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Denmark: Financial Sector Assessment Program—Technical Note—Competition in the Banking Sector

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DENMARK

TECHNICAL NOTE

COMPETITION IN THE BANKING SECTOR

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MONETARY AND CAPITAL MARKETS DEPARTMENT

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Box

GLOSSARY

ATMs	Automatic teller machines
BCP	Basel Core Principles for Effective Banking Supervision
CA	Competition Authority
CC	Competition Council
DBA	Danish Bankers Association
DCA	Danish Competition Act
DFSA	Finanstilsynet, the Danish Financial Supervisory Authority
ECB	European Central Bank
EFTPOS	Electronic funds transfer at point of sale
EU	European Union
FSAP	Financial Sector Assessment Program
HHI	Herfindahl-Hirschman Index
IFS	International Financial Statistics
IMF	International Monetary Fund
MoEB	Ministry of economic and business affairs
NPLs	Nonperforming loans
ROA	Return on assets
ROE	Return on equity

I. Executive Summary

Denmark has a fairly competitive and efficient banking sector.[1] Measured by various indicators, efficiency of banking intermediation has been improving in recent years and compares favorably internationally. In particular, the interest spread between lending and deposit rates of Danish banks has been steadily declining, banks' operating costs as a share of total assets have also been declining, and both Danish banks and their customers seem to be quick in adopting new technologies.

Despite the overall positive trends, competition among Danish banks may be further enhanced. The banking sector has become very concentrated, profitability of banks is relatively high and growing, and deposit mobility is low. There is room for further enhancing the transparency of bank charges. Thus there may be some scope for steps to foster more competition. Key measures to consider in this respect are the following:

- The Danish Bankers Association (DBA) and the Danish Consumers Association, in collaboration with the Danish Financial Supervisory Authority (DFSA), should continue efforts to promote the transparency of pricing and quality of different products and services offered by banks.

- The DBA, in collaboration with the DFSA, could consider developing and implementing a switching code for accounts of bank depositors in order to alleviate perceptions of the difficulties involved in switching.

- The Danish financial sector authorities and their counterparts from other Nordic countries should carefully evaluate the terms and conditions of national deposit insurance arrangements and the extent to which they may hinder competition.

- The DFSA should discourage the current banking practice of putting up defenses against hostile takeover bids (for example, Danish banks could be required to end the practice of limitation on voting rights).

- The DFSA should monitor the use of price bundling by Danish banks, with a view to ensuring that this practice does not lead to distortions, and hamper an effective competition.

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[1] This note was prepared by the Financial Sector Assessment Program (FSAP) team as part of the background work for the Denmark FSAP in November 2005-March 2006. The primary contributor to this paper was Vassili Prokopenko of the IMF's Monetary and Capital Markets Department.

II. INTRODUCTION

1. **Competition is important in all industries as it has implications for efficiency, innovation, pricing, quality of goods and services, and consumer choice.** The role of competition in the banking sector is of particular importance, given the central role played by commercial banks in the economy. By resolving the problems of information asymmetries, banks are able to efficiently intermediate the funds from depositors to borrowers, contributing to economic growth.

2. **Over the last decade, the banking sector in Denmark has become increasingly concentrated.** Merger and acquisition activities involving a group of large banks, combined with the inability of many small banks to operate on a nation-wide scale, resulted in an oligopoly structure of the system, with the largest bank holding more than half of the total system's assets. In addition to the increasing concentration, profitability of the banking sector has also been on an upward trend in line with developments in the industry elsewhere. This combination of increasing concentration and profitability has raised concerns, particularly among the customers of Danish banks, about insufficient competition in the market.

3. **This technical note assesses the degree of competition in the Danish banking sector.** In doing so, it also aims to identify the areas where competition appears to be constrained, and makes recommendations accordingly. This is not the first study of competition in the Danish banking industry. Both the banking sector itself and the authorities, have already looked at the competition among banks.[2] These reports found several specific areas, notably the transparency of fees and commissions income of banks, that need to be addressed in order to foster competition. The current technical note only attempts to put the Danish banking sector into a broader context, not to discuss specific fee structures.

4. **The structure of the note is as follows.** Section II provides an overview of the competition policy as it applies to the banking sector. Section III reviews the standard indicators of profitability and concentration of the banking sector. Both groups of indicators are benchmarked against those in other countries, particularly other European Union (EU) countries. While the relationships between profits and competitiveness as well as between concentration and competitiveness are not straightforward,[3] indicators of profitability and concentration provide a useful means of comparing dynamic and cross-country efficiency of the banking sector. Section IV analyses the contestability in the banking sector. A number of

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[2] See for example, the report of the DBA *Pengeinstitutternes Indtjening 1994−2004* (June 2005, Copenhagen, Finansrådet) (http://www.finansraadet.dk/danish/toolkit/forside/), or the report of the Ministry of Economic and Business Affairs (MoEB) *Gebyrer på penge-og realkredit- institutmarkedet* (September 15, 2005, Copenhagen, MoEB) (http://www.oem.dk/sw184.asp).

[3] High profits may be associated with a low level of competition among banks, but efficient banks may also achieve high levels of profitability; high concentration may be associated with a low level of competition among banks, but efficient banks are likely to gain higher market share, hence increase the concentration.

recent academic studies showed that contestability matters in determining the level of competition in the banking sector. A credible threat of entry is the key to ensure high standards of performance of the existing banks.

III. Competition Policy in the Danish Banking Sector

5. **The DCA (adopted in 1997 and subsequently amended several times) governs competition law in Denmark.** The purpose of this Act, as stated in Article 1 of the DCA, is "to promote efficient resource allocation by means of workable competition." Box 1 briefly describes the administration of this Act.

Box 1. Administration of the Danish Competition Act

The enforcement of the DCA comes under the jurisdiction of the competition council (CC), which consists of a chairman (appointed by the King for a period of up to 4 years) and 18 members (appointed by the minister for economic and business affairs), representing a versatile knowledge of public and private business activities. The CC meets once a month, and it decides on major cases.

The responsibility for the day-to-day administration of the Act is delegated to the competition authority (CA), which is the secretariat of the CC. The CA is in charge of the preparation of cases to be submitted to the counsel, and it is also entitled to decide minor cases in accordance with guidelines set out by the counsel.

6. **The DCA applies to all economic sectors, including the banking sector.** This is in line with international best practice, as separate sector-specific (i.e., banking sector-specific) competition rules typically involve the risk of sectoral lobbying and are more vulnerable to industry influence and inconsistent application of competition policy. In recent years, there has been a movement in countries with partially or totally exempted banking sectors, to extend the jurisdiction of national competition laws to include banks.[4]

7. **Competition in the banking sector is measured and handled in Denmark in the same way as any other sector.** The CA makes an annual analysis of competition in approximately 500 sectors, including the banking sector. The analysis is made using different indicators of efficient competition, including concentration ratio, and customer mobility.

[4] Many countries (e.g., Canada, Finland, France, Germany, Ireland and Portugal) amended their legislation over the last two decades to include banks under the general competition law (see the report of the International Competition Network *An Increasing Role for Competition in the Regulation of Banks*, Bonn, June 2005).

Mergers involving banks and competition infringement cases related to the activities of banks are handled by the CA in the same way as mergers in other sectors.[5]

8. **The Danmarks Nationalbank, the DFSA, and the ministry of finance are also involved in bank mergers for stability reasons and for ensuring the safety and soundness of the institutions and their managerial competency.** This is similar to the arrangements in place in almost all other jurisdictions. In only a few countries, competition and stability concerns are pursued by the same institution.[6]

IV. PROFITABILITY AND CONCENTRATION

A. Indicators of Profitability

9. **Earnings of the Danish commercial banks have been growing steadily in recent years.** Profits before tax of Groups 1–3 banks increased from DKr 18.4 billions in 2000 to DKr 30.8 billions in 2004. Growth in the after tax profits has been less spectacular but also strong (Table 1). Returns on assets (ROA) and equity (ROE) of banks have also been growing, and are now higher than respective average ratios for EU-25 countries (Figures 1 and 2).

Revenues

10. **Net interest income as a share of the gross income has been declining since 2000**. This is reflected in the contraction of the spread between average interest rates on loans and on deposits. As Figure 3 indicates, the interest spread has come down from 6.5 percentage points in early 1995 to 5.0 points in December 2000, and further to 3.2 points in June 2005. As the interest rate spread is traditionally considered as one of the ways to assess the efficiency of banking intermediation, its decline can be viewed as a sign that the efficiency of intermediation has been improving in recent years.

11. **The level of the interest rate spread in Denmark is now broadly similar to the average level for other EU countries (Figure 4).** However, while the Danish spreads are significantly lower than those in countries that have recently joined the EU (e.g., Czech Republic, Slovak Republic, and Slovenia,), they are slightly higher than those in several established EU members (e.g., Ireland and Spain) or in other Nordic countries (e.g., Finland, Norway, and Sweden).[7] This may be an indication that financial intermediation is performed

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[5] The merger control rules are laid down in Part 4 of the Danish Competition Law.

[6] For example, in Brazil, the central bank has full responsibility over bank mergers (for both stability and for competition considerations), while in Italy, anti-trust law provisions apply to banks but they are enforced by the central bank.

[7] Figure 4 compares the interest spread for a group of countries for which the International Financial Statistics (IFS) data were available. In general, the lending rate is the prime rate and the deposit rate is the short-term time deposit rate.

more efficiently in Denmark than in eastern European countries, but less efficiently than in western or northern European countries.[8] The ratio of net interest income to assets is also higher in Denmark than the EU-25 average, or the euro area average (Figure 5).

Table 1. Denmark: Profitability Indicators of Commercial Banks 1/

	2000	2001	2002	2003	2004
			In DKr billions		
Net interest income	31.9	35.1	35.8	37.1	35.2
Net fee and commission income	14.0	13.3	13.1	14.0	15.8
o/w profit of investments	0.9	1.1	0.7	0.8	1.1
o/w received fee and commissions	15.7	14.7	14.7	15.8	17.7
o/w paid fee and commissions	2.6	2.5	2.4	2.6	2.9
Securities and foreign exchange income	4.6	1.8	0.7	4.4	3.7
Staff costs and administrative expenses	30.9	30.6	30.9	31.4	33.1
Other operating expenses	2.6	0.0	0.1	0.3	0.1
Provisions for bad and doubtful debts	3.2	5.2	4.3	5.1	1.6
Income from ass. and subsidiaries	4.8	6.0	6.4	7.8	9.0
Other income	-0.1	-0.1	0.2	1.5	1.9
Profit before tax	18.4	20.2	20.9	27.9	30.8
Tax	3.6	5.1	5.8	7.2	7.9
Profit after tax	14.9	15.1	15.1	20.7	22.9
			In percent of assets		
Net interest income	1.8	1.8	1.7	1.6	1.4
Net fee and commission income	0.8	0.7	0.6	0.6	0.7
Securities and foreign exchange income	0.3	0.1	0.0	0.2	0.2
Staff costs and administrative expenses	1.8	1.6	1.5	1.4	1.4
Provisions for bad and doubtful debts	0.2	0.3	0.2	0.2	0.1
Income from ass. and subsidiaries	0.3	0.3	0.3	0.3	0.4
ROA (before tax)	1.1	1.1	1.0	1.2	1.3
ROA (after tax)	0.8	0.8	0.7	0.9	0.9
			Memorandum items		
ROE (before tax)	17.6	17.2	16.6	20.7	21.6
ROE (after tax)	14.2	12.8	12.0	15.3	16.1
Net interest income to gross income 2/	55.3	59.9	61.1	55.0	51.4
Fees and commissions received to gross income 2/	27.2	25.1	25.2	23.4	25.8
Securities and FX income to gross income 2/	7.9	3.1	1.3	6.5	5.4
Noninterest expense to gross income 2/	62.5	56.7	56.8	51.0	52.6
Staff costs and administrative expenses to noninterest expenses	85.7	92.4	92.8	91.5	91.7
Cost to income ratio	67.9	65.4	64.4	59.9	56.6

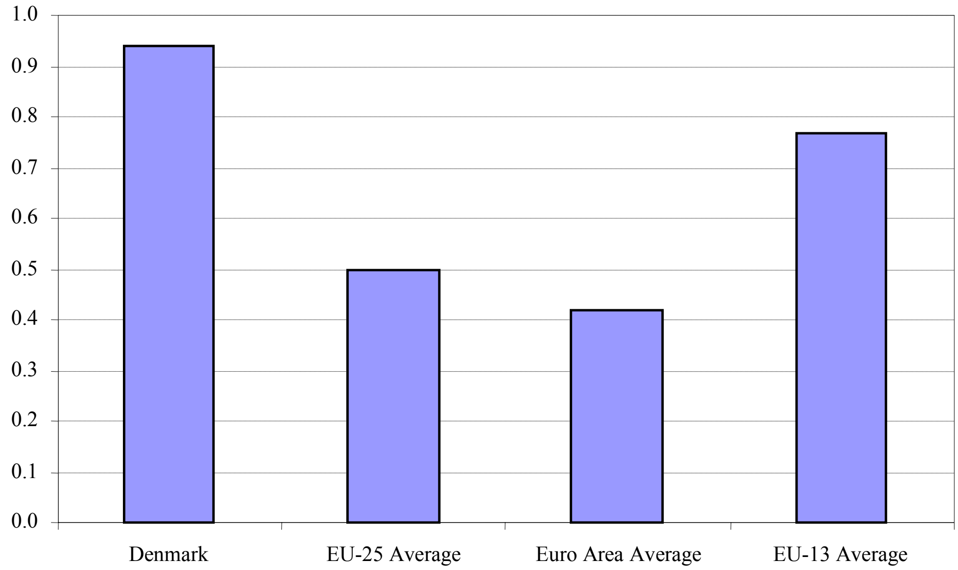
Source: Danish Financial Supervisory Authority.

1/ Groups –3 banks only.
2/ Gross income is the sum of net interest income and non-interest income.

[8] Needless to say, the interest rate spread is not a perfect measure of cross-country efficiency of banking intermediation because it does not take into account fees and commissions associated with deposit and lending services, which may disguise the true picture to some extent. Unfortunately, the data on effective interest rates, which include these fees and commissions, are not available. Furthermore, in contrast to many other countries, Danish banks are not subject to required reserves. In other countries, if these reserves are under-remunerated, they tend to result in a larger spread.

Figure 1. Denmark and EU countries: Return on Assets of Commercial Banks 1/

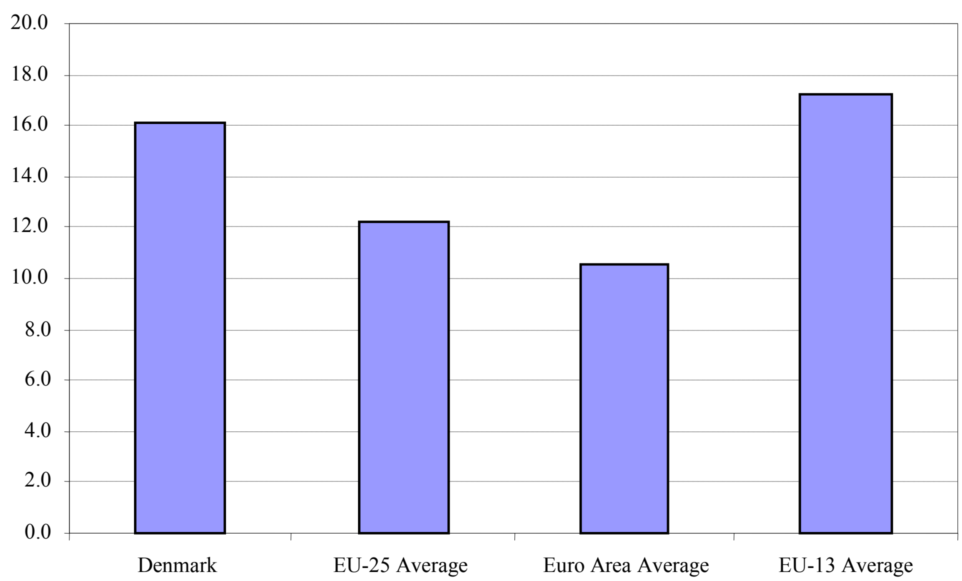
(After tax and external items; as of end-2004)



Sources: Danish Financial Supervisory Authority; and European Central Bank.

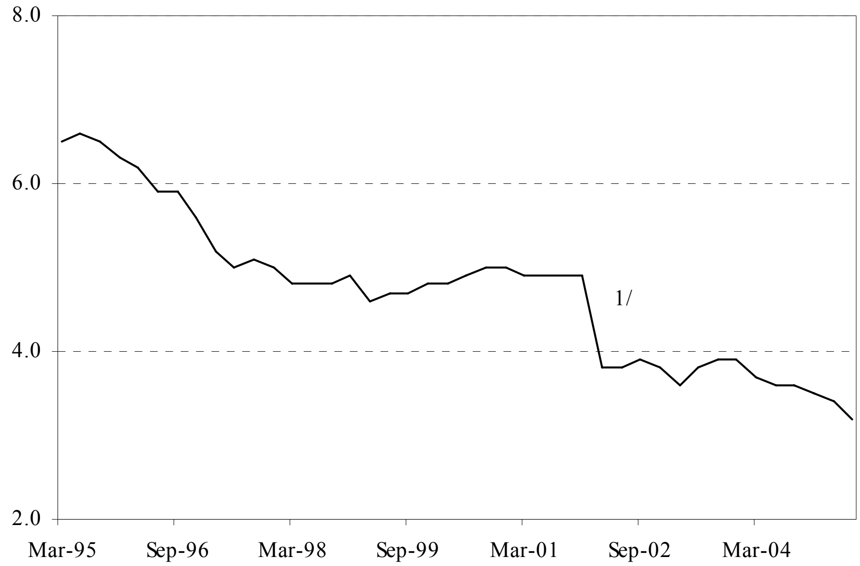
1/ In this and other figures used in this note, EU-25 means all EU member countries, and EU-13 means 13 EU countries that are not euro area members.

Figure 2. Denmark and EU countries: Return on Equity of Commercial Banks
(After tax and extraordinary items; as of end-2004)



Sources: Danish Financial Supervisory Authority and the European Central Bank.

Figure 3. Denmark: Spread Between Deposit and Lending Rates of Commercial Banks
(In percentage points)

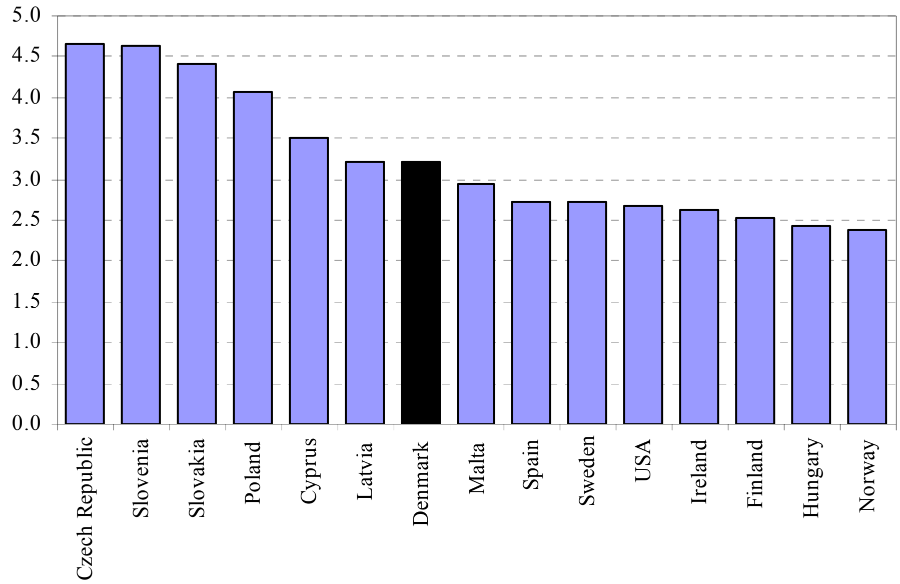


Sources: The Danish Financial Supervisory Authority; and International Financial Statistics.

1/ Decline in the spread in March 2002 is largely due to new definitions of the average deposit and lending rate.

Figure 4. Selected Countries: Spread Between Deposit and Lending Rates of Commercial Banks

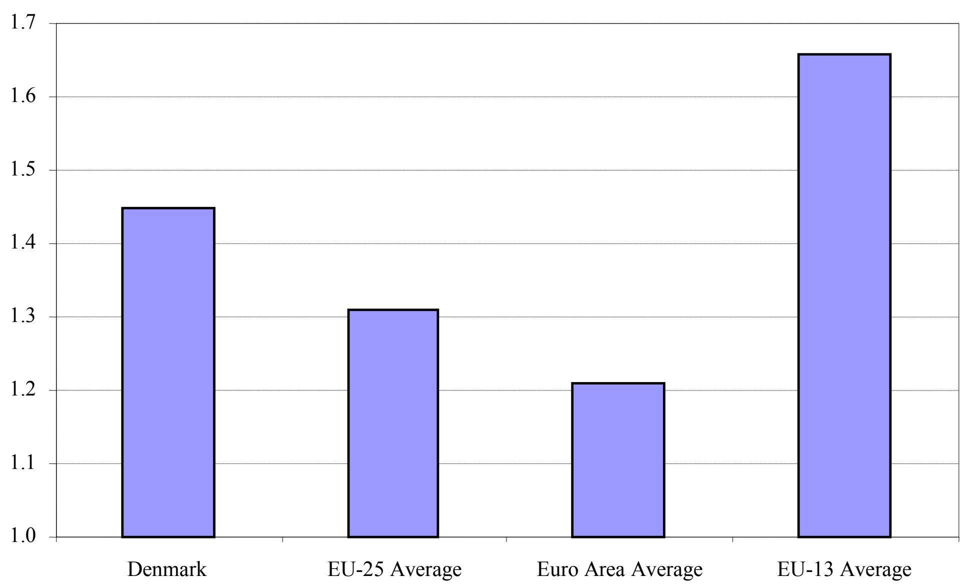
(In percentage points; as of end-2004)



Sources: The Danish Financial Supervisory Authority; and International Financial Statistics.

Figure 5. Denmark and EU Countries: Net Interest Income

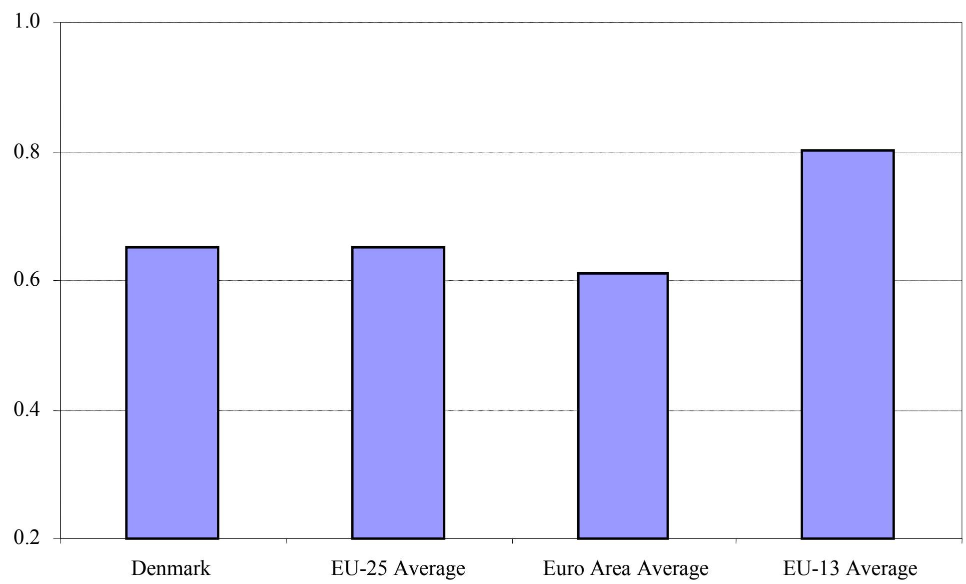
(In percent of assets; as of end-2004)



Sources: The Danish Financial Supervisory Authority; and the European Central Bank.

12. **An increasing proportion of the gross income of Danish banks has been derived in recent years from noninterest income.** A significant portion of noninterest revenues has been growing rapidly due to factors that are not likely to be sustainable over the longer term (in particular, securities and foreign exchange income, or income attributable to the equity investments in associates and unconsolidated subsidiaries. Total profit for most regional and local banks in 2004 and 2005 was positively affected by payments received from Nykredit Realkredit for the purchase of Totalkredit—similar one-off income will affect these banks' results in 2006 as well). Growth in the fee and commission income has been moderate in both gross and net terms, and the share of this income in total assets has been broadly stable. This ratio is similar to that of banks operating in other EU countries (Figure 6).

Figure 6. Denmark and EU Countries: Net Fee and Commission Income
(In percent of assets; as of end-2004)



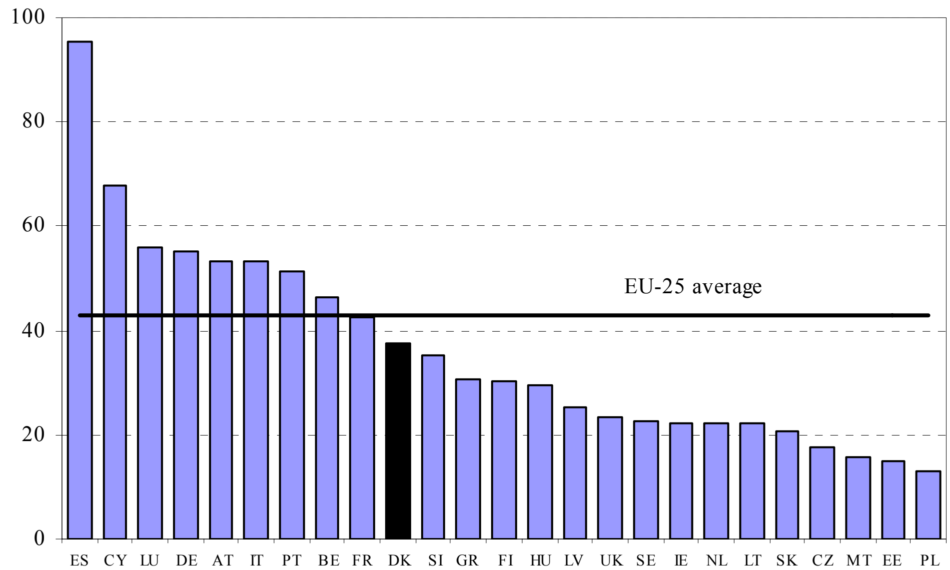
Sources: The Danish Financial Supervisory Authority; and the European Central Bank.

Expenditures

13. **Cost efficiency of Danish banks has been improving in recent years.** Operating costs as a share of total assets has been steadily falling (from 1.8 percent in 2000 to 1.4 percent in 2004), although this outcome might have partly reflected the strong growth in assets. As a matter of fact, while Denmark's branch density of 37 branches per 100,000 inhabitants is similar to the average branch density of EU countries, there are on average more employees working in one Danish branch than in an average EU branch (Figures 7 and 8). However, Danish branches are bigger in terms of assets (Figure 9), to the

extent that despite relatively high nominal operating costs, in relation to assets, costs of Danish banks are one of the lowest in the EU (Figure 10).[9]

Figure 7. EU: Number of Branches of Credit Institutions
(Per 100,000 inhabitants; as of end-2004)



Source: European Central Bank.

14. **The aggregate ratio of operating costs to assets is quite varied across the Danish banks (Figure 11).** This is likely to reflect the degree of involvement in retail business (which typically requires more staff and branches), and/or the different ability and willingness of different banks to reduce costs.

15. **The flow of provisions against nonperforming loans (NPLs) has continued falling reflecting an excellent asset quality of banks.** The ratio of NPLs to total loans in Denmark is one of the lowest in the world (0.5 percent as of end-2004). As a result, the ratio of specific provisions to total assets is also very low (Figure 12).[10]

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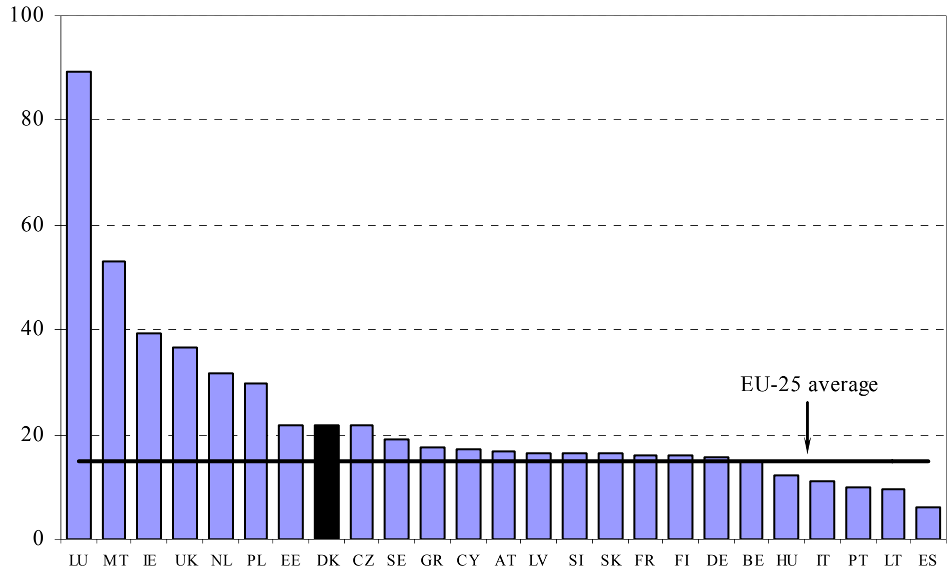
[9] These cross-country indicators on branch density relate to credit institutions which are defined by the ECB as "(i) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account; or (ii) an electronic money institution within the meaning of Directive 2000/46/EC of the European Parliament and of the council of September 18, 2000 on the taking up, pursuit, and prudential supervision of the business of electronic money institutions." This aggregate is slightly broader than commercial banks.

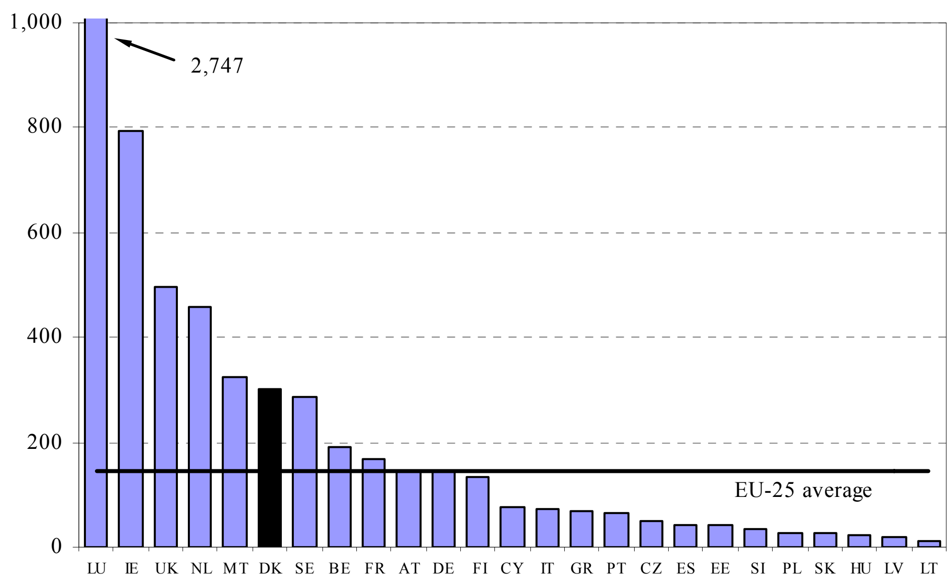
[10] The low provisions in 2004 are in part due to the good performance of the economy, and in part due to adjustment to new provision rules.

Figure 8. EU: Number of Employees of Credit Institutions
(Per one branch)



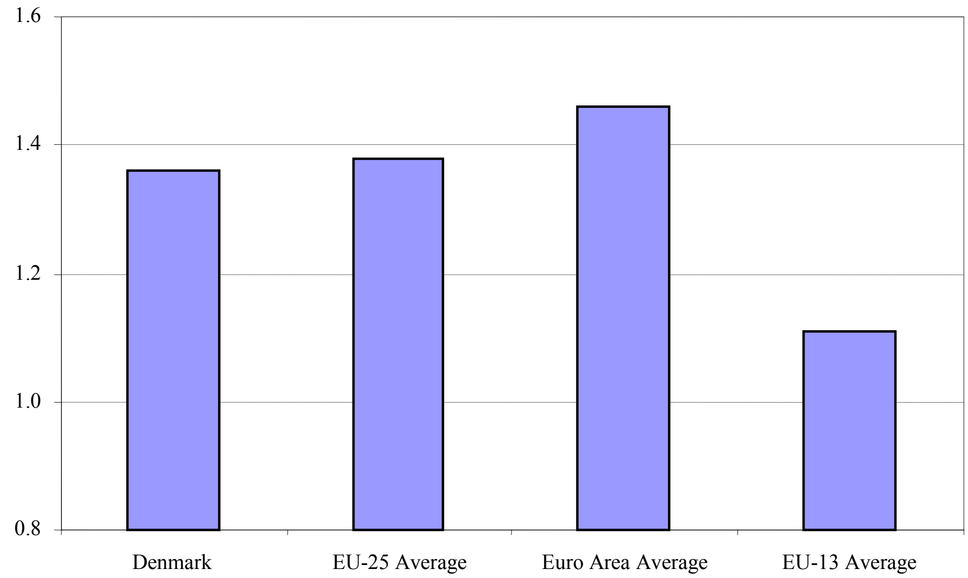
Source: European Central Bank.

Figure 9. EU: Average Amount of Assets
(Per one branch; in EUR millions)



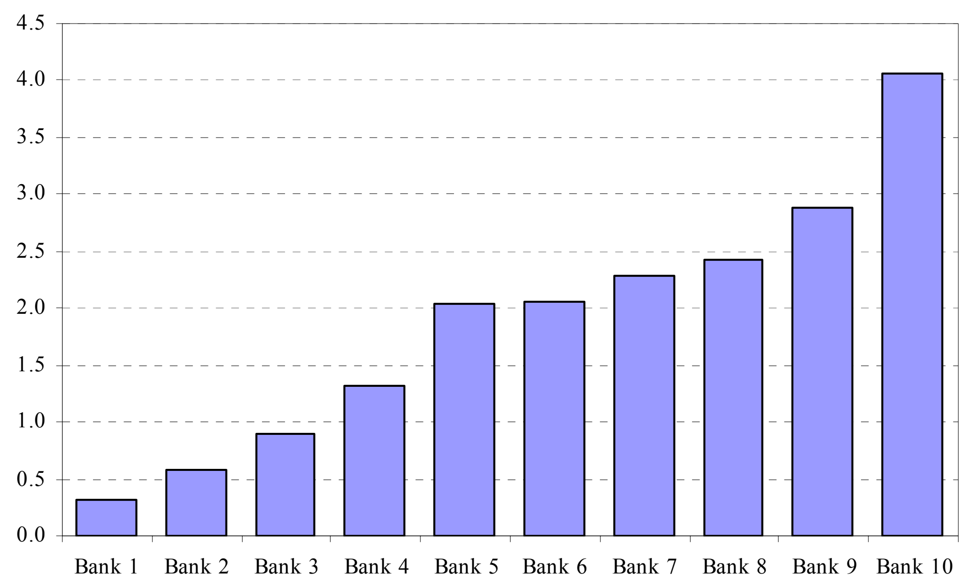
Source: European Central Bank.

Figure 10. EU: Operating Expenses of Commercial Banks
(in percent of assets)



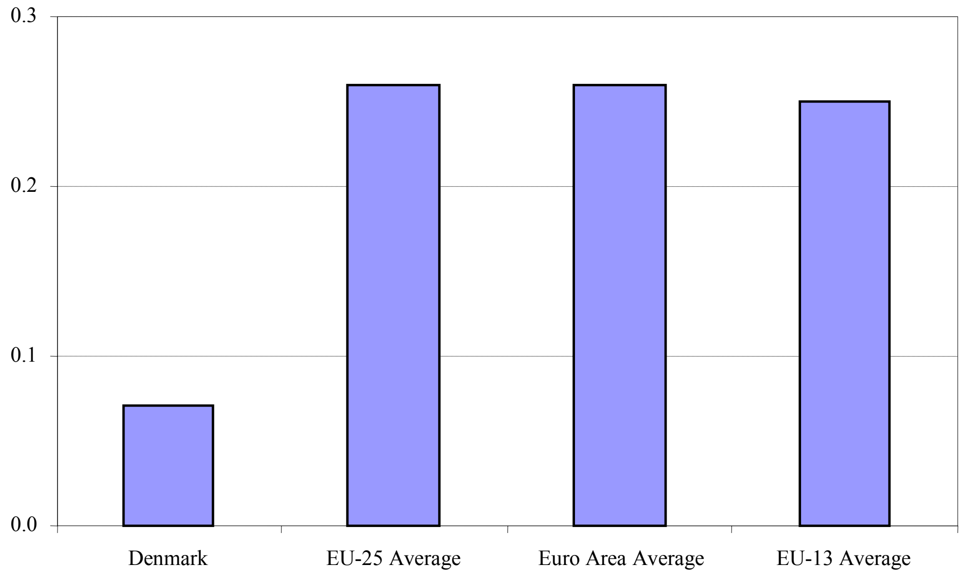
Sources: The Danish Financial Supervisory Authority; and European Central Bank.

Figure 11. Denmark: Operating Expenses of the Ten Largest Commercial Banks
(In percent of assets; as of end-2004)



Source: calculated based on the data from the Danish Financial Supervisory Authority.

Figure 12. Denmark and EU Countries: Specific Provisions for Nonperforming Loans
(In percent of assets; as of end-2004)



Sources: The Danish Financial Supervisory Authority; and European Central Bank.

B. Indicators of Concentration

16. **Even though indicators of concentration are not an ideal measure of competition in banking or another industry, their levels and increases is a focal point in anti-trust analysis.** This is primarily due to the simplicity in computing concentration ratios, and the ability to easily compare these ratios both within a country over time and across the countries. Three of the most commonly used indicators are the number of competing firms, the *N* firm concentration ratio (usually the market share of the largest 1, 3, 5, or 10 firms), and the Herfindahl-Hirschman Index (HHI).[11]

17. **The number of commercial banks operating in Denmark is rather large.** At end-2004, there were 172 registered commercial banks (Table 2). While the total number of banks has been slowly declining in recent years—reflecting merger and acquisition activities in the sector—it remains relatively large considering the size of the country's population (5.4 million inhabitants). The overall turnover of banks, defined as market entry and exit, has been insignificant. The majority of the operating banks are small institutions, typically composed of a headquarters in a relatively large city and a small—if any—branch network. These banks specialize to greater or lesser degrees in particular types of businesses, which

[11] The HHI is the sum of squares of the market shares of all firms in a sector. If all institutions are of equal size, the value of HHI tends to be close to zero, when the number of institutions tends to be very large. If one institution has 100 percent market share, the value of HHI will be 10,000.

reflect the banking requirements of their clients (typically, small- and medium-sized enterprises). However, these banks often use common service providers, which reduces costs and allow these banks to compete with a few large banks across a broad range of banking services throughout the country.[12]

Table 2. Denmark: Number of Commercial Banks

	2000	2001	2002	2003	2004
Number of banks (end-year)	186	186	180	176	172
Number of bank mergers	3	3	3	5	1
Number of newly opened banks	2	4	0	0	0

Source: Danish Financial Supervisory Authority.

18. **Concentration of assets, loans, and deposits in Danish commercial banks is very high.** At the end-2004, the share of the largest bank (Danske Bank) was 54 percent in terms of assets, and slightly below 50 percent in terms of loans or deposits (Table 3). The share of total assets held by the three and five largest institutions was respectively 78 and 84 percent. The levels of concentration ratios in the loan or deposit markets are broadly similar. These concentration ratios exclude foreign bank branches operating in Denmark, but include branches of Danish banks operating abroad. Adjusting the calculations by including foreign bank branches operating in Denmark and excluding Danish bank branches overseas, would result in lower but still significant concentration ratios.[13]

19. **The data on the HHI also points out to a significant market concentration among Danish banks.** The HHI calculated using the data on banking assets was 3,352 as of end-2004, which can be considered as very high by international standards.[14] The value of the HHI calculated based on the loan or deposit market shares is also very high, but substantially lower than the one based on the asset shares (2,639 and 2,683 respectively), which means

[12] For example, most small- and medium-sized banks use common computer centers, which allow even the very smallest banks online access to do their banking business. Only the largest banks have their own computer systems.

[13] According to the DFSA, the share of five largest banks would drop from 84 percent to 71 percent as of end-2004, when adjusted by foreign branches.

[14] While there are no absolute definitions of the level of concentration that is likely to lead to an unacceptable ability to exercise market power, as a rule of thumb, banking regulators in many countries (e.g., the United States) consider the value of the HHI between 1,000 and 1,800 as an indication of a "somewhat concentrated" market structure. If the value of the HHI is above 1,800, the market is considered as "highly concentrated."

that loan and deposit markets are less concentrated—and probably more competitive—than the market for banking assets.[15]

20. **With the exception of total number of banks, almost all concentration indicators have been on an upward trend in recent years.** It can be noticed that the share of the largest bank and the share of the three largest banks both increased sharply in 2001, and have subsequently remained more or less stable. This increase in 2001 reflected by the merger of two large banks (Danske Bank and BG Bank), which at the time of their merger were ranked as the first and third largest banks in Denmark.

Table 3. Denmark: Bank Concentration Ratios

	2000	2001	2002	2003	2004
	Share of assets (in percent)				
Largest bank	38.5	49.0	50.5	50.9	54.3
Largest 3 banks	70.9	76.5	79.0	78.1	77.8
Largest 5 banks	80.0	83.2	84.8	84.3	83.8
Largest 10 banks	89.5	90.0	90.9	90.4	89.9
	Share of loans (in percent)				
Largest bank	35.5	46.1	45.1	47.2	47.3
Largest 3 banks	66.7	71.6	70.8	70.7	70.2
Largest 5 banks	77.1	80.4	80.1	79.9	79.5
Largest 10 banks	87.3	87.3	87.4	86.8	86.3
	Share of deposits (in percent)				
Largest bank	33.8	46.1	46.6	48.6	46.8
Largest 3 banks	68.5	73.7	73.4	74.0	73.4
Largest 5 banks	78.6	79.5	79.3	79.9	79.5
Largest 10 banks	85.0	84.6	84.8	85.1	85.0
	Herfindahl-Hirschman Index				
Assets	2,164	2,966	3,155	3,144	3,352
Loans	1,900	2,598	2,525	2,636	2,639
Deposits	1,875	2,654	2,661	2,796	2,683

Source: staff calculations based on the Danish Financial Supervisory Authority's data for the whole banking system and for each of the 100 largest banks.

21. **High concentration of the financial sector is however relatively common in many EU countries.** According to the data of the ECB, the level of concentration of credit institutions' assets in Denmark is at the higher end of the middle range when compared to the concentration indicators in other EU countries (Figures 13 and 14).[16] In particular, both the

[15] The difference is chiefly due to a lower share of Danske Bank in the total loans and deposits than in the total assets.

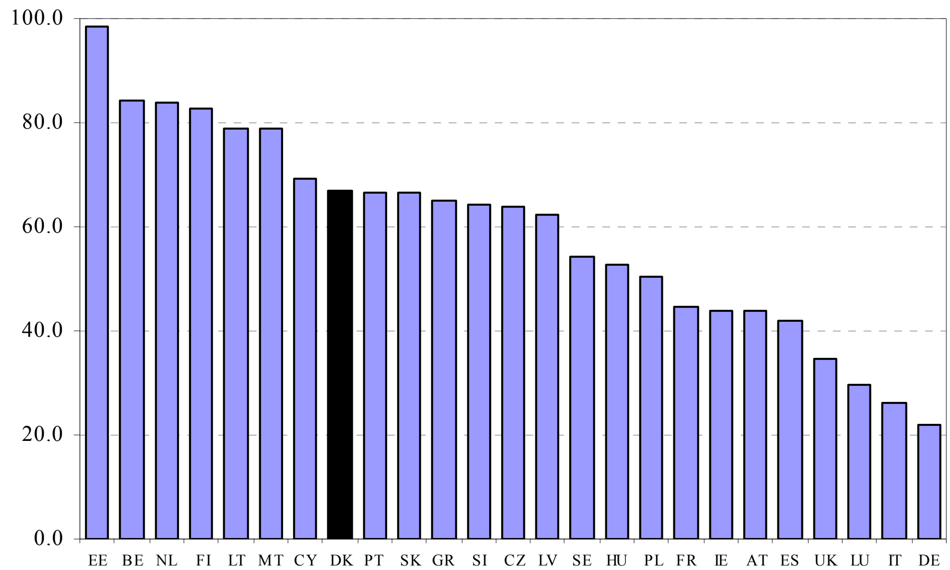
[16] These indicators of concentration relate to credit institutions (see footnote 9).

share of the five largest institutions in total assets and the HHI for total assets in Denmark are lower than in Belgium, Finland, or Netherlands—countries which are comparable to Denmark in terms of the size of the economy, and in terms of economic development, as measured by the level of per-capita GDP, but higher than in the majority of other EU countries (Figure 15).

22. **More generally, high indicators of concentration may not necessarily be associated with the inefficiencies in banking intermediation.** Scale economies as well as limited size of the market may naturally lead to oligopolistic structures. Thus, indicators of concentration need to be supplemented by an analysis of contestability (see below). In a perfectly contestable market, even a monopoly can be induced to behave as if it is competitive if there is a threat that other institutions can easily enter the market.

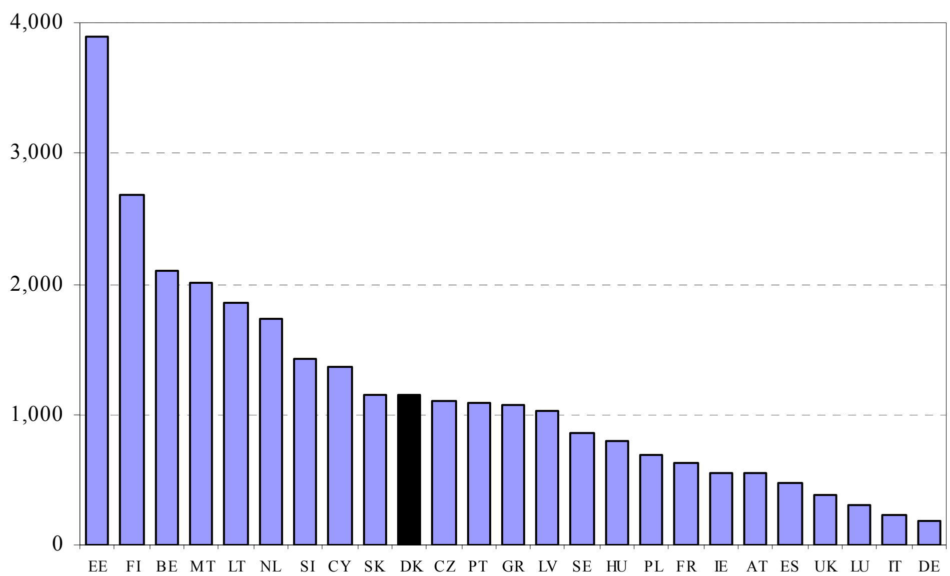
23. **Another problem of concentration indicators may arise in the case of a less than uniform distribution of banks across different regions of the country.** High concentration ratios, calculated for the whole country, may not always accurately reflect the concentration levels in different regions of the same country. Two extreme situations are possible. On one hand, in a country with a significant regional segmentation of banks, the indicators of concentration computed for the whole country can be lower than any of the regional concentration indicators (i.e., different banks may hold monopolistic positions in different regions). On the other hand, in a country where a few banks dominate the whole system and have large branch networks covering the whole country, but do not have dominant positions in any of the country's regions, the indicators of concentration for the country can be higher than those for any of its regions.

Figure 13. EU: Share of the Five Largest Credit Institutions in Total Assets



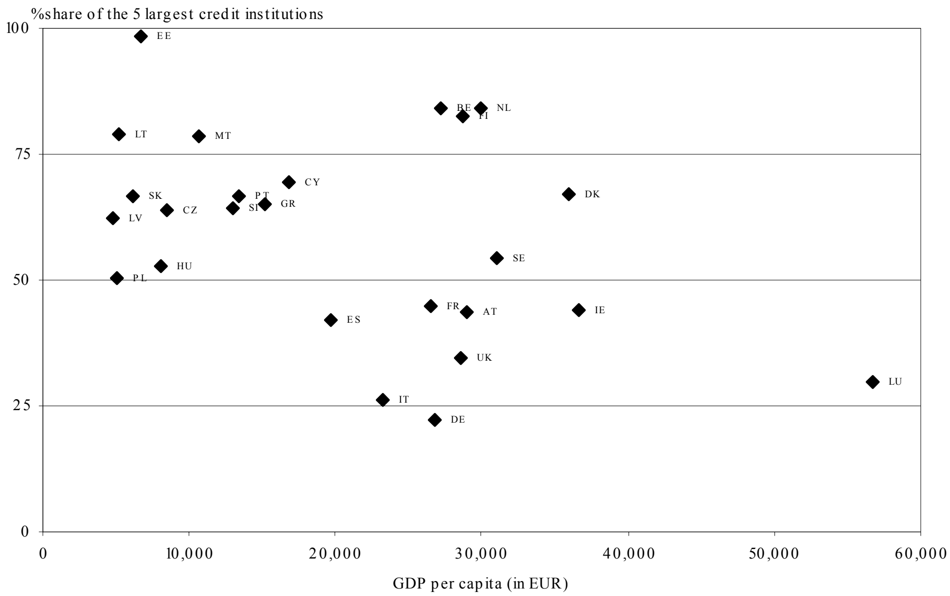
Source: European Central Bank.

Figure 14. EU: Herfindahl Index for Credit Institutions' Total Assets



Source: European Central Bank.

Figure 15. EU: Economic Development and Concentration of Credit Institutions



Source: European Central Bank.

24. **Given the traditionally strong role played by the Danish regional banks, it is highly likely that the concentration ratios differ significantly across the regions.** The magnitude of deviations of concentration in different regions from the country's average concentration is however difficult to estimate as there are no meaningful data. Technological advances, including the use of internet banking and bank substitutes, such as automatic teller machines (ATMs) and electronic funds transfer at point of sale (EFTPOS) terminals, may however blur the significance of regional concentration ratios.

V. Barriers to Entry and Contestability

25. **The assessment of contestability in the banking sector needs to take into account the special role played by banks in the economy.** Ensuring low entry barriers in banking does not mean that entry should be free and most countries have some prudential regulations that limit contestability. In addition, there are economic and other country-specific barriers to entry.

A. Regulatory Barriers to Entry

Prudential regulations

26. **While prudential regulations are needed to promote financial stability, these regulations can create a barrier to entry and distort the competition.** It is therefore important to ensure that prudential requirements do not undermine competition too much, but also contribute to a stable and sound banking sector. The preferred combination of prudential

requirements depends on country circumstances, including the complexity of the country's financial sector and the quality of supervision.

27. **The prudential barriers to entry into the Danish banking sector are broadly similar to those prevailing in other EU countries.** As discussed in detail in the detailed assessment of compliance with the Basel Core Principles for Effective Banking Supervision (BCP), with the exception of the minimum capital requirement, the DFSA's licensing guidance and practice are broadly consistent with those of the EU's Banking Directive concerning licensing and supervision of credit institutions.

28. **As to the minimum capital requirement to open a bank, although this requirement is slightly higher in Denmark than in many other countries, it does not seem to represent a significant barrier to entry.** While in many European countries, the minimum capital required to open a bank is set at EUR 5 millions (which is also the minimum amount recommended by the EU Directive 2000/12/EC), the DFSA grants a banking license only if the capital of the undertaking in question is no less than an equivalent of EUR 8 million.[17] However, this does not seem to pose a barrier to entry since the total number of banks in Denmark is quite high (see above). Also, the minimum requirement for already registered banks is equal to EUR 5 million, in line with the EU Directives. It is therefore not clear whether a slightly lower requirement would encourage the creation of new competitors.

Deposit insurance requirements

29. **Differences in the deposit insurance schemes can represent an obstacle to competition between domestic banks and foreign bank branches.** A banking institution domiciled in Denmark must participate in the Danish deposit guarantee scheme. A branch of a foreign bank domiciled in Denmark is covered by the deposit guarantee scheme in the bank's home country. Deposit insurance schemes vary substantially across the countries, which is reflected in the differences in amounts and types of deposits covered by the various schemes. For instance, the Danish deposit guarantee fund covers up to DKr 300,000 (an equivalent of EUR40,260), the Swedish deposit guarantee covers up to SKr 250,000 (an equivalent of EUR26,523), whereas the Norwegian deposit guarantee covers up to NKr 2,000,000 (an equivalent of EUR 252,525). Furthermore, the coverage criteria of the schemes, their financing models and capital levels, as well as their general institutional set-ups may vary. Table 4 highlights key features of the deposit insurance schemes in the Nordic countries.

30. **Real or perceived differences in deposit insurance between domestic banks and bank branches of foreign banks may undermine the spirit of competition.** These differences complicate the cross-border penetration of bank branches (e.g., a Norwegian bank

[17] The DFSA considers that a higher capital requirement to open a bank is justified by a relatively high start-up cost that banks are likely to incur in the beginning of their operations.

may not be willing to open a branch in Denmark because it will have to provide a substantially more generous deposit insurance for depositors of Danish branches; a Swedish bank may not be willing to open a bank branch in Denmark because it may find it difficult to attract depositors who would accept a less generous deposit insurance).[18] Differences in the deposit insurance arrangements are also at the core of the issues concerning the conversion of existing bank subsidiaries into bank branches (illustrated by the case of Nordea Bank's planned conversion of its Danish and Norwegian subsidiaries into branches of the Swedish hub). The DFSA and other financial sector authorities from the Nordic countries should therefore carefully assess the extent to which the varying terms and conditions of deposit insurance arrangements might hinder market entry and competition in the region.

[18] Although in that case a Swedish bank branch may choose to purchase supplementary deposit cover under the Danish deposit insurance scheme (topping up).

Table 4. Nordic Countries: Deposit Insurance Arrangements

	Denmark	Norway	Sweden	Finland	Iceland	EU Directive
Type of scheme	Explicit	Explicit	Explicit	Explicit	Explicit	--
Established	1987	1923	1996	1970	2000	Issued May, 1994
Administration	Government legislated and privately administered	Government legislated and privately administered	Government legislated and administered	Government legislated and privately administered	Privately established and administered	---
Mandatory	Yes	Yes	Yes	Yes	Yes	Yes
Types of institutions covered	Banks, mortgage banks, investment companies	Saving banks	Banks with Swedish charter or incorporated in other EEA states	All banks	Commercial and saving banks, investment and securities houses	All credit institutions
Member institutions	127	131	125	336	40	---
Foreign bank branches	Included	Included	Banks incorporated in other EEA states or outside the EEA may join the Swedish scheme	EU banks only	Included	Foreign branches of EU banks operating in the country should have adequate coverage from their home country scheme or otherwise should join the host country scheme
Types of deposits eligible for coverage	Saving and checking accounts, registered deposits	Saving and checking accounts, annuities, securities of deposit	Saving and checking accounts, foreign currency deposits, interbank deposits	Saving and checking accounts, foreign currency deposits	Saving and checking accounts, certificates of deposits, travelers cheques, money orders, certified drafts of cheques, foreign currency deposits	Excluded are deposits of financial institutions, central and local government, insurance companies, pension and retirement funds, collective investment schemes, intra-group deposits, related parties deposits and foreign currency deposits (except currencies

Table 4. Nordic Countries: Deposit Insurance Arrangements *(concluded)*

Types of depositors eligible for coverage	Foreign (non-residents), domestic and foreign corporations	Foreign (non-residents), domestic and foreign corporations	A depositor could be a natural or a legal person except institutions which are part of the scheme.	Foreign (non-residents), domestic and foreign corporations	Foreign (non-residents), domestic and foreign corporations	
Amount of insurable deposits (dom. currency)	DKK 358 billion	NOR 300 billion	SEK 400 billion	EUR 33 billion	ISK 315 billions	---
Amount of insurable deposits (in euro) 1/	EUR 48.0 billion	EUR 37.9 billion	EUR 42.4 billion	EUR 33 billion	EUR 4.1 billion	---
Coverage characteristics	Per depositor per institution	Per depositor per institution	Per depositor per institution	Per depositor per institution	Per deposit account	Per depositor per institution
Coverage limit (in dom. currency)	DKK 300,000	NOR 2,000,000	SEK 250,000	EUR 25,000	ISK 1,700,000	...
Coverage limit (in euro) 1/	40,260	252,525	26,523	25,000	22,052	20,000 minimum
Coverage indexed	No	No	No	No	Indexed to the euro	...
Coverage of insured deposits by the deposit insurance scheme resources	0.90	1.50	3.00	0.30	...	...
Co-insurance	No	No	No	No	No	...
Type of funding	Maintain a fund	...	...	Maintain a fund	...	...
Deposit insurance scheme funded through	Premium assessment	...	...	Premium assessment	...	...
Type of premium	Flat rate	...	...	Differential	...	...
Premium base	Insured deposits	...	...	Insured deposits	...	...
Premium rate	Currently 0 as reserves sufficient	...	...	0,05 per cent (the fixed part) + max 0,25 per cent (based on solvency on the member bank)	...	...

Source: Canada Deposit Insurance Corporation Deposit Insurance Survey, 2002-03
1/ Converted from domestic currency at end-June 2005 exchange rate.

B. Economic Barriers to Entry

There are several additional economic barriers to entry.

Consumer mobility

31. **Impediments to consumer mobility could limit competition among banks and serve as a barrier to entry.** According to the data from the Danish Competition Authority, depositor mobility was only around 2-3 percent in 2002. Although this ratio might have increased since then, as claimed by some commercial banks interviewed by the FSAP mission, it still seems to be low. Low mobility may reflect depositors' perception of the difficulties involved in switching banks. Most depositors do not seem to like moving their bank accounts to other banks. This may be due to due customer loyalty and locational convenience, but it may also indicate that the costs of doing so outweigh the benefits.[19] Switching banks is seen as complicated, time-consuming, and with possible disruptions to the payment activities. While some banks do not charge a fee for moving certain businesses, others do, and it can be particularly cumbersome and expensive for various pension products.[20]

32. **To address this problem, the DBA in collaboration with the DFSA could consider developing and implementing a switching code for accounts of bank depositors.** Such a switching code should be designed to facilitate individual and corporate bank depositors to move their bank accounts to another banks, if they wish to do so. The experience of Ireland, where a switching code was launched in January 2005, could be examined.

33. **Another important reason of low mobility relates to depositors' difficulties in assessing and comparing various bank products.** Even if a bank client can identify his or her needs and find a suitable type of bank product or services, finding the bank with the best price-quality combination is not likely to be easy. A study conducted by the MoEB found that most banks charge 35-70 different types of fees, with one bank having as many as 340 different types of fees. The lack of transparency causes a widespread public feeling that despite declining levels and spreads of interest rate, fees, and commissions that banks charge for their services are not justified, even at their present level (which is not higher overall than the average for EU countries). It is not however possible to compare the composition of bank

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[19] Furthermore, a recent study on competition in four EU countries (Ireland, Netherlands, Sweden, and U.K.) showed that people often tend to choose the bank not based on better service or better products but rather based on location and family history with a particular institution. This is also likely to be the case of Denmark.

[20] Reportedly, the tax authorities require that tax subsidized pension products be maintained with one bank only with a view to avoid abuse (since it makes it easier to monitor), though there are no restrictions on moving this pension account to a new bank.

fees and commissions with other countries, as the DFSA does not collect these data for Danish banks.[21]

34. **In early 2006, the DBA, in coordination with the Danish Consumer Association, established a website allowing consumers to compare the prices of the 25 least expensive banks of a range of products.**[22] The mission welcomes this initiative, which should promote the transparency of pricing and quality of different products and services offered by banks.

35. **An associated problem to the insufficient transparency is the bundling of products and services.** Danish banks, especially the large ones, are extensively using price bundling. The bundles often include current account, pension insurance, and mortgage or other loans. The price bundling helps banks to diminish operating costs and stimulate demand for additional services. At the same time, however, the price bundling can negatively affect the competition among banks by leveraging oligopoly power of a few banks and/or by making it more difficult to compare the prices of offered products. The use of price bundling is also likely to increase the loyalty of bank customers, which means that depositor mobility can decline. While the FSAP team did not find any clear evidence of distortions arising from the use of price bundling by Danish banks, the continued bundling practice warrants a close monitoring by the Danish authorities.

Technological advances

36. **Denmark is relatively advanced in adopting new technologies, which reduces the need for a large branch network.** Although considerable investments in infrastructure and IT are still generally needed for newly set up institutions in all EU countries, which represents a barrier to entry, Danish banks and their clients use relatively developed internet banking and telephone banking services. The economist intelligence unit recently ranked Denmark as the best place in the world to do internet-based business.[23] In addition, ATM and EFTPOS penetration and usage in Denmark are relatively high by EU standards, which also reduces the need for a large branch network for standard transactions. At end-1999 (latest data available for Denmark), Denmark already had more ATMs and EFTPOS terminals in per capita terms than the majority of other western or northern European countries had at end-2003 (Table 5).

[21] The study of the MoEB estimated that the annual costs of loan was one percentage point higher in Denmark than the average in the EU when fees are taken into account.

[22] http://www.pengepriser.dk/frontpage.html

[23] Based on the consideration of factors such as broad-band and mobile penetration as well as government regulation, Denmark was scored first in the ranking of "e-readiness" of the world 65 largest economies (The Economist, May 7, 2005).

Table 5. Selected Countries: ATM and EFTPOS Penetration
(as of end-2003) 1/

	Number of ATMs Per 1 Million Inhabitants	Number of EFTPOS Terminals Per 1 Million Inhabitants
Belgium	681	10,900
Denmark	496	13,155
Finland	422	11,617
France	683	16,267
Germany	620	6,008
Italy	671	15,945
Netherlands	465	11,466
Norway	448	13,124
Sweden	299	12,062
Switzerland	722	10,803
UK	783	14,508

Sources: CPSS (data for all countries except Denmark, Finland, and Norway); and Norges Bank (data for Denmark, Finland, and Norway).

1/ Data for Denmark, Finland, and Norway are as of end-1999.

Foreign penetration

37. **Denmark has several country-specific factors that tend to limit foreign bank entry**. These include: (i) small size of the economy; (ii) different regulatory, tax, and legal framework; (iii) unique language; (iv) currency and interest rate differences; and (v) impediments to hostile take-overs.[24]

38. **Impediments to hostile take-overs may be one reason why Denmark has been relatively immune to foreign bank penetration.** Almost all regional Danish banks have reportedly, in one form or another, implemented measures designed to deter anyone from trying to acquire their share capital. In most instances, this is done by a limitation of voting rights, whereby one shareholder is restricted to vote only on a limited percent of the total share capital, regardless of the shareholder's total share holdings. Leveling the playing field for shareholders rights can be helpful in promoting cross-border entry to the Danish market, and enhancing the competition in the Danish banking sector.

[24] The linguistic and cultural similarities of Denmark, Norway, and Sweden have arguably provided banks domiciled in these countries an important advantage to other foreigners with regard to the penetration in the neighboring Scandinavian countries.