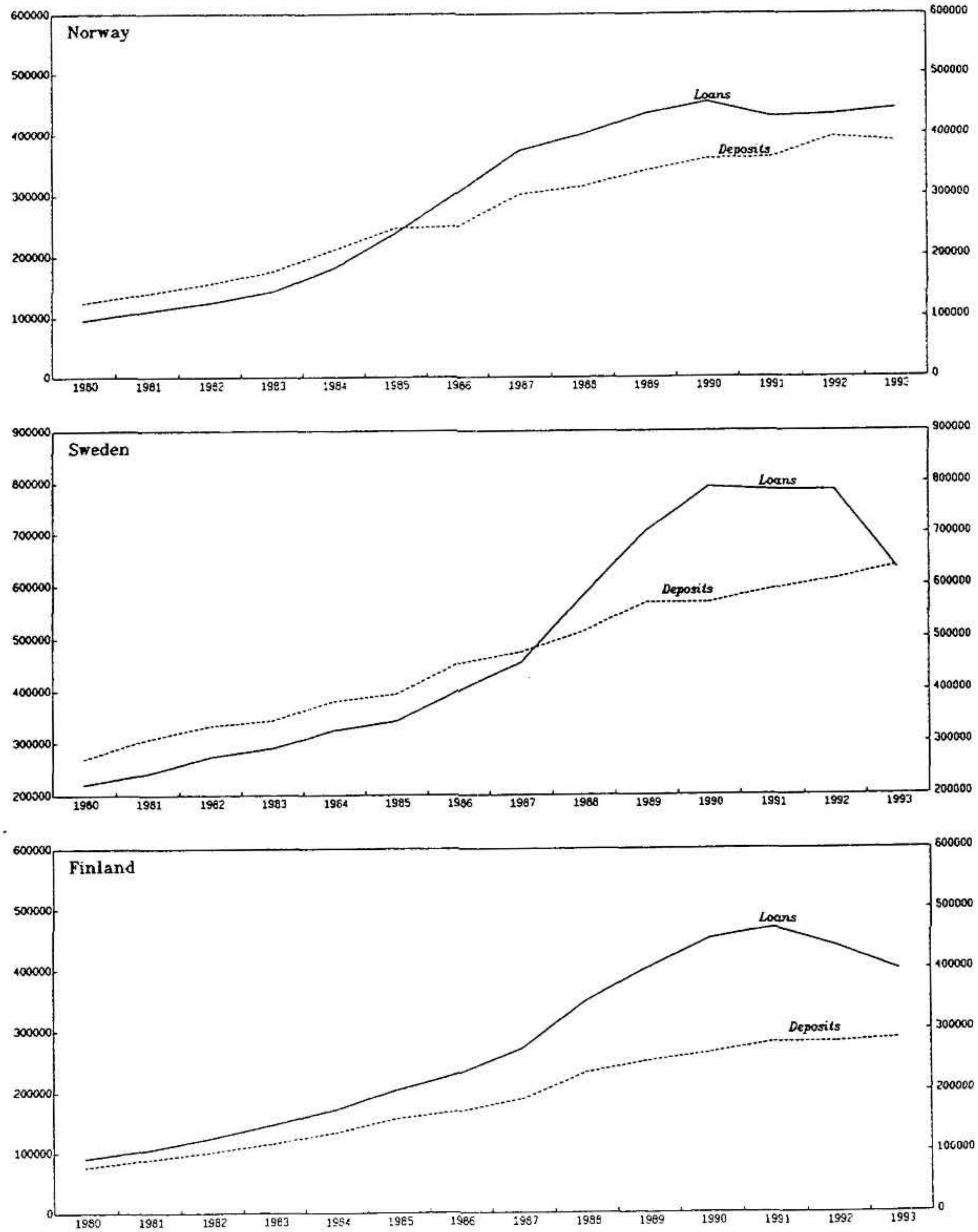
2/ Bisat, Johnston, and Sundararajan (1992).

CHART 6
FINLAND
POSIT BANKS: CREDIT GROWTH
(In percent)



Source: Data provided by the Finnish authorities.

CHART 7
NORWAY, SWEDEN, AND FINLAND
DEPOSITS AND LOANS
(In millions of national currency)



Sources: International Financial Statistics, and national authorities.

d. Pricing policies

More intense competition in the three Nordic banking systems is illustrated by the behavior of lending rates. In all three countries, real lending rates actually rose at the time of lending rate liberalization, and then declined in Finland and stayed constant in both Norway and Sweden (Chart 8). The initial relatively sharp rise could reflect in part the liberalization of lending rates, but it does not appear that banks used their new discretion to raise lending rates noticeably. 1/ Instead, banks appear to have employed market-share strategies after deregulation. This impression is underscored by the continuous decline of real rates of lending in Finland and Sweden between 1985 and 1988 when deflated by the average of the actual inflation in the following three years. Moreover, the rates on new lending remained below the money market rate until the late 1980s in Norway and below the yield on public issues in Finland. This suggests that banks did not raise lending rates to appropriate levels that would have compensated them sufficiently for the risks associated with the rapid expansion of lending and for the increased cost of funding as banks in all three countries relied heavily on money markets and foreign funds rather than deposits. Competition seems to have held back the continued upward adjustment in lending rates after the liberalization. When the adjustment finally occurred in the early 1990, many borrowers with variable rate loans, which were predominant, were hit by surprise. What is more, the surge in interest rates coincided with a tightening of the tax treatment of interest payments and a decline in inflation which as a result raised after-tax loan rates substantially.

While the net interest income of Norwegian savings banks declined merely from 3.9 percent of total assets to 3.6 percent during 1985-88, net interest income of commercial banks as a percent of total assets declined steeply from about 3.4 to 2.6 percent. This fall can be explained by three main factors: the growing dependence on more expensive money market funding rather than deposits; an increase in nonaccrual loans; 2/ and the reduction in credit commissions (which in Norway are included in net interest income). 3/

Net interest income (as percent of assets) of Finnish commercial banks became more volatile after deregulation but on average was only insignificantly lower in the late 1980s than prior to deregulation. Whereas the net interest income of cooperative banks continued to decline slowly, the net income of savings banks dropped rapidly after 1987. The income drop of savings banks was mainly due to a faster rise in interest expenses that appears to have been the result of the more aggressive expansion in the savings bank sector. The decline in the interest rate spread in Finland at

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1/ The sharp increase in real lending rates could also reflect lower than expected inflation in 1986.

2/ Non-accrual loans are potential bad loans that have not yet been entered as losses, but are instead debited to the banks' earnings.

3/ See Atler Berg et al (1992) and (1993).

the time of the credit boom also suggests more intense competition among financial institutions. The spread between the rate on new lending and the rate on total funding dropped to just below 4.5 percent in the boom years 1988 and 1989 from about 5.3 percent in 1986-87. In 1990, the spread reached a peak of 5.4 percent.

In Sweden, banks' net interest income was slightly higher during the credit boom of 1986-88, before it dropped back to its level of the early 1980s. 1/ Similar to the experience of Norway and Finland, the decline in Swedish interest rate spreads at the time of the credit boom suggests heightened competition among financial institutions. The interest rate spread between household lending rates and deposit rates dropped to below 4 percentage points in 1986 but then rose sharply in the second half of 1989, reaching almost 7 percentage point at year-end.

Overall, the vulnerability of banks to credit losses increased in all three countries since no additional operating profits were being generated during the lending boom to compensate for the greater lending risks (Table 4).

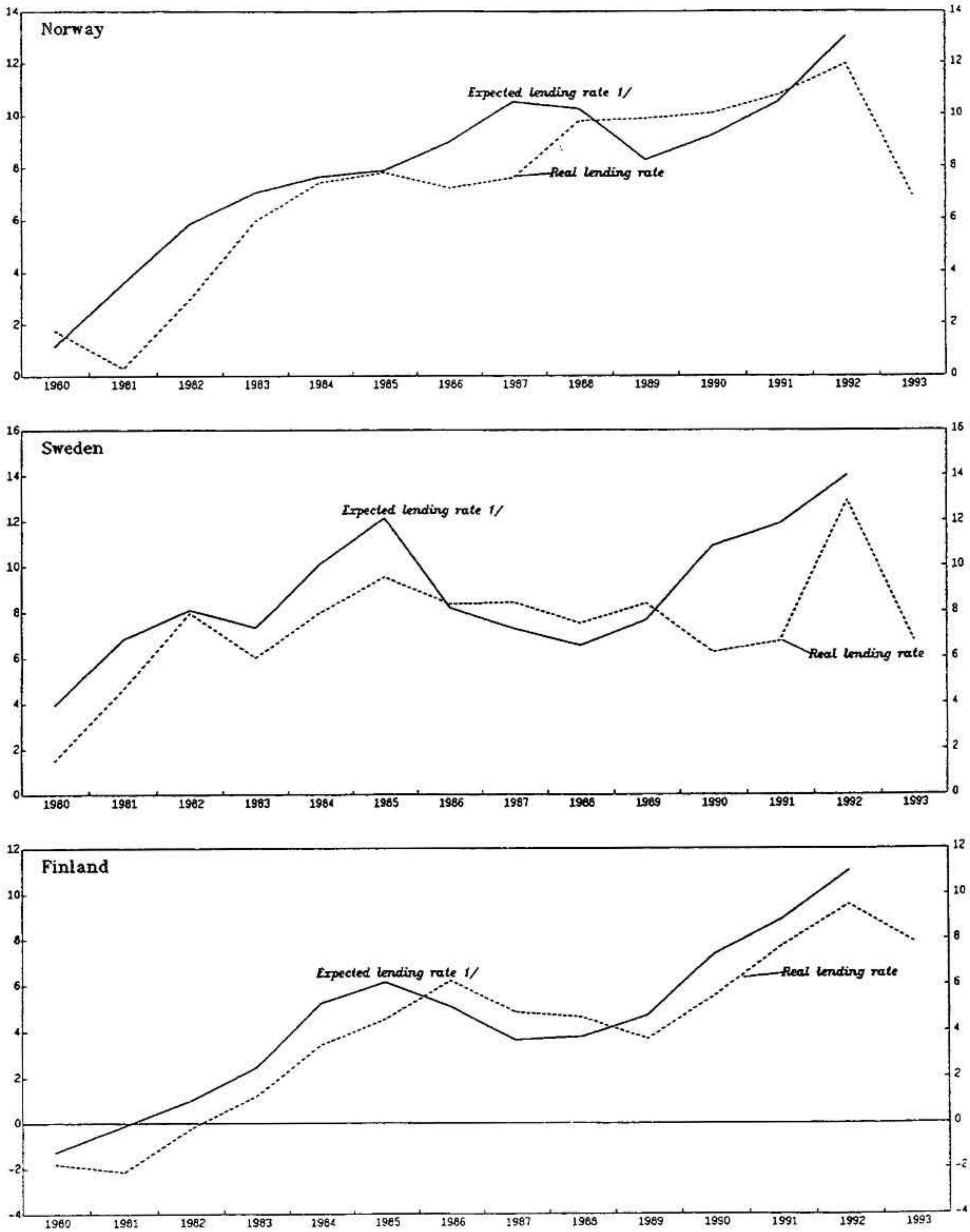
e. Incentives for increased risk-taking

A central question about the Nordic banking experience in the late 1980s concerns the banks' economic motivation and their underlying incentives for the sharp increase in bank lending, and more importantly, in risk taking. Several factors appear to have contributed to the banks' behavior. These include moral hazard incentives stemming from implicit "no-bank-will-fail" policies of the state and reduced bank franchise values due to lower rents in the banking industry after liberalization; economic euphoria and myopia that resulted in risk-taking behavior and insufficient adjustment of internal control incentives and business practices to the new environment. 2/ Moreover, banks seem to have underestimated the increased risks due to changed bank-customer relationships and risks involved in asset-based lending.

To elaborate, banks entered the 1980s poorly capitalized, regardless whether bank equity is measured in terms of book or market value. They had thus little cushion against loan losses, that made them vulnerable to adverse economic shocks and gave them a strong incentive for risk taking to

1/ See Dahlheim and Strom (1991), Dahlheim, Strom and Nedersjo (1992) and Lind and Nedersjo (1994).
2/ See Guttentag and Herring (1993).

CHART 8
NORWAY, SWEDEN, AND FINLAND
LENDING RATES
(In percent)



Sources: International Financial Statistics; and national authorities.

1/ Calculated as lending rate minus 3-year forwarded average of inflation.

Table 4. Norway: Bank Profitability, 1980-93

(In percent of average total assets)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Commercial banks														
Net interest margins	3.17	3.06	3.03	3.39	3.10	2.77	2.78	2.71	2.62	2.98	2.55	2.45	2.78	3.07
Net operating expenses	2.19	2.00	2.05	2.01	1.69	1.50	1.33	1.72	1.18	1.15	1.70	2.33	2.32	2.32
Net operating profits	0.98	1.06	0.98	1.38	1.41	1.27	1.45	0.99	1.44	1.64	0.79	-0.01	1.00	2.00
Loan losses	0.13	0.07	0.17	0.20	0.24	0.35	0.50	1.03	1.57	1.60	1.96	4.28	2.25	1.41
Profits before taxes	0.85	0.99	0.81	1.18	1.17	0.92	0.95	-0.04	-0.13	0.04	-1.17	-4.29	-1.25	0.58
Savings banks														
Net interest margins	3.92	4.52	4.60	4.64	4.44	3.87	3.70	4.03	3.62	4.14	3.85	3.79	4.34	4.73
Net operating expenses	2.85	2.90	2.41	3.16	3.06	2.83	2.49	2.56	2.43	1.74	2.46	2.77	3.17	3.03
Net operating profits	1.07	1.62	2.19	1.48	1.38	1.04	1.21	1.47	1.19	1.94	1.28	0.90	1.87	3.21
Loan losses	0.04	0.06	0.07	0.13	0.15	0.18	0.27	0.84	1.23	2.24	2.05	2.11	1.83	1.19
Profit before taxes	1.03	1.56	2.12	1.35	1.23	0.86	0.94	0.63	-0.04	-0.30	-0.77	-1.21	0.04	2.03

Table 4 (Continued). Sweden: Bank Profitability, 1980-93 1/

(In percent of average total assets)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Commercial banks														
Net interest margins	2.10	2.15	1.99	2.27	2.21	1.99	2.61	2.43	2.36	2.09	2.09	2.11	3.32	4.14
Net operating expenses	0.98	0.92	0.73	0.62	0.70	0.65	0.43	0.90	0.73	0.69	0.79	0.78	2.27	2.18
Net operating profits	1.12	1.24	1.26	1.65	1.52	1.34	2.18	1.53	1.62	1.40	1.36	1.33	1.06	1.96
Loan losses	0.05	0.11	0.35	0.28	0.39	0.23	0.34	0.24	0.17	0.18	0.62	1.83	3.37	3.18
Profits before taxes	1.07	1.13	0.91	1.38	1.12	1.11	1.85	1.29	1.45	1.22	0.68	-0.50	-2.31	-1.22
Cooperative banks														
Net interest margins	2.72	3.15	3.33	3.69	3.70	4.08	4.50	4.50	4.69	4.84	3.87	3.94	--	--
Net operating expenses	2.15	2.15	2.17	2.27	2.53	2.80	2.77	3.10	3.04	2.96	2.16	2.17	--	--
Net operating profits	0.57	1.00	1.17	1.42	1.17	1.28	1.73	1.40	1.65	1.88	1.71	1.77	--	--
Loan losses	0.01	0.02	0.05	0.07	0.07	0.18	0.18	0.19	0.18	0.31	0.65	2.80	--	--
Profits before taxes	0.56	0.98	1.12	1.35	1.10	1.10	1.56	1.21	1.47	1.57	1.06	-1.03	--	--
Savings banks														
Net interest margins	2.64	3.09	3.22	3.60	3.59	3.94	4.21	4.05	4.13	4.11	4.55	4.53	4.17	6.83
Net operating expenses	1.88	1.87	1.95	2.09	2.26	2.39	2.19	2.63	2.49	2.54	2.42	2.47	2.53	3.14
Net operating profits	0.76	1.22	1.27	1.50	1.34	1.55	2.02	1.42	1.63	1.57	2.13	2.06	1.64	3.69
Loan losses	0.02	0.03	0.07	0.11	0.16	0.29	0.42	0.28	0.29	0.36	1.09	3.85	4.46	2.15
Profit before taxes	0.75	1.19	1.20	1.39	1.18	1.26	1.60	1.14	1.34	1.21	1.04	-1.79	-2.82	1.54

1/ The cooperative banks formed a single "system" of cooperative banks during 1992 and was converted to a commercial bank. The figures for the commercial banks for 1992-93 reflect this change.

Table 4 (Concluded). Finland: Bank Profitability, 1980-93

(In percent of average total assets)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Commercial banks														
Net interest margins	2.28	2.19	2.14	1.68	1.64	1.65	1.24	1.53	1.59	1.36	1.51	1.25	1.12	1.37
Depreciation	0.33	0.31	0.26	0.23	0.24	0.25	0.22	0.23	0.24	0.25	0.23	0.43	0.27	0.33
Net operating expenses 1/	3.58	3.37	3.19	2.83	2.78	2.73	2.34	2.34	2.42	2.23	2.17	2.27	2.02	2.09
Net operating profits	0.72	1.00	1.06	0.77	0.87	1.17	0.93	1.07	1.32	0.73	0.68	0.23	0.37	0.66
Loan losses	0.02	0.03	0.06	0.07	0.07	0.08	0.11	0.17	0.23	0.27	0.30	0.96	2.30	2.42
Profits before taxes	0.71	0.97	0.99	0.70	0.80	1.09	0.82	0.90	1.09	0.46	0.38	-0.73	-1.93	-1.76
Cooperative banks														
Net interest margins	3.71	3.73	3.66	3.50	3.34	3.36	3.19	3.27	3.21	2.90	3.10	2.98	2.47	2.99
Depreciation	0.20	0.20	0.24	0.21	0.24	0.19	0.18	0.18	0.16	0.15	0.16	0.18	0.19	0.19
Net operating expenses 1/	4.23	4.20	4.26	4.08	4.07	4.03	4.02	3.95	3.84	3.66	3.65	3.80	3.96	3.97
Net operating profits	0.67	0.71	0.77	0.71	0.66	0.77	0.72	0.91	1.15	0.77	0.95	1.15	1.16	0.59
Loan losses	--	--	--	0.02	0.02	0.02	0.06	0.19	0.19	0.16	0.18	0.39	1.13	2.24
Profits before taxes	0.67	0.71	0.77	0.69	0.64	0.75	0.67	0.73	0.96	0.60	0.78	0.76	0.03	-1.65
Savings banks														
Net interest margins	3.57	3.57	3.83	3.50	3.10	3.28	3.28	3.27	3.05	2.65	2.53	2.09	0.36	1.50
Depreciation	0.28	0.26	0.36	0.31	0.22	0.23	0.25	0.28	0.27	0.16	0.18	0.11	1.46	0.77
Net operating expenses 1/	4.52	4.49	4.97	4.77	4.49	4.48	4.57	4.60	4.02	3.68	3.37	3.41	5.55	5.06
Net operating profits	0.59	0.66	0.69	0.53	0.40	0.63	0.67	0.84	0.88	0.63	0.93	0.53	-2.49	-1.64
Loan losses	--	--	--	--	--	0.04	0.04	0.11	0.12	0.18	0.36	0.94	6.80	3.30
Profit before taxes	0.59	0.66	0.69	0.53	0.40	0.60	0.64	0.72	0.76	0.45	0.56	-0.41	-9.29	-4.94

1/ Including depreciation.

maximize the option value of deposit insurance. 1/ In Finland and Norway,the book-value ratio of shareholder equity to total assets of all banks ranged from 2 percent to 2-1/2 percent. The financial strength of the Norwegian banking industry was further weakened by allowing subordinated debt to count as equity capital. By 1990, the subordinated debt of Norwegian commercial banks represented about 3/4 of their equity capital. The Swedish banks had also low--yet somewhat higher--capital ratios in the range from 3 1/2 percent to 4 1/2 percent.

In principle, leverage-related and risk-related costs (such as bankruptcy costs) may restrain the risk-taking incentive of banks, as can regulatory costs that potentially change with the riskiness of a bank's portfolio and its capitalization. 2/ Taken together, the reduced regulatory costs that were associated with deregulation and the low equity ratios, however, provided a strong incentive to accommodate the surge in credit demand and to bear more risk.

The trend toward riskier lending could also have resulted from the diminished franchise values of deposit banks as a consequence of deregulation and increased competition. 3/ Prior to the mid-1980s, banks in Finland, Norway, and Sweden operated in highly regulated markets that tended to thwart competition and to allow banks to earn considerable rents (excess profits) from the provision of financial services. 4/ But instead of benefiting shareholders, these rents appear to have been used by banks to boost the scale of their operations. This was particularly apparent in the

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1/ The incentive for bank risk taking tends to rise as the relative share of equity financing declines. See, for example, Furlong and Keeley (1989). In Finland, deposit insurance funds for savings and cooperative banks have been in existence since the 1930s, for commercial banks since the 1960s. Deposit insurance was made mandatory in 1969. The insurance coverage is unlimited. The insurance funds are operated by their member banks and charge a flat-rate premium. Their resources, however, proved highly inadequate for the banking crisis.

2/ Shrieves and Dahl (1992).

3/ A related proposition regarding the impact of liberalization on bank risk taking focuses on the erosion of rents accruing to shareholders. This argument has been applied to U.S. bank performance by Keeley (1990) and Fries (1994). For a discussion of this proposition in the context of the Nordic countries, see Lewellyn (1992).

4/ Rents accruing to shareholders can be measured by the ratio of the market value to the book value of their assets (Tobin's q ratio). Lindberg and Ross (1981), pioneered the use of Tobin's q ratio as a measure of excess profits. See Keeley (1990) and Fries (1994) for an application to the banking industry. The basic premise behind this measure is that the capitalized value of any excess profits is reflected in the market value but not the book value of bank assets. For selected banks in Finland, Norway, and, Sweden, Tobin's q ratios were not significantly higher than 1 prior to financial liberalization, pointing to the absence of excess profits accruing to shareholders (Fries (1993)).

case of Finland and Norway where an extensive branch network, high operating costs, and low profits prevailed. In principle, deregulation leads to a fall in the future profitability and thus tends to reduce rents in the banking industry. With less scope for discretionary expenditures, bank managers in Finland, Norway, and Sweden, like their shareholders, had less to lose from increased risk taking after financial liberalization.

Fearing that they could lose ground in the vigorous competition touched off by liberalization, many banks, in particular some large banks, pursued aggressive lending policies as a preemptive response and were prepared to accept the higher risk involved. In this context, the aggressive lending behavior of the Finnish savings banks following a loss of market share in the early 1980s may not be surprising in hindsight. They probably faced the biggest scope for risk taking due to their ownership structure--they can be characterized as managerially controlled banks without shareholders to monitor behavior. Moreover, savings banks shared their credit risks through a system of mutual loan insurance. Since individual institutions accordingly did not bear the entire default risk, this system created potentially a strong incentive to grant risky loans. To what extent the scope for risk taking was actually used, however, depended on bank management, as illustrated by the Finnish cooperative banks. Though cooperative banks shared many structural characteristics of savings banks, including mutual loan insurance, they pursued a more cautious lending strategy.

Beyond changes to incentives, financial liberalization also altered traditional banking relations with adverse implications for banks' ability to monitor the creditworthiness of customers. Before deregulation, close relationships existed between banks and their borrowers due to credit rationing. After market forces became dominant on the credit market, transaction-based banking largely replaced relationship banking. In that connection, banks appear to have underestimated the increased risk of the larger pools of borrowers to whom they were lending. Moreover, banks' internal credit policies and control mechanisms appear to have been inadequate for the task of assessing credit risks and of monitoring debtors in the new deregulated environment; in particular, risk monitoring was weak. In the case of Swedish and Finnish commercial banks, complicated cross share holdings with nonfinancial corporations provided ample opportunity for connected lending, and--since there were no limits on the size of exposures, for instance in Finland--credit exposures often exceeded prudent limits. 1/ In addition, although significant interest rate risks were shifted to the borrower since most loans carried variable interest rates, banks did not anticipate adequately the possibility that a surge in interest rates can turn a borrower's interest rate risk into the bank's credit risk, as demonstrated in the early 1990s in Sweden and Finland when monetary conditions were sharply tightened.

1/ The Finnish Deposit Bank Act of 1991 introduced exposure limits.

The experience in the Nordic countries also illustrates the potential pitfalls of asset-based lending. Banks appear to have misjudged the initial upward pressure on asset prices as a sustained trend justified by favorable fundamentals. With the steady and often spectacular increases in prices, banks were prepared in some cases to provide nearly 100 percent financing for asset purchases, requiring only that the asset serve as collateral. The absence of significant equity stakes by some borrowers left them vulnerable to an economic downturn and asset price deflation. High leverage itself may also have contributed to an adverse selection problem among borrowers. 1/

3. Policymakers' response

The response by policymakers was inadequate in three respects. The authorities failed to tighten prudential bank regulation; the favorable tax treatment of interest payments was not reformed until well after the credit boom; and monetary conditions were not tightened in a timely manner and to a sufficient extent.

It is now widely recognized that economic deregulation needs to be supplemented by a strengthening of prudential regulations. 2/ But in the Nordic countries little emphasis was given at the time of deregulation to strengthening and adapting prudential safety-and-soundness regulations to the new competitive environment. Even after deregulation, the bank supervisory offices in the Nordic countries continued to focus merely on the banks' compliance with regulation and did not review in depth the banks' lending practices and risk management policies. Furthermore, at the height of the credit expansion by banks, the banking supervisory offices in Norway and Sweden were merged with the insurance supervisory bodies and devoted special attention to developing capital markets and less attention to the banking system. The frequency of routine on-site inspections--rather than being increased--was sharply reduced as a result of the explicit move toward "document-based supervision." In Finland, direct supervision and on-site inspections of savings and cooperative banks remained the sole responsibility of their own supervisory bodies.

With high marginal tax rates, the tax-deductibility of interest expenses meant that the real cost of capital was low during most of the 1980s; the real capital costs of home ownership were in fact markedly negative. Under such circumstances, one might have expected a tightening of the generous tax deductibility of interest payments. Yet mainly due to political reasons, the authorities did not correct these incentives at the time of deregulation, instead tax reforms were delayed until 1988 in Norway (when marginal tax rates were lowered) and 1990/91 in Sweden and Finland

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1/ Stiglitz (1993).
2/ White (1991).

(when marginal tax rates were lowered and the deductibility of interest payments was curtailed). 1/

Despite the sharp lending growth and the surge in private indebtedness, monetary conditions were not immediately tightened. Norges Bank sharply increased substantially central bank credit to banks from 3 percent to 23 percent of the private credit extended by banks in 1986, following the 10 percent devaluation of the Norwegian krone that was triggered by a decline in oil prices. 2/ The increase in the banks' borrowing facility was a deliberate measure to offset an anticipated decline in foreign borrowing (which never materialized). In Finland, the exchange rate peg initially constrained the monetary policy response but in early 1989 the markka was revalued by 4 percent and a special reserve requirement was imposed to slow the growth in bank lending. Yet some banks, in particular savings banks, chose to pay the penalty rates instead of curtailing their lending growth. 3/

V. Boom-and-Bust Cycles and the Banking Crises

In the previous section, we discussed the microeconomic response to deregulation, now we turn to the macroeconomic environment following deregulation. All three countries experienced a pronounced long-lived boom-and-bust cycle. Against that background, we will argue that financial liberalization and the accommodative macroeconomic policies contributed significantly to the economic boom, but at the same time made the economies more susceptible to macroeconomic shocks as long as economic agents had not fully adjusted their behavior to the new regulatory environment.

1. The boom-and-bust cycles

The economic boom followed a similar pattern in the three countries. 4/ The initial impulse came from abroad when exports rose, such as in Norway in the early 1980s, or the terms of trade improved significantly as in Sweden and Finland after the oil price decline in 1986 and the surge in world market prices for paper and pulp products in the late 1980s. These initial effects spilled over strongly into domestic demand. In particular, private consumption rose sharply as employment and incomes rose; the initial stimulus was amplified by easier access to credit after the deregulation and rising wealth due higher asset prices, with the result that in Norway and Sweden the household saving rate became negative. The domestic boom,

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1/ The Swedish tax reform lowered to 30 percent the share of interest expenses that could be deducted from taxable income (Bank Support Authority 1993). In Finland, the deductibility was reduced in steps between 1990 and 1993.

2/ At the end of 1987 central bank financing accounted for 28 percent of the commercial banks' total assets and 14 percent of savings banks' total assets.

3/ Nyberg and Vihriälä (1994).

4/ See Jonung et al (1994).

that was also characterized by sharply higher investment activity, was reinforced also by the rapid expansion of credit that fuelled speculation in shares and real estate, which in turn raised wealth levels and thus made additional borrowing possible. Monetary policy options to limit the expansionary effects of deregulation were, however, constrained by fixed exchange rate regimes; and fiscal policies appeared to have been not sufficiently tight.

In Norway, the downturn was experienced earlier than in the other two countries due to Norway's heavy dependency on oil exports. The negative terms of trade shock that resulted from the sharp decline in oil prices in 1986 however did not immediately cause a recession in Norway, and lending growth persisted in part aided by the additional liquidity that Norges Bank provided following the devaluation in 1986.

By the late 1980s, it became increasingly clear also in Sweden and Finland that neither the upward trend in asset prices that was in part driven by overly high inflationary expectations nor the favorable macroeconomic conditions would last and that much of the recent borrowing had pushed private indebtedness to unsustainable heights. The tax reforms in the Nordic countries, in combination with a tightening of monetary policy and lower inflation raised real after-tax lending rates noticeably and contributed to the sharp drop in property and share prices. In response, households began to consolidate their financial positions by cutting back on consumption, and businesses decreased investment considerably (Chart 9). As a result, all three Nordic countries entered a deep recession that in turn accelerated the asset price deflation. Compounding the initial domestic demand shock was the collapse of trade with CMEA countries in 1990-91, which affected Finland in particular, and the drop in paper and pulp prices in the world market.

In addition, the depreciation of the Norwegian krone in 1986, the Finnish markka in 1991-93, and the Swedish kronor since 1992 increased the domestic-currency value of foreign-currency denominated debt. This was particularly significant for Finland and Sweden since in the late 1980s more than half of the borrowing by the Finnish corporate sector was denominated in foreign currency and, moreover, almost half of the foreign currency loans had gone into the domestic sector. 1/ The depreciation was particularly burdensome for firms in the sheltered sectors that lacked foreign currency earnings. 2/ In general, it became increasingly difficult for small and medium-sized firms to gain access to outside financing. In some cases, even viable firms faced bankruptcies since they were unable to ease liquidity problems through new borrowing. Bankruptcy rates reached record levels in all three countries (Chart 10). 3/ The financial problems of highly

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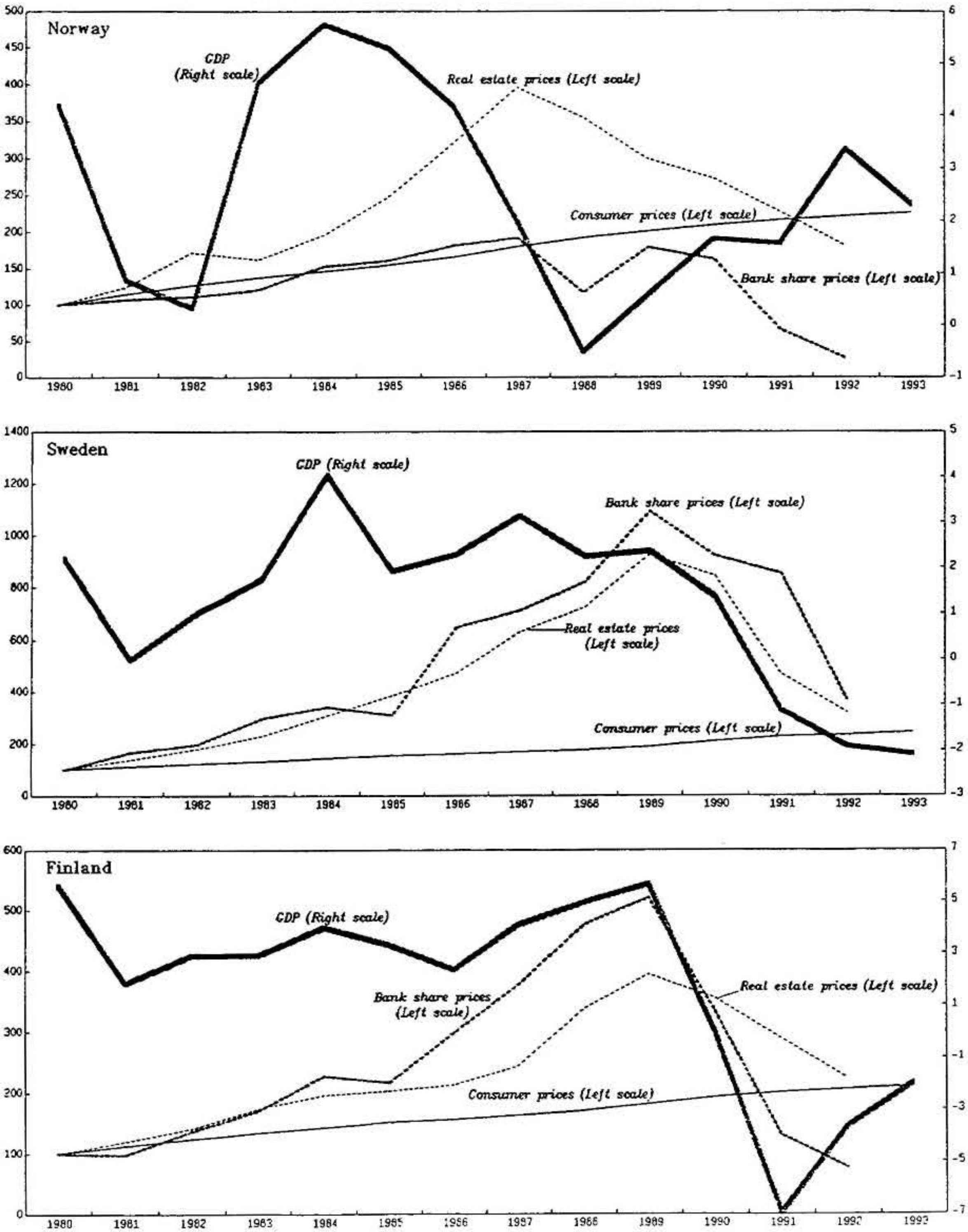
1/ Brunila and Takala (1993).

2/ However, the effect on the export sector was not unambiguously negative due to its improved external competitiveness.

3/ In Norway, during 1986-89 the number of corporate bankruptcies rose by 40 percent annually.

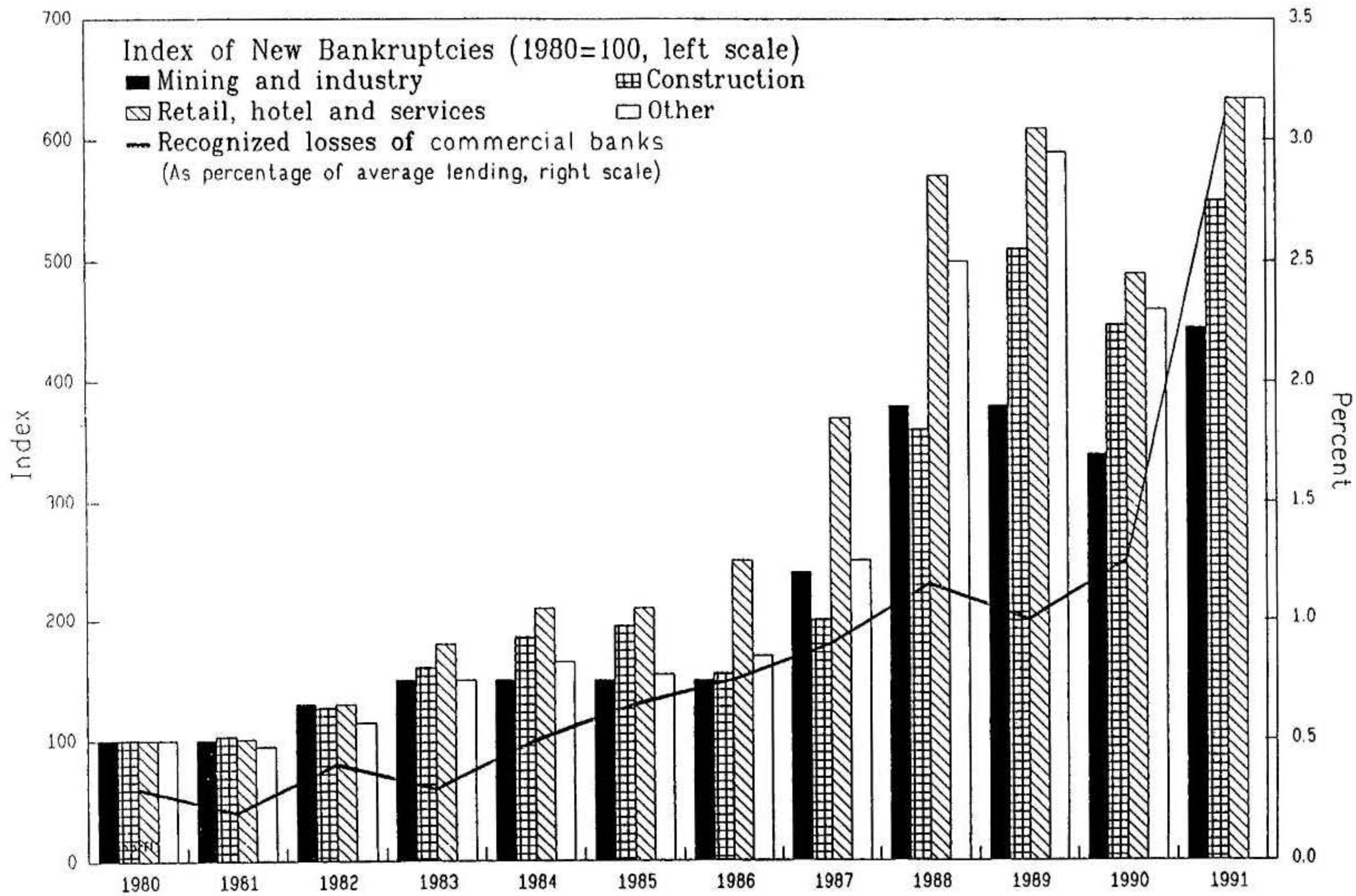
CHART 9
NORWAY, SWEDEN, AND FINLAND
GDP AND PRICE INDICATORS 1/



Sources: International Financial Statistics; and national authorities.

1/ GDP is in real terms, percentage change; price indicators (1980=100).

CHART 10
NORWAY
LOAN LOSSES AND BANKRUPTCIES



Source: Report by the Commission on the Banking Crisis (Norway).

indebted corporate and private borrowers led to a sharp rise in banks' nonperforming loans. The accumulation of losses and repayment difficulties in the nonfinancial sector as well as the decline in collateral values thus quickly translated into losses in the financial sector that led to the banking crises.

2. The banking crises

Both in Norway and Sweden, finance companies were the first to show the effects of the emerging crisis in 1986-87 and 1990-91 respectively. Losses of the finance companies in both countries--mainly from property investments--exceeded 5 percent of loans, and many of them went out of business or were restructured. With a year lag, it became clear that the difficulties of the finance companies had spilled over to banks because of their involvement in finance companies.

In the first phase of the Norwegian financial crisis, the corporate sector accounted for about 80 percent of loan losses (Table 5). Within the corporate sector, about 50 percent of the loan losses were concentrated in industry and trade, hotels and restaurants sectors, where the losses were highest among small and newly established enterprises. The problems that emerged in the first phase of the crisis, including the heavy loan losses, were regarded as mainly due to bad banking and excessive lending by some small and medium-sized banks. The public did not see any threat to the solidity of the Norwegian banking industry as a whole.

Loan losses, however, unexpectedly surged in 1991 as more banks, including several of the largest, encountered financial difficulties after making heavy loan-loss provisions. Loan losses reached about 6 percent of GDP. The household and corporate sectors accounted for 18 and 75 percent of these losses, respectively. The losses of the corporate market stemmed primarily from the fact that large parts of industry were burdened by weak capitalization and poor liquidity. In contrast to 1988 and 1989, when primarily newly established firms faced problems, in 1990 defaults on loans were mainly incurred by well-established enterprises, especially in the trade, hotels and restaurants, and real estate sectors.

For Swedish bank groups as a whole, credit losses increased to 11 percent of GDP in 1993 (Table 6). A relatively small share of the credit losses was attributable to households (11 percent), while the bulk

Table 5. Norway: Credit Losses

(In percent of total)

	1988	1989	1990	1991	1992
Firms	80	78	76	75	74
Of which:					
Agriculture, forestry, fishing	9	10	9	7	6
Industry	19	8	9	7	6
Construction	5	8	8	8	8
Trade, restaurants, hotels	24	24	22	24	25
Real estate business	16	24	27	29	30
Other	7	4	1	1	1
Households	15	20	17	18	20
Other	5	2	7	7	5

Table 6: Sweden Credit Losses
(In percent of total)

	1991	1992	1993
Households	7	7	11
Non-Financial Enterprises	69	74	72
Swedish Financial Institutions	15	11	3
Non-Swedish Borrowers	5	5	9
Others	4	3	5

increasingly concerned small and medium-sized nonfinancial enterprises (72 percent). Foreign loans accounted for about 10 percent of loan losses. The situation of banks was at first dominated by the real estate crisis: real-estate related losses accounted for four-fifths of total losses in 1991 and about one-half in 1992. However, as the recession deepened, the proportion of nonperforming loans not connected with real estate grew. 1/

In Finland, nonperforming bank loans rose sharply in 1992 to 9.3 percent of banks' total exposure, even after 3.7 percent had been written off as loan and guarantee losses (Table 7). 2/ In 1992 and 1993, almost 60 percent of the loan losses were accounted for by domestic firms, while households were responsible for 25 percent. The largest default rates were in the real estate and the construction sectors. In total, about 40 percent of banks' real estate exposure was either written off as credit losses or was nonperforming in 1992. The same was true for construction loans in 1993. Less than 1 percent of loans to households have been booked as credit losses in 1992 and 1993.

An analysis of financial ratios based on bank balance sheets and income statements reveals certain common trends. 3/ Table 8, which presents some financial ratios for commercial banks that were classified officially as insolvent compared to those that remained solvent reveals that failed institutions funded a larger proportion of their loans by sources other than deposits, in particular through money markets and foreign borrowing. As discussed in section IV, this meant higher funding costs as well as higher exposure to foreign exchange risks. In addition, as far as Norway is concerned, the liquidity provided by the central bank played a much larger role for failed institutions.

Since the Nordic banks, in particular Finnish and Norwegian banks, entered the recession with a relatively small capital base, the huge credit losses eroded the banks' equity positions quickly. The failed institutions in all three countries had much lower capital asset ratios and thus very little cushion against heavy loan losses. In Norway, as was mentioned above, the financial strength of the banking industry was further weakened by allowing more subordinated debt to count as equity capital. In 1990, subordinated debt accounted for 74 percent of the equity capital of commercial banks.

1/ The decline in the share of real estate related nonperforming loans is mainly due to the conversion of some of these loans into real estate holdings by banks.

2/ See Pensala and Solttila (1993) for more information.

3/ The empirical literature on financial institution failures uses cross-sectional data over a given sample period or cross sectional data pooled from different years to identify the determinants of closure by analyzing financial ratios derived from bank balance sheets and income statements. See Demirguc-Kunt (1989) for a detailed survey of the empirical literature on this subject.

Table 7. Finland: Nonperforming Assets and Credit Losses

(In percent of total)

	End-1992				End-1993			
	Nonperforming Assets		Credit Guarantee Losses		Nonperforming Assets		Credit Guarantee Losses	
	Percent	Percent of Exposure	Percent	Percent of Exposure	Percent	Percent of Exposure	Percent	Exposure
Firms	58.9	12.1	7.8	5.9	58.1	12.8	74.6	5.2
Of which:								
Industry	7.5	4.7	8.2	2.2	7.5	4.9	8.6	1.8
Construction	10.1	18.8	11.8	8.8	12.4	26.1	12.2	8.4
Trade, restaurants, hotels	13.4	12.7	14.2	5.4	13.7	14.7	22.4	7.6
Real estate business	16.4	26.8	20.5	13.4	11.8	18.5	19.4	9.6
Other	11.5	10.9	16.5	6.3	12.8	13.2	11.7	3.8
Households	21.1	6.1	6.6	0.8	24.5	7.1	8.7	0.8
Other domestic sectors	6.1	6.0	10.6	4.1	5.2	6.2	2.1	0.8
Foreign countries	13.9	9.8	11.0	3.1	12.2	7.7	15.0	3.0
Of which:								
Former Soviet Union					2.7	83.7	4.9	48.5
Other countries					9.5	6.1	10.1	2.1
All sectors	100.0	9.3	100.0	3.7	100.0	9.6	100.0	3.0

Source: Bank of Finland.

Table 8. Selected Financial Ratios for Commercial Banks

(In percent of total assets)

	Officially Insolvent Banks 1/				Other Banks			
	Norway		Finland	Sweden	Norway		Finland	Sweden
	1989	1991	1991	1991	1989	1991	1991	1991
Loans to public	87.80	90.20	52.10	78.0	61.50	68.20	51.97	47.0
Deposit from public	58.30	54.10	20.30	49.0	53.20	61.30	33.14	38.0
Loans from central bank	26.90	27.40	0.74	11.0	10.10	12.20	0.78	4.0
Equity capital	-5.00	1.90	3.86	4.1	5.10	6.60	6.22	7.6
Net interest income	3.64	2.70	-0.48	--	3.48	3.34	1.26	--
Operating profits before loss	0.49	-0.03	0.07	0.7	1.79	1.40	0.51	2.30
Operating profits after realized losses	-8.25	-4.93	-2.87	-10.4	0.09	-0.89	-0.59	-0.40

1/ Official insolvency is defined as a case where capital is judged inadequate by the regulators and the institution is closed, merged out of existence, taken over by the Government, or sold through purchase-and-assumption agreements.

As a result of problem assets, bank profitability deteriorated sharply in all three countries, and income from financial operations declined due to the loss of interest payments on nonperforming assets and growing loan losses. Operating results before tax in percent of total assets for the Norwegian commercial and savings banks dropped to -3.94 and -0.54, respectively.

On the other hand, earnings--especially in the solvent banks--have been sustained by two factors: the large spread between lending and deposit rates, and the banks' efforts to increase efficiency and reduce costs. For the first time, bank costs in the three countries, particularly in Norway and Finland, declined in early 1990s as banks cut their staff expenses and the number of employees.

VI. The Government Support Measures

It is generally considered important that a banking crisis be resolved quickly to minimize the adverse effects that arise from distorted incentives due to solvency problems. To that end, the authorities can apply a number of support measures, depending on the nature of the crisis. An injection of short-term liquidity into the affected banks would be sufficient in a mere liquidity crisis. In circumstances such as the Nordic banking crises that were characterized by widespread solvency problems, a more active role of the government is usually required. Authorities face the choice of providing capital to the troubled banks without any change in their ownership and operation (sometimes referred to as "open-bank assistance"), or to either liquidate the insolvent banks and pay off depositors and other creditors (not necessarily in full), or to "sell" the troubled bank to a new owner through a so-called purchase-and-assumption arrangement. In the Nordic countries, only very few small banks have been liquidated as a result of the solvency problems. In the majority of cases, the authorities have either assumed ownership (most often with the intention to find a purchaser for the bank in the near to medium term) or have provided funds to banks that continued to operate.

Purchase-and-assumption arrangements preserve the franchise value of banks and are therefore generally preferred over bank liquidations. Such arrangements can be structured in two basic ways as a "whole-bank approach" or as a "clean-bank approach." In the whole bank approach, all bank assets (including the nonperforming assets) as well as all bank liabilities (often including uninsured liabilities) are transferred to the acquiring bank with the objective to keep as many assets as possible under private control to enhance the recovery incentive. To fill the net worth gap, the government provides a so-called "assistance payment" in cash or notes to the acquiring bank. In exchange for assistance, the government sometimes receives warrants that are convertible in shares with the result that the government would share in the upside potential if the bank were to prosper. In addition, such warrants reduce the risk taking incentive of the acquiring bank. If the future value of the nonperforming assets is highly uncertain and it is thus difficult to determine the appropriate assistance payment, authorities can provide "capital loss coverage," that is, they in effect can issue guarantees for the nonperforming assets that remain on the bank's balance sheet and may even provide "yield maintenance payments" by servicing nonperforming loans.

In the clean bank version of purchase-and-assumption agreements, while all liabilities are assumed by the new owner, no assets (or at least no nonperforming assets) are transferred to the acquiring bank. Instead, the assets are lifted into an asset management company, that is sometimes referred to as a "bad bank." The main objective for separating the nonperforming assets from the acquiring bank is to correct its risk taking incentives. Another argument in favor of transferring nonperforming assets to a separate institution lies in the fact that it is a once-and-for-all solution for the authorities (and for the acquiring bank) since the remaining "healthy" bank should be able to manage without further government involvement. In general, a bad bank may represent less direct involvement for the government than an injection of capital or a guarantee of nonperforming assets. Moreover, a specialized institution that deals exclusively with the sale of nonperforming assets may be more efficient in recovering the maximum possible value due to economies of scale and specific expertise. However, as mentioned earlier, a private institution, such as the acquiring bank, that shares in the proceeds of the sale of the bad assets may have an even stronger incentive to maximize the recovery effort than a government-run agency.

In contrast to liquidating a bank or selling it to another bank, as part of open-bank assistance, the government can provide direct support in the form of net worth certificates, promissory notes, cash or other forms of injection of capital as well as by assuming debt or through guarantees to a bank without revoking its charter. This form of bank support can be controversial because it may imply subsidizing the bank's current shareholders by allowing the bank to continue to operate even though it may be insolvent. It is possible that such government assistance has terms (such as interest rates) attached that are below market. Guarantees are particularly difficult to price accurately. More generally, open-bank assistance can entail a form of subsidization that can noticeably distort competition among financial institutions.

In all three Nordic countries, the Government took over a number of large banks. Under such circumstances there exist a wide ranging consensus that the authorities should immediately replace bank management and attempt to privatize these banks as soon as possible to minimize competitive distortions and to provide appropriate incentives for management. Regardless of which specific method of bank support is chosen, the incentives that accompany government bank support should be analyzed carefully to minimize the overall costs of the operation and to keep the distortions created by government intervention small.

1. The Norwegian experience

The banking crisis erupted first in Norway, reflecting in part the earlier cyclical downturn in that country. The strong expansion that had begun in the early 1980s came to a halt in 1986 with the sharp decline in oil prices. The downturn in economic activity together with the high level of loans secured by property led to an increase in the indebtedness of both corporate and private borrowers and to a subsequent increase in banks' nonperforming loans. Finance companies were the first to show the effects of the emerging crisis with losses of 1.2 and 2.3 percent of loans being reported in 1986 and 1987, respectively. Losses reached about 5 percent of loans in 1989, after which many finance companies went out of business or were restructured.

Problems in the banking sector also surfaced in 1987. Large provisions on loans and guarantees had to be made and the commercial banks as a group recorded a net loss. 1/ Two relatively large savings banks and a regional commercial bank recorded heavy losses in 1987 and lost their equity capital in the following year. In addition, one of several new commercial banks that had been established in the past few years lost all its capital in 1988 and was placed under public administration.

Loan losses of the commercial banks and savings banks more than doubled in 1987 and rose sharply in 1988, resulting in negative before-tax profits. In 1989 the crisis appeared to ease as loan losses moderated and banks showed modest before-tax profits, owing both to a reduction in net operating expenses and an increase in net interest margins. However, loan losses surged in 1990 as more banks, including several of the largest, encountered difficulties after making heavy loan-loss provisions. Loan losses reached about 6 percent of GDP. Toward the end of 1990, two large commercial banks and six savings banks were in serious difficulty.

By end-1991, it became clear that the three largest commercial banks, Den Norske, Christiania, and Fokus, which together held 85 percent of total commercial bank assets, were in greater difficulty than previously thought. A substantial amount of funds was allocated to these banks to enable them to meet the capital requirements to maintain foreign financing and international creditworthiness. Accordingly, by the end of 1991, the Government had become the sole owner or the majority shareholder of the three largest commercial banks. By December 1992, the state in the shape of the Government Insurance Fund was sole owner of Fokus Bank, and owned 98 percent of Christiania Bank. The state also owned 55 percent of the shares of Den Norske Bank through the Government Bank Investment Fund. (See Table 9.)

1/ Up to 1987 there were no explicit regulations regarding banks' provisions for losses on loans and guarantees--general accounting rules applied. Explicit rules were introduced in 1987 and tightened in 1991. The Banking, Insurance and Securities Commission has estimated that the new regulations increased provisions for losses in 1987 by about 25 percent compared with what would have been the case without the new regulations.

Table 9. Norway: Funds Used in Rescue Operations From 1988-92

(In millions of Norwegian Krona)

		Savings Bank's Guarantee Fund		Commercial Bank's Guarantee Fund	Norges Bank	Government Bank Insurance Fund		Government Bank Investment Fund
		Guarantee	Equity	Equity		Guarantees	Equity	
1988	Sparebanken Nord-Norge	600			200			
1989	Sparebanken Nord-Norge	650	1,456		500			
	Sunnmorsbanken			580				
	Norion Bank			305	73			
	Other savings banks	73	288					
1990	Sparebanken Nord-Norge	650	7					
	Sunnmorsbanken			466				
	Other savings banks	567	172					
1991	Den Norske Bank			940				
	Fokus Bank			2,150 1/			475	
	Christiana Bank			2,724			5,140	
	Sparebanken Midt-Norge		525					
	Sparebanken Rogaland		600					
	Sparebanken Nort-Norge	800						
	Oslobanken							63
	Other commercial banks			22				20
	Other savings banks	138	504					
1992	Den norske Bank					600	4,750	1,675
	Christiania Bank						1,900	
	Sparebanken Midt-Norge		75			200	600	
	Sparebanken Rogaland		144					
	Other savings banks							1,070
Total		3,478	3,768 2/	7,187 3/	773	800	12,865	2,828

1/ Indicates also subordinate convertible debt.
2/ Indicates NKr 539 million made on the basis of support loans from the Government Bank Insurance Fund.
3/ Includes NKr 2.45 billion made on the basis of support loans from the Government Bank Insurance Fund.

Sources: NOU No. 30 (1992); OECD.

a. Rescue operations prior to 1991

In this early phase of the crisis, the two industry-operated deposit insurance funds, the Commercial Banks Guarantee Fund (CBGF) and the Savings Banks Guarantee Fund (SBGF), came to the assistance of a number of ailing banks by providing funds to facilitate mergers with stronger banks. 1/

The Banking, Insurance and Securities Commission (BISC) found that more than 25 percent of the share capital of the Sunnmorsbanken--a medium-sized regional commercial bank--had been lost by September 1988. All claims on the bank, including its subordinated debt was guaranteed by the Commercial Banks Guarantee Fund and the bank was merged with Christiania Bank in 1990.

In November 1988, the BISC ruled that two regional savings banks in northern Norway had lost their equity. Initially, the SBGF issued limited own-funds guarantees to enable the banks to continue to operate, but the banks were later merged. At the same time the central bank provided liquidity support to the banks, and later made a subsidized loan to the merged bank to strengthen its' capital. Part of this loan was subsequently written off.

Norion bank, a small commercial bank which was founded in 1987 and had pursued an aggressive asset growth strategy, was placed under public administration in 1989 after interim accounts indicated that the share capital was lost. All bank depositors received full compensation thanks to a loan from Norges Bank and a guarantee from the CBGF.

In addition, the SBGF provided assistance to 15 savings banks during 1988-93. In all cases but one, the SBGF issued limited guarantees to permit the continuation of the bank, subsequently the distressed banks were merged with well-capitalized banks. More generally, the SBGF used one or more of the following measures: capital injections; guarantees of some assets or outstanding guarantees from banks in distress; servicing of the subordinated debt of the banks in distress. As a result, at the end of 1990 the SBGF itself had negative equity and its amount of disposable funds was almost exhausted.

In addition to an infusion of preference capital to its member banks based on their contributions to the fund, the CBGF provided an equity guarantee of NKr 1.5 billion to Fokus Bank, which suffered heavy losses in 1990.

b. Rescue operations during 1991-92

Toward the end of 1990, accumulating bank losses had virtually exhausted the capital of the two industry support funds and it became clear that the Guarantee Funds would not be able to meet the banking industry's

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1/ These funds were built up from charges on the banks.

increasing capital needs. 1/ To shore up confidence in the banking system, in March 1991 the government established a new fund, the Government Bank Insurance Fund (GBIF), with an initial capitalization of NKr 5 billion. The objective of the Government Fund was to provide loans to the bank Funds so as to enable them to supply capital to individual member banks. 2/ To receive support, the beneficiary bank was required to present a business plan designed to improve operating profits and reduce the bank's risk-weighted assets. The support could be made conditional on the implementation of cost-cutting measures.

In August 1991, the Government Bank Insurance Fund made two support loans to the Commercial Bank Guarantee Fund totalling NKr 2450 million. The loans were used to inject preference capital into Christiania Bank and Fokus Bank to allow them to meet the statutory capital adequacy requirements. 3/ Furthermore, in October 1991, the Government Bank Insurance Fund supplied the Savings Bank Guarantee Fund with NKr 320 million in support loans, which in conjunction with a Nkr 1 billion allocation by the Government to the SBGF, was used to finance NKr 1125 million in primary capital to Sparebanken Midt-Norge and Sparebanken Rogaland. By end-October 1991, therefore, the Government Bank Insurance Fund had disbursed NKr 2770 million in support loans, over half of its capital.

At the same time, it became clear that the three largest commercial banks, Den Norske, Christiania, and Fokus were in greater difficulty than previously thought. Christiania and Fokus had negative equity capital positions after their share capital and a sizable portion of preference capital was written off. Den Norske applied for infusions of preference capital in October and November after it became clear that it could not raise capital in the private market. Overall the need for funds to recapitalize the three banks was estimated to be between NKr 12 and 28 billion.

To deal with the crisis, the Norwegian parliament adopted in November several new measures proposed by the Government. The measures were intended to reinforce the guarantee system, to raise profitability, and to speed-up the recapitalization of the ailing banks. These included an increase in the capital of the Government Bank Insurance Fund by NKr 6 billion; the

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1/ At the end of 1990 the Commercial Banks Guarantee Fund had equity capital of NKr 3.8 billion. However, in December the Fund had provided Fokus Bank with an equity capital guarantee of NKr 1.5 billion for which it had not made provisions for losses, and it had set a quota of Nkr 2 billion for the supply of preference capital to member banks. The scope for the Commercial Banks Guarantee Fund to provide additional support funds was severely constrained. The Savings Bank Guarantee Fund for its part had guarantee liabilities of NKr 1.2 billion, but equity capital of only Nkr 38 million at book value (Jonassen (1992)).

2/ The interest on the loan to the CBGF or SBGF was to correspond to that on the Government's account in Norges Bank.

3/ At the same time, the Commercial Bank Guarantee Fund provided a further NKr 300 million of its own resources to Christiania Bank.

extension of the mandate of the Government Bank Insurance Fund to allow it directly to provide banks in distress with tier one capital; a budgetary allocation of NKr 1 billion to the Savings Banks Guarantee Fund; the creation of a new fund, the Government Bank Investment Fund, with a capital of NKr 4.5 billion; 1/ and, amendments to the Commercial Banks Act to empower the Government to order a bank to write-down its share capital against losses if less than 25 percent.of the share capital remained.

c. Rescue operations in 1993

During 1993, the Government Bank Insurance Fund allocated NKr 20 million as share capital in connection with a merger of Fokus Bank and a small commercial bank, Samvirkebanken. Another small commercial bank, Oslobanken, applied for capital injections since its share capital was exhausted. The bank was recapitalized and its assets were sold off on a commercial basis. The Government Bank Insurance Fund and the Commercial Banks Guarantee Fund injected NKr 88 million as share capital and guaranteed all of its liabilites.

The direct fiscal impact of the banking crisis in terms of funds used in rescue operations during 1991-93 amounted to about NKr 20 billion (about 3.4 percent of GDP). The bulk of these funds was allocated to the three largest banks (Den Norske, Christiania, and Fokus) to enable them to meet their capital requirements (about NKr 17.8 billion). By the end of 1991, the Government had become the sole owner or the majority shareholder of the three largest commercial banks, which account for about 85 percent of all commercial bank assets. 2/

2. The Swedish experience 3/

With falling property and share prices, and rising interest rates during the summer of 1990, some finance companies that provided credit for share and property transactions started to face financial difficulties. 4/ Nyckeln was the first finance company to suspend payments in 1990. The resulting unrest drew attention to other finance companies with major exposure in the real estate sector. In particular, finance companies that depended on commercial paper for their funding faced serious liquidity problems, which eventually triggered increasing defaults. The crisis of Gamlestaden, another finance company, had major repercussions. After a capital injection from its parent company proved to be insufficient, the parent company had to transfer its shareholdings in Gamlestaden to Nordbanken. The takeover of Gamlestaden with its weak capital base,

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1/ The objective of this Fund was to participate on commercial terms, together with private investors, in capital issues by banks.

2/ As of December 1992, the state in the shape of the Government Insurance Fund is sole owner of Fokus Bank, and owns 98 percent of the shares in Christiania Bank. The state also owns 55 percent of the shares of Den Norske Bank through the Government Bank Investment Fund.

3/ This section borrows heavily from the Director's Report of the Bank Support Authority (1993).

4/ See Biljer (1991).

however, magnified the problems of Nordbanken and was one of the factors that forced the State to restructure that bank.

Initially, the finance company crisis was perceived as an isolated phenomenon that would not have an impact on the banking system, since bank standards for loan collateral were stricter than those of finance companies. However, some banks had been lending to finance companies in the form of trading and investing in their financial securities. As the economy deteriorated and as real interest rates surged and asset price continued to fall, financial problems soon spread to banks. Already in 1991, two large banks faced financial difficulties and needed capital injections.

a. Rescue operations during 1991-92

In the autumn of 1991, Nordbanken had to make large loan loss provisions, and the state, as majority share holder, decided to subscribe to SKr 4.2 billion of a SKr 5.2 billion new equity issue. At the same time, it emerged that Forsta Sparbanken (now merged with Sparbanken Sverige) had also incurred large loan losses, and the state guaranteed SKr 3.8 billion for a loan to restructure the bank. By March 1992, this had proved insufficient and instead the Government decided to provide a SKr 3.8 billion loan at concessional rates and SKr 3.5 billion in loan guarantees.

In spring 1992, it also became clear that Nordbanken was in serious difficulty. To facilitate restructuring, the state bought all outstanding shares for about SKr 2 billion, and then split the bank into a "good bank" and a "bad bank" (an asset management company). The "bad bank," Securum, took over bad assets with a book value of SKr 67 billion, while Nordbanken was left with the performing assets. In addition, the state provided Nordbanken with SKr 10 billion in equity capital, and Securum with SKr 24 billion in equity capital and SKr 10 billion in loan guarantees.

In September 1992, it became clear that the Gota Group, which included Gota Bank (the fourth largest bank in Sweden), would not meet the capital adequacy requirement at year-end due to heavy losses and was in danger of becoming insolvent. To bolster confidence in the banking sector and safeguard the payments system, the Government assumed all commitments of Gota Bank, but not those of the parent company, Gota AB, which was declared bankrupt. As an interim solution, the state provided a loan guarantee of SKr 10 billion and took over the bank. At the same time it became evident that the problems in the banking sector were of such a magnitude that ad hoc measures intended for particular banks could be inadequate and that a more extensive operation was needed to safeguard the stability of the financial system, especially in view of the uncertainties caused by the turbulence in the currency markets and the high short-term interest rates.

To "guarantee the stability of the payments system and to safeguard the general supply of credit," Parliament approved a bill in December 1992 that guaranteed that banks and other credit institutions could meet their commitments on a timely basis. All banks with a Swedish charter (including their subsidiaries), foreign-owned subsidiaries located in Sweden, and certain other credit institutions with a state affiliation, were eligible for support. The Government was authorized to provide loan guarantees, capital contributions, and other appropriate measures. No limit was set on the amount that could be spent on support operations. Support was to be provided to the extent necessary to ensure the operations of viable institutions, and to restructure or orderly liquidate institutions that could not be expected to be profitable in the long run. Government support ensured that the liabilities of liquidated institutions, except their share capital and perpetual debentures, were met.

With respect to bank restructuring, the approach adopted for Nordbanken and Gota Bank envisaged to split the banks into a "good bank" and a "bad bank." The key advantage of this approach was that much of the uncertainty concerning asset quality of the good bank would tend to dissipate, making it easier to attract private capital.

b. Rescue operations in 1993

A new authority, the Bank Support Authority, was established to handle the State support system in May 1993. In addition to Gota Bank, three other banks, S-E-Banken (the country's largest bank), Foreningsbanken, and Sparbanken Sverige received State support. The Bank Support Authority provided support to these banks based on its thorough analyses of the banks' nonperforming loans and the long-term earning potential. The examination also involved an analysis of the strategy, the structure, and the risk management systems of the banks.

From the start of the banking crisis in 1990 to end-1992, credit losses of banking groups totaled SKr 122 billion. By the end of 1993, the credit losses of banks amounted to SKr 200 billion, equivalent to about 3 1/2 percent of cumulative GDP and the total state support had reached about Skr 60.5 billion (Table 10). The actual amount of support is difficult to estimate as it will depend on the financial performance of banks, on the form the support will take, and on the extent to which part of the required recapitalization of banks will come from the private sector.

3. The Finnish experience 1/

In Finland, the savings bank sector has been particularly hit by the banking crisis. As a result, most of the bank support measures have been directed at Skopbank (the central institution for the savings banks) and the Savings Bank of Finland, which was formed by an emergency merger of 41 savings banks.

Skopbank had pursued more aggressive lending policies than other commercial banks following financial liberalization. It had also acquired a significant stake in an industrial conglomerate that encountered severe financial difficulties once the economic downturn began. As early as the fall of 1989, Skopbank was put under special surveillance by the Banking Supervision Office and the Bank of Finland, and in late 1990, the authorities designed a plan to restructure Skopbank, which included a capital injection of Fmk 1.8 billion by the savings banks.

1/ This section draws heavily on Nyberg and Vihriälä (1993 and 1994).

Table 10. Sweden: Funds Used in Rescue Operations, 1991-93

(In millions of Swedish Kronor)

	Total commitment	Paid out	Charged to the state's budget
Savings bank foundations			
Guarantees 1/	6,803	--	--
Interest subsidies	1,028	1,028	1,028
Total	7,831	1,028	1,028
Nordbanken			
Share subscription 1991	4,191	4,181	4,191
Share purchase 1992	2,055	2,065	2,055
Capital contribution 1992	10,000	10,000	10,000
Total	16,246	16,246	16,246
Securum			
Guarantee 1992 1/	9,850	9,850	9,850
Guarantee 1992 2/	13,150	13,150	13,150
Share purchase 1993	1,000	1,000	--
Guarantee 1993	10,000	--	--
Total	34,000	24,000	23,000
Gota Bank			
Capital contribution 1993	20,000	20,000	20,000
Guarantee shareholder's equity 3/	231	231	231
Total	20,231	20,231	20,231
Retriva			
Capital contribution 1993	3,800	3,800	--
Guarantee 1993	3,500	--	--
Total	7,300	3,800	--
Föreningsbanken			
Capital adequacy protection 1993	2,500	--	--
Total bank support 4/	88,108	65,305	60,505

Sources: Swedish Banking Association; Ministry of Finance; Bank Support Authority.

1/ At the time of the agreement, the guarantee to the savings bank foundations was about Skr 5.5 billion, calculated at present value.

2/ The guarantee to Securum has declined by Skr 1 billion through Securum working this claim after propagation of the 1993 year-end financial statements.

3/ The prior guarantee of Skr 3 billions of shareholders' equity in Gota Bank to Nordbanken was discharged in an amount of Skr 231 million after the year-end financial statement were approved.

4/ In addition to the above charges against the national budget of Skr 60,586 million, the appropriations to strengthen the financial system were charged with a further Skr 2,722 million; in the financial obligations for further of Skr 3,660 million in the National Debt Office, while at the same time appropriations were credited with aid in guarantee loans, etc. of Skr 920 million.

By mid-1991, however, it became evident that the objectives set out in the restructuring program could not be achieved. As a result, a liquidity crisis in September 1991 prompted the Bank of Finland--at the time the only government agency equipped to conduct a rescue operation--to take over Skopbank. Two asset management companies were formed: one took possession of Skopbank's industrial holdings, while the other took over the share and real estate holdings. 1/ Bank management was largely replaced, and a plan was drafted to reduce Skopbank's balance sheet and operating costs. As part of the rescue operation, the Bank of Finland committed about Fmk 14 billion.

Since the Skopbank experience had revealed the need for a new government agency to deal with the looming banking crisis, a Government Guarantee Fund (GGF) was established in April 1992. The fund was initially endowed with Fmk 20 billion for its operations that could include providing bank equity, granting loans and guarantees, and other forms of bank support. In deciding on the appropriate support measures, the fund was guided by general principles, such as the transparency of support, relying on the bank owners' responsibility as much as possible, minimizing distortive effects, and ensuring public monitoring of supported banks.

a. Rescue operations in 1992

Fearing a credit crunch since the equity of banks threatened to fall below the Basle capital adequacy requirements, the Government offered Fmk 7.9 billion as a capital injection to deposit banks proportional to their risk-weighted assets. The preferred capital certificates carried a noncumulative interest slightly above market rates; they could thus be counted as tier 1 capital. 2/ If interest was not paid for three consecutive years or if a bank's equity ratio fell below the minimum required, the certificates could be converted into voting stock. All banks took advantage of the capital offer.

The Government Guarantee Fund conducted three rescue operations in 1992, all of which were related to savings banks. In June 1992, the GGF acquired Skopbank from the Bank of Finland for Fmk 1.5 billion, while the holding companies managing Skopbank's former corporate holdings and real estate investments, however, remained in the Bank of Finland's possession. In addition, the GGF injected Fmk 1 billion into the bank.

In early 1992, several savings banks developed financial problems, partly due to their stakes in Skopbank, but mainly as a result of their own aggressive lending in 1988 and 1989. Since savings banks were closely interconnected by a mutual sharing of responsibilities for their solvency, a total of 41 savings banks (problem and nonproblem banks) were merged into the Savings Bank of Finland (SBF) that was subsequently taken over by the GGF. 3/ In the process, the savings bank foundations lost their equity

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1/ A third company, Scopulus, was set up to own shares in Skopbank.

2/ The interest rate on the certificates increases gradually relative to the market rate to give banks an incentive to repay bank support early.

3/ After the merger, 40 independent savings banks remained in business, Nyberg (1994).

stakes in the merged banks. The Guarantee Fund provided a capital injection of Fmk 5.5 billion and Fmk 1.4 billion of subordinated debt. In December 1992, an extra Fmk 4.7 billion as capital was provided to cover larger-than-expected write-offs of nonperforming real estate loans. At the same time, the SBF was converted into a joint stock company, majority-owned by the GGF. By the end of 1992, the GGF had spent Fmk 12.5 billion on the SBF operation.

The third rescue operation involved STS Bank, which had been a savings bank whose status had been converted to a commercial bank in the late 1980s. Like many other savings banks, it suffered large credit losses from its rapid credit expansion, and its owners were unable to provide the necessary capital to keep the bank viable. Under close cooperation with the GGF, a merger of STS with KOP, the largest commercial bank in Finland, was negotiated in November 1992, in which the GGF would have assumed financial responsibility for most of the problem loans by placing them into a "bad bank." Parliament, however, did not approve the formation of a "bad bank" and the merger had to be postponed.

b. Rescue operations in 1993

In April 1993, a new merger agreement with KOP was concluded. STS Bank itself was in effect turned into a "bad bank" since it retained all nonperforming loans and bad assets, while the rest of its banking business was transferred to KOP. Although KOP remained responsible for 10 percent of losses on the portfolio of bad assets and had formal ownership of STS Bank, effective control rested with the GGF. As a result, the GGF anticipated a loss of Fmk 2.5 billion on STS Bank's Fmk 3.4 billion of nonperforming asset.

The financial condition of the Savings Bank of Finland remained critical in 1993, and made further capital support of Fmk 2.1 billion necessary. By October 1993, the SBF had received a total of Fmk 14.6 billion from the Guarantee Fund. Also Skopbank received an additional Fmk 1.5 billion as preferred capital certificates in 1993, bringing the net total of official bank support to Fmk 15.7 billion.

In total, at the end of 1993, the GGF had disbursed Fmk 16.8 billion as bank support (without guarantees), the Government had provided Fmk 10.7 billion, and the Bank of Finland had committed Fmk 11.6 billion. 1/ Including guarantees, the total of funds committed to bank support reached Fmk 83.2 billion (Table 11).

1/ Bank support from the Bank of Finland included loans of Fmk 5.8 billion and booked losses of Fmk 5.3 billion. Fmk 2.8 billion were recovered from the sale of assets from the Skopbank rescue (see Bank of Finland Year Book 1993).

Table 11. Finland: Funds Used in Rescue Operations, 1991-93

(In millions of Finnish Markka)

	Bank of Finalnd	Council of State			Government Guarantee Fund					
		State's capital investment	Preferred capital certificates	Share capital	Loan	Sub-ordinated Loan	Preferred capital certificates	Shared capital	Total	Transfer
1991 Skopbank	4,330									4,330
1992 Skopbank	9,444	580					1,500	1,000		12,524
Savings Bank of Finland		1,094				1,400	7,100	2,900		12,494
Other savings banks		160								160
Security fund of the savings banks					500					500
Okobank		422								422
Cooperative banks		1,108								1,108
Postipankki		903								903
Union Bank of Finland		1,749								1,749
KOP		1,726								1,726
STS-Bank		170								170
1993 Skopbank	-2,722		350				1,200			-1,172
STS-Bank		-170					3,036			2,866
Savings Bank of Finland			750	250			950	150		2,100
Sale of Savings Bank of Finland		-1,094	-750				-3,756			-5,600
Asset management company Arsenal Ltd				3,442				1,558		5,000
Security fund of the savings banks					-345					-345
Transfer to the Government Guarantee Fund									-357	-357
Support disbursed as at 31 December 1993	11,052	6,648	350	3,692	155	1,400	10,030	5,608	-357	38,578

Source: Data provided by the Finnish authorities.

c. Rescue operations in 1994

In May 1994, the sound components of the Savings Bank of Finland, in particular its branch network and its deposit base, were sold in equal parts to the remaining four large banking groups (KOP, UBF, Postipankki, the cooperative banks). 1/ The nonperforming assets valued at about Fmk 40 billion were transferred to a government-run asset management company (Arsenal). It was estimated that losses on the nonperforming assets could reach Fmk 15 billion. 2/

d. Reorganization of the GGF and banking supervision

Developments in 1992 had demonstrated that the administration of bank support was inadequate. The GGF had no full-time staff of its own. More importantly, it was recognized that a conflict of interest could arise from the representation of the Bank of Finland and the Banking Supervision Office on the GGF's executive board, which itself was supervised by a Parliamentary Supervisory Board.

According to the new organizational structure, which was approved in February 1993, only the Ministry of Finance was represented on the GGF board, whereas the Banking Supervision Office and the Bank of Finland assigned permanent advisors to the GGF. Moreover, the GGF now reported directly to the Government, which would in future decide on all bank support measures, rather than the GGF.

In February 1993, in connection with the reorganization of the GGF, Parliament unanimously approved a resolution that reaffirms the commitment of the authorities to "guarantee that Finnish banks are able to meet their commitments on time under all circumstances."

In order to improve supervision of the financial system, the Banking Supervision Office, which had been part of the Ministry of Finance, was transferred to the Bank of Finland in October 1993 as a new autonomous unit (renamed Financial Supervision Authority). 3/ The responsibilities of the Authority were essentially unchanged, with the exception of new supervisory duties concerning foreign exchange risk, which were formerly assigned to the Bank of Finland. In addition, the resources of the Financial Supervision Authority were substantially strengthened.

VII. Conclusions

Financial deregulation expands the set of lenders' and borrowers' opportunities and capabilities for risk taking. As the Nordic experiences illustrate, if inappropriate incentives coincide with a macroeconomic environment that provides expansionary impulses at the time of deregulation,

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1/ As part of the sale of the SBF, the Government received share capital of Fmk 1 billion from KOP and Fmk 0.5 billion from UBF.

2/ Nyberg and Vihriälä (1994).

3/ See Aranko (1994).

borrowers and lenders tend to behave in an unsustainable fashion. As a result, a domestic overheating fueled by rapidly rising asset prices can develop.

Against the background of the formerly tightly regulated financial system, the deregulation efforts of the Nordic countries in the mid-1980s were a significant shock to the system. While previously the banking environment had been quite stable and predictable, deregulation triggered major changes. The elimination of direct controls on lending and exchange restrictions triggered a stock-adjustment effect in the debt burden of borrowers who had previously been credit-rationed and a surge in lending by banks that gained access to new funding sources. While this initial stock-adjustment effect was inevitable, certain conditions and policy decisions that prevailed in the three Nordic countries, however, were critical in magnifying these initial effects.

For the borrowers, during the boom years the surge in asset prices allowed households and firms to sharply increase their indebtedness without a significant effect on their net wealth. Important factors behind the aggressive borrowing include: (i) expectations of rapid economic growth and asset-price increases as the deregulation coincided with a strong macroeconomic momentum; (ii) the low, and sometimes even negative, costs of borrowing (especially for real estate) due to tax incentives and low-interest-rate policies combined with persistent high inflationary expectations; and (iii) relatively thin net-worth of the nonfinancial sector.

For the banks, the resulting breakdown of traditional banking relationships that followed liberalization weakened their ability to assess credit risks and to monitor borrowers, and made it easier for financial institutions to enter new segments of the credit market. This, in turn, heightened competitive pressures further. In addition, the banking systems were characterized by relatively high operating costs and low profitability by international standards. The high operating costs, which resulted primarily from large banking capacity, reinforced the managerial incentives for aggressive lending growth when the vast branch networks threatened to become unsustainable after deregulation. The aggressive bank lending policies were accompanied by a noticeable increase in risk taking. The composition of loan portfolios was shifted toward more cyclical sectors, and loans denominated in foreign currency rose sharply. In all three countries, loans appear to have been underpriced, and no additional operating profits were being generated to compensate for the greater lending risks, thus increasing the vulnerability of banks to credit losses. Important factors behind the aggressive lending by banks include (i) banks' relatively thin capitalization; (ii) the reduced scope for the exercise of managerial discretion; (iii) the slow response of banks to adapt their internal risk management and credit policies (including complicated cross share holdings with nonfinancial corporations); and (iv) the underestimation of the risks involved in asset-based lending.

It is also evident that policy-makers did not take sufficient measures to minimize the adjustment costs in the aftermath of the financial deregulation. The authorities failed to tighten prudential bank regulation and to create an adequate supervisory framework; the favorable tax treatment of interest payments was not reformed until well after the credit boom; monetary policy was constrained by the fixed exchange-rate regime, and the stance of fiscal policy was not tightened in a timely manner and to a sufficient extent.

The Nordic experience confirms that the set of incentives that accompanies the deregulation process is crucial in transmitting the positive aspects of financial liberalization. In that connection, it is imperative that banks have a generous equity position and that large overcapacity that may have been built up under the previous regulatory regime is reduced prior to deregulation. Close attention needs to be paid to the macroeconomic context of financial liberalization and that, in particular, monetary conditions have to be monitored carefully to contain the initial jump in asset prices that is likely to follow liberalization from developing into a speculative bubble. In light of these macroeconomic uncertainties, it is essential that parallel to deregulation banks strengthen their internal management controls and especially their risk management. Such tighter risk assessment by banks should, in addition, be supported and enforced by an adequate supervisory framework. If these steps are not taken and the liberalization process is not designed carefully, the competitive pressures that are typically enhanced by liberalization and the distortions in the incentive scheme due to policy measures and the inherent structure of the financial sector, will magnify the impact of a negative shock to the system and will put the stability of the financial system at risk.

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