

24th Voorburg Group Meeting  
Oslo, Norway  
September 14th – 18th, 2009

# **TURNOVER/OUTPUT MEASURES IN THE BANKING AND CREDIT GRANTING INDUSTRIES IN NORWAY**

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# 1. Definition of the service being collected

## 1.1 Classification standards

### 1.1.1 Industry classification

The Norwegian standard of industrial classification in use up until the end of 2008 was called SN2002. It was based on NACE rev. 1.1, which is derived from ISIC (ISIC rev. 3.1).

According to NACE rev. 1.1, banking and other credit granting activities are coded together in NACE 65. The central bank activity has code 65.11, while other banking and other credit granting activities are coded as 65.12 and 65.22 respectively – see table 1.

**Table 1. Banking and credit granting activities, NACE rev. 1.1 and SN2002**

NACE rev. 1.1 (ISIC rev. 3.1)	Activities	SN2002	Activities
65		65	Financial intermediation, except insurance and pension funds
65.11	Central Bank	65.11	Central banking
65.12	Other banking	65.12	Other monetary intermediation
65.22	Other credit granting activities	65.22	Other credit granting

Table 2 shows the most recent version of the national classification, SN2007. It is identical to the new industrial classifications NACE rev. 2 and ISIC rev. 4. The transition to SN2007 began in the basic industry statistics in 2009. The transition to new classification standard SN2007 is carried out in accordance with requirements from Eurostat and the national accounts. All short-term statistics are published according to the new standard from January 2009 onwards, with back-casting of time series to January 2000.

**Table 2. Banking and credit granting activities, NACE rev. 2 and SN2007**

NACE rev.2 (ISIC rev. 4)	SN2007	Activities
64	64	Financial intermediation, except insurance and pension funds
64.11	64.11	Central banking
64.19	64.19	Other banking
64.92	64.92	Other credit granting

The National Accounts will adopt the new classification as basis for its industry classification in 2011. Time series back to 1970, to be presented in November 2001, will incorporate the new classification.

### **1.1.2 Product classification**

Tables 3 and 4 give the corresponding classification by product according to the former and new version of the EU Classification of Products by Activity (CPA) respectively.

**Tabell 3. CPA 2002**

<b>Code</b>	<b>Type of service</b>
65.11.10	Central banking services
65.12.10	Other banking services
65.21.10	Financial leasing services
65.22.10	Other credit granting services

As seen the number of products at the detailed level has been expanded from four to eleven items. The new classification is given a three dimensional structure, i.e. type of financial institution, type of underlying financial instrument and type of customer, while the former classification was more one dimensional, i.e. by type of financial unit.

**Tabell 4. CPA 2008**

<b>Code</b>	<b>Type of service</b>
64.11.10	Central banking services
64.19.11	Deposit services to corporate and institutional depositors
64.19.12	Deposit services to other depositors
64.19.21	Inter-industry credit granting services by monetary institutions
64.19.22	Consumer credit granting services by monetary institutions
64.19.23	Residential mortgage credit granting services by monetary institutions
64.19.24	Non-residential mortgage credit granting services by monetary institutions
64.19.25	Commercial non-mortgage credit granting services by monetary institutions
61.19.26	Credit card services by monetary institutions
61.19.29	Other credit granting services by monetary institutions
61.19.30	Other monetary intermediation services n.e.c.

The remainder of this paper will in general refer to SN2002 (NACE rev. 1.1) and the currently applied classifications in the National Accounts.

## **1.2 Credit market statistics**

### *Financial institutions, accounts statistics*

These quarterly and annual statistics comprise accounting data from both profit and loss accounts and balance sheets accounts from all units in the relevant industries. The source for this census is administrative registers kept by Norges Bank (the central bank). The data collection is the result of a three part co-operation agreement between Statistics Norway, Norges Bank and Kredittilsynet (the Financial Supervisory Authority of Norway). The statistics have been published in the series Banking and Credit Statistics, Current Figures, since 1981, although in general statistics in this field go way back, for savings banks to 1870.

Among relevant variables we find interest income and costs by category of customer sector, and provisions and received payments for other banking and financial services.

### *Interest rate statistics, banks*

Quarterly statistics from 1979 onwards gives data on interest on deposits and loans in banks (including the central bank), state lending institutions and mortgage companies. Information on interest is needed for the National Accounts estimations on Financial Intermediation Services Indirectly Measured (FISIM).

## **1.3 National accounts**

Quarterly series go back to 1978 and annual series at detailed level to 1970. The national accounts give a structured overview of supply and use of products in the economy measured in both current and constant prices. Currently, series are published at two-digit industry level for 64 industries, with one industry covering all banking and credit granting activities. At the most detailed level however, the Central Bank and other banking activities are separate industries.

## **1.4 Wage statistics**

These annual statistics give figures on average monthly earnings and average basic monthly salary at three-digit level, 65.1 Monetary intermediation. Figures by age-group, sex, educational level and occupational group are published for the industry section J Financial intermediation as a whole. The time series go back to 1999.

## **2. Unit of measure to be collected**

Output in financial intermediation typically consists of two main categories of characteristic products.

- a) First, services explicitly charged as commissions and fees to their customers, for example through underwriting commissions, commitments fee, brokerage fees, sales commissions etc. These fees can be labelled financial intermediation services directly measured.
- b) In addition, financial intermediaries can charge customers through interest margins, i.e. depositors in financial institutions receive a rate of return that is lower than the market rate of interest while borrowers pay a rate of interest that is higher than the market rate. These earnings are labelled Financial Intermediation Services Indirectly measured (FISIM).

The information given in the Credit market statistics, based on quarterly and annual accounting data reported from banks and other credit institutions, give figures for income from directly charged services expressed in NOK.

Output of services not directly charged (FISIM) can on the other hand not be extracted directly from the accounts of the banks. The value of this output is estimated using data on interests and balance sheet information from the banks' accounts in combination with data on inter-bank interest rates. These estimations are in Norway as in other countries, carried out as part of the National Accounts compilation.

### 3. Market conditions and constraints

#### 3.1 Consolidation and concentration

The financial intermediation industry in Norway has the last few decades experienced a dramatic consolidation. Looking at the number of units we find that 549 banks and credit granting institutions were operating in Norway in 1970, while the number in 2007 was reduced to 162, see table 3. The consolidation has been particular strong in the saving banks sector and mostly took place before 1990.

**Table 3. Number of enterprises by type of institution, 1970-2007\***

Type of institution	1970	1980	1990	2007
Central bank	1	1	1	1
Commercial banks	40	24	23	149
Savings banks	493	322	142	
Credit granting institutions	15	15	14	12
Total	549	362	180	162

\*Credit market statistics

The consolidating process in Norway took place at an earlier stage than in many other countries as Norwegian banks quickly adapted to new technology and thus took advantage of the apparent elements of economies of scale due to the rapid technological development.

In Europe, a strong consolidation took place at the national level particular at the end of the 1990s<sup>1</sup>. The EU commission<sup>2</sup> has stated a clear strategy towards an integrated financial market in Europe and actively formulating policy measures to reach this goal. Even in the field of statistics this is felt and one example is the efforts to reduce costs on trans-border payments which have resulted in a raise in the threshold for reporting cross-border payments used as basis for settlements statistics of the central banks. So far however, the consolidation of the banking industry has been far from as strong across the national borders as within the national borders.

A further consolidation and concentration of the banking sector probably will depend on both legal regulations and on bank customers' behaviour and loyalty towards "own" banks.

#### 3.2 A few dominating banks<sup>3</sup>

The most dominant unit in the banking and credit granting industries in Norway has nearly 40 per cent of the domestic market, measured through its share of total bank assets. The two largest units have more than 50 per cent.

<sup>1</sup> See Solberg and Lien (2008), page 26.

<sup>2</sup> EU-commission (2005).

<sup>3</sup> Based on 2007-data, Solberg and Lien (2008).

Another feature is the strong element of Nordic banks on the Norwegian market. These constitute around 25 per cent of the market, while other foreign owned banks constitute 5 per cent.

### **3.3 Liberalisation of markets, but...**

The post-war period brought a strong regulation on both the financial markets and the financial institutions in Norway. Until the mid-1980s credit rationing prevailed in the Norwegian economy as a consequence of the government credit policy. The interest rates faced by the bank customers were de facto decided through administrative resolutions.

Around 1985 this changed as the government policy was geared towards more market orientation and less emphasis on direct regulation of market operations.

### **3.4 ... still strongly regulated industry**

Although the conditions surrounding the market operations of banks and credit granting institutions were deregulated from the mid 1980's onwards, the financial institutions itself have been subject to strong supervision of the authorities all along. The prevailing Law on financial operations and financial institutions from 1988 regulates both the establishment of banks through the system of concession and the ownership conditions and scope of operations, as well as stating capital reserves requirements.

Through the European Economic Area (EEA) agreement Norway has adopted the laws and regulations of the European Union in this field.

### **3.5 Financing shipping operations – a Norwegian speciality**

Through its traditional contact with domestic shipping companies, Norwegian banks have gained much experience and competence in financing shipping operations. This has over time brought Norwegian and Nordic banks at the very top world wide in this field<sup>4</sup>.

Norwegian and Nordic banks have also made efforts in reaching corresponding positions within other markets, e.g. financing of oil and energy activities, without the same degree of success.

## **4. Standard classification structure and product detail/levels**

### **4.1 Credit market statistics**

The industry based statistics on banking and credit granting is based on business accounts data. The industry classification is based on NACE, as explained in chapter 1.

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<sup>4</sup> This has a parallel in insurance where Norwegian insurance companies have a significant part of the international ocean transport insurance market.

No international product classification has so far been introduced directly in this statistics. However, in the reporting of the profit and loss account some details on income generated by type of activity are given. Table 4 shows the income items given and the structure of the report submitted by banks.

**Table 4. Income by type.**

Type of income	Type of underlying financial instrument	Customer sector and industry
Total		
1. Income from interest and commissions/fees from credit granting		
1.10 Interest		
1.20 Commissions and fees from credit granting		
1.30 Financial leasing		
2. Other operational income		
2.40 Commissions from guarantees		
2.45 Other commissions and fees		
2.55 Operating income from real estate		
2.60 Revaluation income		
2.65 Other ordinary income		
3. Other income		
3.75 Gains/losses on disposal of fixed assets		
3.85 Extraordinary income		

The data structure of the reports from the banks and other credit granting institutions is designed to give information both on type of income (i.e. interest, fees etc.), on underlying asset (financial instrument or other assets) giving rise to the income flows and on type of customer (institutional sector, industry). It is thus possible to extract rather detailed data in accordance with the three-dimensional structure given in the new CPA classification.

This reporting structure and specifications was introduced in the mid 1980s and has been kept more or less the same since then.

## 4.2 National accounts - industries

The current industry classification of the Norwegian National Accounts is based on the former version of the Norwegian standard of industrial classification (SN2002), in turn based on NACE rev. 1.1 (see chapter 1). The activities of NACE J are distinguished in 9 industries, within three aggregated headings. All industries are classified as market producers.



**Tabell 5. Industries in the Norwegian National Accounts – NACE J.**

Code	Industry	
65	Financial intermediation services, except insurance and pension funding services	
	651	Central banking
	652	Other monetary intermediation
	655	Other financial intermediation
66	Insurance and pension funding services, except compulsory social security services	
	661	Life insurance
	662	Pension funding
	663	Non-life insurance
67	Services auxiliary to financial intermediation	
	670	Activities auxiliary to financial intermediation

The relevant industry for the present discussion is industry aggregate 65 - Financial intermediation services, except insurance and pension funding services.

With respect to coverage of credit institutions - both NACE 65 Financial intermediation excluding insurance and pension funding and NACE 67 Activities auxiliary to financial intermediation - most institutions are subject to government supervision and hence covered in the basic statistics. They also cover consumer credit institutions and credit card companies. Unit trusts - part of National Accounts-industry 655 - and part of activities auxiliary to financial intermediation - are covered through separate estimates. Financial leasing is treated as loan from financial institutions, and the new Accounting Act emphasizes that the leased assets are to be recorded and shown explicitly in the balance sheets of borrowers. Inconsistencies could however occur for small enterprises that might record leasing expenses as intermediate consumption (amount involved is quite small, however). As to the problems on coverage of foreign credit institutions, the activity on the domestic territory is subject to government supervision (this is not the case for corresponding Norwegian units abroad).

### 4.3 National accounts - products

The Norwegian National Accounts statistics has a long tradition for incorporating detailed goods and services flows as an integrated part of the annual GDP estimations. In the current system almost 1 500 groups of goods and services are identified. This detailed product classification is used for compiling annual final accounts which is published slightly less than 2 years after the end of the accounting year. For preliminary annual accounts and Quarterly National Accounts, an aggregated product classification is used, specifying about 90 goods and services groups.

The prevailing product classification of the Norwegian National Accounts was established in 1995 and was based on Eurostat's product classification - Classification of Products by Activity (CPA) – version 1992.

Table 3 shows the products stated by the 1992 CPA for Section J Financial Intermediation Services. For use in the Norwegian National Accounts some adjustments on the CPA has been necessary. First, FISIM has been introduced as a separate product. Secondly, the FISIM product has to some degree been cross-classified by type of customer to accommodate the deflation process, i.e. the linking to stock data and interest rates by customer sector, the

choice of reference rates, and for use in the balancing of the product flows in the supply and use tables of the National Accounts.

Table 6 gives National Accounts product classification of characteristic products of industry 65.

**Table 6. Characteristic output of industry 65 Financial intermediation services, except insurance and pension funding services.**

<i>Code</i>	<i>Characteristic output</i>
651 111	FISIM from banks to non-financial enterprises
651 112	Central banking services
651 211	FISIM from banks to central government institutions
651 212	Other monetary intermediation services, direct charges
651 311	FISIM from banks to local government institutions
651 411	FISIM from banks to households and NPISHs
652 211	FISIM from other credit institutions to non-financial enterprises
652 212	Other credit granting services, direct charges
652 311	FISIM from other credit institutions to central government institutions
652 411	FISIM from other credit institutions to local government institutions
652 511	FISIM from other credit institutions to households og NPISHs

## **5. Evaluation of standard vs. definition and market conditions**

Per definition banking and credit granting services, inclusive FISIM, are produced solely by banks and other credit granting institutions, and accordingly the services statistics covering these types of services will have to be based on reporting from these institutions. As mentioned earlier these industries have traditionally been subject to strict surveillance and a rather heavy reporting duties has been imposed upon them for a long time.

The specifications and data structure of the reports from the banking and credit granting industries were initially at least partly designed to serve National Accounts needs. Hence information on both services directly charged and data needed for estimation of FISIM is available from the reports. There seems to be enough details given in the current reporting system also making it possible to extract figures according to the new and more detailed CPA classification.

One aspect not covered in the classification structure of the CPA is the categorisation of the bank customers according to industry. As mentioned in chapter 3.6 Norwegian banks hold a quite large share of the international market for financing shipping activities and it might be of interest to have the national statistical system be able to describe this situation. However it seem quite possible to achieve this by introducing specific items in the product classification of the national accounts using the existing statistical reporting system, as here also customers

are categorised also by industry. This question will be assessed as part of the forthcoming main revision of the National Accounts.

## 6. National accounts concepts and measurement issues for the area related to GDP measurement

### 6.1 General aspects

Financial intermediation service, except insurance and pension funding, make a contribution of 2.1 per cent to GDP in 2006, see table 7. At a 3-digit level the Other monetary intermediation industry made by far the largest contribution.

**Table 7. NACE 65 - NOK billion and percentages in 2006**

		Output	Intermediate consumption	Value added	Per cent of total value added	Per cent of GDP
65	Financial intermediation services, except insurance and pension funding	73.7	27.8	45.9	2.4	2.1
651	Central banking	2.3	1.7	0.6	0.0	0.0
652	Other monetary intermediation	49.2	18.4	30.1	1.6	1.4
655	Other financial intermediation	22.2	7.7	14.5	0.8	0.7

Looking at the development since 1999 we find a rather strong growth in both output and value added measured at constant prices. For output the exception was the year 2002 with an annual growth rate of 2.8 per cent. Due to a decline in intermediate consumption the value added however still reached a growth of 6.3 per cent compared to the previous year – see table 8.

**Table 8. Output and value added NACE 65. 1999-2006\*. NOK\*\***

	Output		Intermediate consumption		Value added	
	NOK billion	Annual per cent change at constant prices	NOK billion	Annual per cent change at constant prices	NOK billion	Annual per cent change at constant prices
1999	46.1	6.5	17.0	2.8	29.1	8.6
2000	51.1	8.5	19.6	9.1	31.9	8.2
2001	54.5	5.2	21.0	4.1	33.5	6.0
2002	55.2	2.8	21.3	-2.9	33.9	6.3
2003	64.5	6.1	21.6	-0.1	42.9	10.1
2004	70.9	7.5	23.2	3.3	47.7	9.6
2005	74.0	8.3	24.6	0.6	49.4	12.1
2006	73.7	5.5	27.8	4.6	45.9	6.0

\*National accounts, \*\*1 Euro = ca 8 NOK

The credit market statistics taken as basis is processed into the National Accounts database by use of converting keys linking items of the credit market statistics to items of national accounts. These keys are general in the sense that they are used for all years, until

specifications in the credit market statistics are altered. Holding gains and losses are excluded from the measurement of output of financial intermediation. Earlier FISIM was calculated for the financial intermediation enterprises (including Norges Bank, the central bank) as the difference between interest income and interest costs. Now, the estimation is based on information on the stocks of loans and deposits and interest margins between actual interest rates received/paid on those stocks and chosen reference rates. The sectors producing FISIM now comprise private banks, state lending institutions (excluding the central bank), mortgage companies and finance companies.

Output in financial intermediation, except insurance and pension funding, is specified by 6 characteristic and 4 non-characteristic National Accounts products. These are illustrated by 2006 figures:

**Table 9. National Accounts. Output in NACE 65. NOK billion in 2006 - Sources and methods**

<i>Characteristic output</i>	<b>NOK billion</b>	
651 111 FISIM from banks to non-financial enterprises	11.6	Estimated from banking statistics and credit market statistics
651 112 Central banking services	2.3	Items from the accounts of Norges Bank
651 211 FISIM from banks to central government institutions	0.0	Estimated from banking statistics and credit market statistics
651 212 Other monetary intermediation services, direct charges	18.0	Items from the accounts of Post Giro, the Post Office Bank, the commercial banks and the savings banks
651 311 FISIM from banks to local government institutions	0.1	Estimated from banking statistics and credit market statistics
651 411 FISIM from banks to households and NPISHs	19.2	Estimated from banking statistics and credit market statistics
652 211 FISIM from other credit institutions to non-financial enterprises	3.9	Estimated from the accounts of state banks, credit enterprises and financial companies and credit market statistics
652 212 Other credit granting services, direct charges	5.9	Items from the accounts of state banks, credit enterprises and financial companies
652 311 FISIM from other credit institutions to central government institutions	0.0	Estimated from the accounts of state banks, credit enterprises and financial companies and credit market statistics
652 411 FISIM from other credit institutions to local government institutions	0.4	Estimated from the accounts of state banks, credit enterprises and financial companies and credit market statistics
652 511 FISIM from other credit institutions to households og NPISHs	8.8	Estimated from the accounts of state banks, credit enterprises and financial companies and credit market statistics
<i>Non-characteristic output</i>		
	3.5	Include security broking and fund management services, rental services of non-residential property (3.2), renting of automobiles and accounting and auditing services
<b>Total output</b>	<b>73.7</b>	

## **6.2 Output of financial services directly measured**

Data on monetary intermediary services directly charged are taken from the reports from the relevant institutions to the Credit market statistics. But although the reports give quite detailed information on this type of income and underlying asset, the information is aggregated into only three characteristic products for services directly charged for use in the national accounts, see table 6. The reports give figures in Norwegian kroner and can be aggregated directly.

## **6.3 Financial intermediary services indirectly measured (FISIM)**

Statistics Norway introduced a new method for calculating FISIM in 2006, in accordance with EU regulations. While the principle of allocating FISIM output to various users is the most pioneering feature of the new treatment, there was also a new method introduced for the FISIM output calculation. The new method makes use of other types of data than before – balance sheet data and rates of interest instead of interest payments flows. Furthermore, FISIM is no longer estimated for Norges Bank (the central bank), lowering the new FISIM estimates compared to previously.

FISIM outputs are first calculated by institutional sector, i.e. for Non-financial corporations, General government and Households, and for Rest-of-the World in terms of exports and imports, on loans and deposits these sectors have with the financial corporations involved. Total FISIM for each sector is arrived at by adding the two components FISIM on loans and FISIM on deposits. FISIM on loans is calculated by multiplying stock of loans by the difference between the rate of interest on loan and a chosen reference rate, while FISIM on deposits is calculated by multiplying stock of deposits by the difference between the reference rate and the rate of interest on deposits. Grand total FISIM is the sum over all sectors. Important reason behind the change of method and data used is the sectoral approach taken as a departure for the calculations to be able to show FISIM by user category (sector or industry), and also the fact that balance sheet data are more easily available than data on transaction flows when it comes to relevant data involving all the sectors.

Stock data and interest data are available by sector from the Monetary statistics compiled by Statistics Norway<sup>5</sup>. The reference rate is chosen as the interbank interest rate NIBOR (3-monthly efficient rate) for the national part, which is a market rate that in theory contains a risk element. As for reference rates for the international part, initially three different rates were tested, the 3-monthly interbank interest rate for the Euro-zone (earlier the German EURIBOR) for Europe, and the corresponding 3-monthly rates LIBOR for USA and TIBOR for Japan. However, due to difficulties in accessing both good quality stock data and relevant interest rates on loans and deposits for the three different geographical areas, in practice only EURIBOR are used as reference rate, while interest rates on loans and deposits are taken from the European Central Bank (ECB), see table 10.

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<sup>5</sup> All statistics produced by Norges Bank – the central bank – were transferred to Statistics Norway in 2007.

**Tabell 10. Interest rates on international deposits and loans\*.**

	Households	Government and non-financial enterprises
Deposits	Deposits with agreed maturity up to 1 year for households	Deposits with agreed maturity up to 1 year for non-financial corporations
Loans	Floating rate and up to 1 year initial rate fixation	Other loans over 1 million EURO; Floating rate and up to 1 year initial rate fixation

\* Source European Central Bank

## 6.4 Output at constant prices

### 6.4.1 Deflation of FISIM

The two product groups produced by units in NACE 65, FISIM and directly charged output, require widely different deflation methods, as entirely different problems arise in the determination of output for each of these products at both current and constant prices.

Deflation of FISIM is implemented according to the guidelines laid down in the EU Regulation on FISIM<sup>6</sup>:

FISIM output is generated from the management by financial intermediaries of loans and deposits whose rates they control. It is assumed that the output is linked to the number of transactions, and that a positive correlation exists between the number of transaction and the constant price value of stocks of loans and deposits. This means that change in the constant price value of stocks of loans and deposits may be interpreted as an indicator of the change in the production volume. The price concept applied is the interest margins on loans and deposits. Total FISIM at constant prices reflects the interest margin on loans and deposits earned in the accounting period applying the interest rates in the base year.

The Eurostat handbook on constant price estimations classifies different methods into A, B and C methods. There are two B method recommendations for FISIM in the handbook<sup>7</sup>:

1. The use of a detailed volume indicator approach
2. The use of reference rate in the base period on the volume of deposits and loans at constant prices

The method used in the Norwegian National Accounts is similar to method 2.

### 6.4.2 Deflation of banking services directly charged

Central banking services and Other monetary intermediation services directly charged are calculated at constant prices using extrapolation from the base year using a volume indicator. This indicator is constructed based on information from Bank of Norway (the central bank) on number of transactions related to use of bank cheques, giro, mini banks and credit cards. For Other credit granting services directly charged at constant prices output at constant prices is estimated using employment data.

<sup>6</sup> Council Regulation 98/448/EEC: Official Journal of the European Communities L58, p.1.

<sup>7</sup> At the moment, it is considered impossible to identify an A-method.

Alternative methods in estimating output at constant prices have been tested and rejected. These include constructing price indexes combining price and volume information on detailed instrument payments, and a weighted average price index published by Norges Bank. All alternatives were turned down, concluding that it is difficult to develop price indices based upon price surveys from the finance industry, pointing out the following problems:

- **One for all:** The prices are set for a set range of services (loans, cheque cards, etc), leaving the customer with no options to choose between these. This is called a joint-product of the sector.
- **Mixed prices:** Actually a joint-product, in a different form. Meaning that some services are cheap/free, while other services are expensive (for instance an interest on loans versus a low fee on use of cheque cards).
- **A differentiated industry:** The price policy and the target group in the industry are very heterogeneous. Many enterprises are directed towards special markets (segmented) and design product packages (implicitly this means price setting) to avoid comparisons with products made by competitors.

The use of price information from the Consumer Price Index (CPI) has also been assessed as an alternative to volume extrapolation, but was rejected arguing that the CPI was a too narrow price measure, both in terms of sector coverage<sup>8</sup> and terms of types of customer contracts.

When separate prices exist for the services directly paid, the Eurostat handbook recommends the use of quality-adjusted output price indices for a representative set of those services. Where the activities are highly heterogeneous, the set of services must be selected to represent each part of the market. The approach is considered an A method, provided these preconditions are met. If the heterogeneous nature of the activities is not taken into account the approach is considered a B method.

The Norwegian method of estimating the directly paid banking services at constant price by use of a volume indicator would generally be considered a B method.

## **7. Turnover/output data method(s) and criteria for choosing various output methods**

The measurement of turnover/output of banks and credit granting institutions in the Credit market statistics must be regarded as an integrated part of the reporting from those institutions for both statistical and surveillance purposes. The report has been constructed to also serve National Accounts needs as far as type of service is concerned.

For FISIM the method of estimation is strictly regulated by legal acts in Europe implying the collection of both stock data and interest rates data. In Norway some accommodation to the rules has been effectuated in terms of choosing the most relevant reference rates for the estimations. In particular this applies to the choice of a pragmatic solution in the cases when negative values of services flows are the result of the initial estimations. In the case of negative result at a detailed level in the estimation of a FISIM flow, adjustments are made for example in the choice of reference rates to reach a positive figure. An example is the

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<sup>8</sup> CPI covers transactions made by households only.

calculations of output of FISIM in some government credit granting institutions being funded through government budgets and having the interest rates on their lending fixed through administrative decisions. Here choosing reference rates from the inter bank market was found illogical.

## **8. Comparability of turnover/output data with price index practices**

As explained in chapter 6.4 the constant price estimations of FISIM requires special information that price statistics normally do not cover, i.e. balance sheets data and interest data. This kind of information is available from the credit market statistics.

For services directly charged we must conclude that lack of relevant price information has resulted in the use of extrapolation methods based on volume indicators in estimating output at constant prices. Here a good quality price statistics could obviously improve the situation for the constant price estimations of the National Accounts.

## **9. Summary**

Information on output in banking and other credit granting industries in Norway are supplied partly in Credit market statistics and partly in the National Accounts. Due to the particular needs of the authorities, these activities are subject to detailed census like and accounting based reports that are available also for statistical purposes. This information includes data on income from directly charged services. In addition, data needed for estimation of services not directly charged (FISIM), both at current and constant prices, is also supplied.

On the other hand relevant price information on services directly charged is not available and here more second rate estimation methods has been applied.



## Sources

- Statistics Norway: [www.ssb.no](http://www.ssb.no)
- EU-commission (2005): *Cross-border consolidation in the EU financial sector*, Bruxelles 2005.  
[http://ec.europa.eu/internal\\_market/finances/docs/cross-sector/mergers/cross-border-consolidation\\_en.pdf](http://ec.europa.eu/internal_market/finances/docs/cross-sector/mergers/cross-border-consolidation_en.pdf)
- Solberg, Carl Anton and Lien, Ole Helge (2008): *Globalisering av banknæringen (Globalisation of the banking industry)*, (in Norwegian only) Research Report, BI/Norwegian school of management 2008  
[http://web.bi.no/forskning/papers.nsf/b63c43a0385ff61dc1256e620043c6b0/c8124ed04cce8491c1257472003888ef/\\$FILE/2008-04-solberg&Lien.pdf](http://web.bi.no/forskning/papers.nsf/b63c43a0385ff61dc1256e620043c6b0/c8124ed04cce8491c1257472003888ef/$FILE/2008-04-solberg&Lien.pdf)
- Eurostat (2001): *Handbook on price and volume measures in national accounts*, Office for Official Publications of the European Communities, 2001