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Comparing financial centers by using gross value added as main indicator

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Comparing financial centers by using gross value added as main indicator

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1. Objective of the study

This study contributes to the discussion on the measurement of financial sector output. It also serves as a lead-in to discussing possible causes of productivity changes in banking and insurance companies and other financial services providers.

We demonstrate how the financial sector's net output and service production can be measured using aggregate financial statement data. We briefly examine current treatments of financial services in the national income accounts and introduce a conceptual framework for the construction of a financial firm's output measure consistent with the accounting approaches. Financial institutions in different countries do different things. While London, New York and Tokyo may be the primary places for certain products, other centers may be equally or more important for others. If one were looking for a metric for an one-dimensional ranking of financial centers by size value-added in financial services would be most appropriate.¹ It can be compared from company to company and country to country. Therefore the concept of "value added" is adopted to circumvent some of the difficulties, like differences in accounting and reporting standards², in making comparisons between banks and insurance companies in different countries.

Furthermore, we focus on the one hand on the competitiveness of the Swiss banking and insurance industry compared to international competitors and on the other hand we analyze in particular the banking and insurance industry in Switzerland over time considering the following dimensions:

- Contribution of the industry to national economy, respectively of the different groups to the industry
- Productivity measures
- Domestic gross value added and gross value added abroad
- Outsourcing rate
- Analyzis of the creation and distribution of gross value added
- Other profitability and efficiency measures

2. The economic concept of value added

Value added refers to the additional value created at a particular stage of production. In modern neoclassical economics, especially in macroeconomics, it refers to the contribution of the factors of production, i.e., land, labor, and capital, to raising the value of a product and corresponds to the incomes received by the owners of these factors.

Economists use the value added method as a way to avoid double counting. The sum of the value added in each of the different stages of production equals the value of the final product, the product that drops out of the production process and is thus not incorporated in some new product. The total value added of resident producers in a national economy represents the economy's gross domestic product (GDP). Usually the term "net output" refers to the contribution of a particular eco-

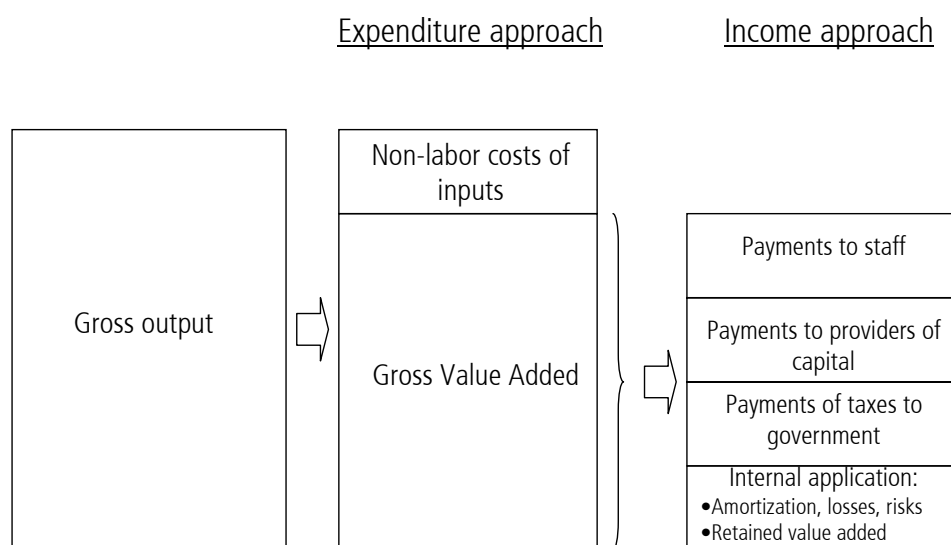
¹ Tschoegl (2000), p. 8.

² Fixler (1991), p. 53.

conomic sector to the total value added or GDP within a time period (quarter, year, etc.).³ Value added is a measure of output which allows comparisons across countries and different economic structures.

There are two main ways of calculating value added: the expenditure approach (subtractive method) and the income approach (additive method) which may be linked or unconnected in different ways.⁴ Since only “produced” things can be “distributed”, first of all, the source of the value added has to be considered. These two approaches are illustrated in the next figure.

Figure 1: Expenditure and income approach of GVA



Source: Own illustration

The two methods yield the same results because the total value of the goods and services produced must be by definition equal to the total income paid to the factors that produced these goods and services.

Using the value added as output measure has the following advantages: first, it is a simple theoretical concept. This measure considers the contribution and performance of actors in the wealth creation process. Second, the required information is almost always readily available and established. Third, value added is a useful economic parameter to measure and compare the financial sector with other sectors of the economy.

³ Meyer-Merz (1985), S. 40.

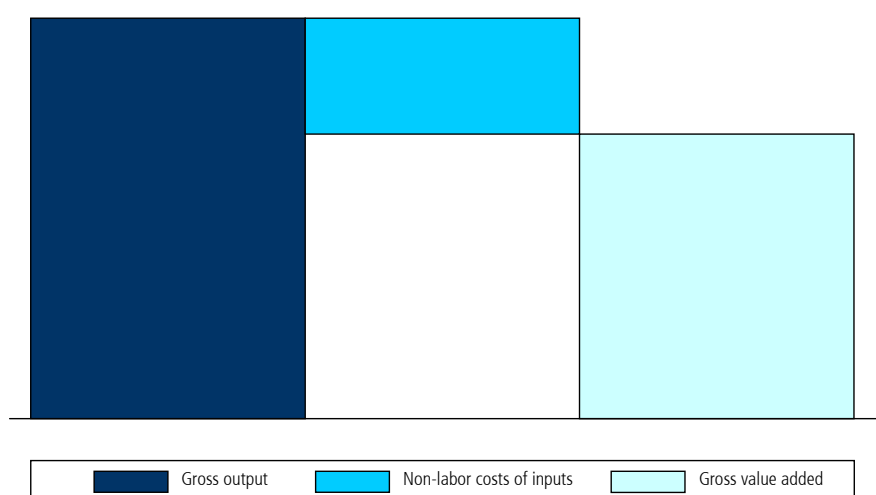
⁴ Wenke (1987), p. 173.

2.1. Expenditure approach: Creation of value added

Gross⁵ value added (GVA) is defined as gross output minus the value of intermediate goods and services. Gross output represents the total value of sales produced by enterprises in an accounting period. Deducting the value of intermediate goods used, or more specifically the non-labor costs of inputs, leads to the GVA:

$$\text{Value Added} = \text{Gross output (Sum of revenues)} - \text{Non-labor costs of inputs}$$

Figure 2: Creation of GVA



Source: Own illustration

The expenditure approach can also be called "subtractive method" or "direct method".⁶

2.2. Income approach: Distribution of value added

Value added is a measure of the wealth generated by the collective effort of those who work in a company, industry or economy – the employees and owner-managers – and those who provide the capital – the investors.⁷ The value created by a company is used to reward the stakeholders and to sustain and develop the business. In most companies, the biggest share of the added value goes to the employees in the form of wages, salaries, bonuses, holiday pay, the employer's contribution to pensions and national insurance, and all other forms of staff cost. Another part is allocated to those who provide capital. This contribution is paid either in the form of interests or dividends. However, before the shareholder receives a dividend, the government demands a share of value added in the form of taxes. The company is thus paying indirectly for services pro-

⁵ Gross value added includes depreciation charges or consumption of fixed capital.

⁶ Göckeler (1975), p.17.

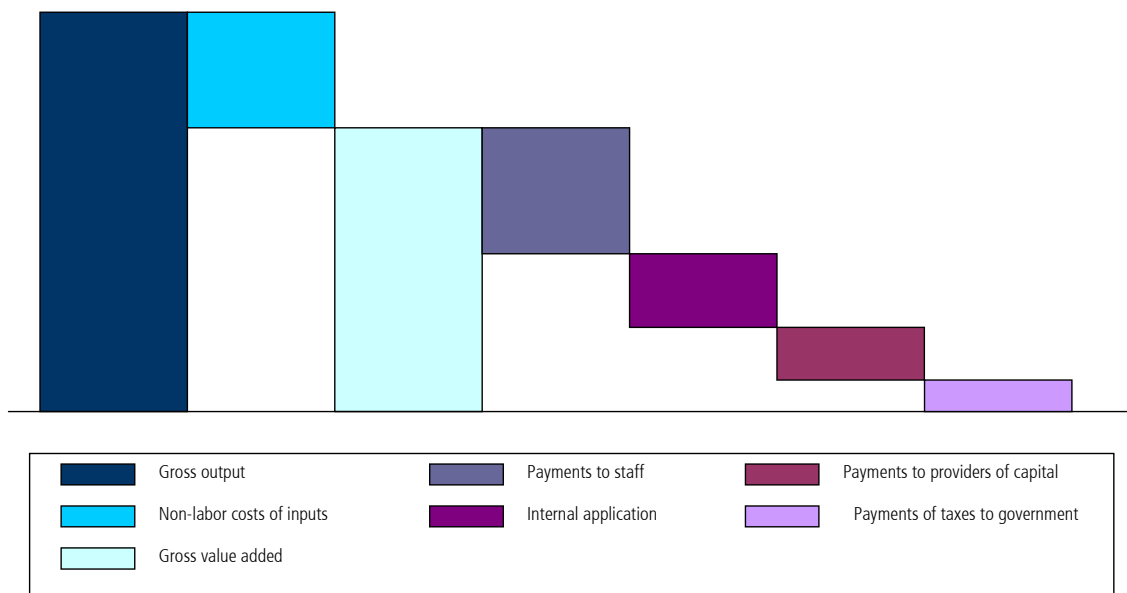
⁷ Rütter (1986), pp. 7-11.

vided by the government. The final share of value added is retained in the company for depreciation or retained profit. In effect, depreciation can be regarded as a charge for the ownership and use of assets.

Thus, as the next figure shows, there are four major shares:

1. Wages, salaries, and other employment costs -> payments to staff
2. Dividends and interest on loans -> payments to providers of capital
3. Taxes on profit => payments of taxes to government
4. Internal application:
 - a. Amortization, losses, risks
 - b. Retained value added (positive or negative)

Figure 3: Distribution of GVA



Source: Own illustration

Compared to the "subtractive method", one speaks of the "additive method".

Value Added	=	Payments to staff
	+	Payments to providers of capital
	+	Payments of taxes to government
	+	Internal use for creating wealth, covering losing and risks or depreciation

Thus, both the expenditure and the income approach of value added result in the same value for GVA. The two approaches are the core of the macro-economic calculation of domestic product.⁸

2.3. Purpose of Value Added

Added value is mainly used for:⁹

1) measuring output:

- basis of national accounting
- measuring business performance
- measuring the productivity of labor and capital

2) informing "stakeholders":

- explaining the business
- presenting accounting information
- basis for employee participation

3) public policy

2.4. Value Added and productivity

The concept of value added is a broader concept than the concept of profit. Value added represents the value of the production process, whereas profit is the residual value that belongs to the provider of equity capital after the providers of labor, government services and debt capital have been rewarded. However, value added does not replace the profit measure, but is another form of measuring performance and could provide a better way of describing the performance.

Productivity is a ratio of output to input. Productivity ratios usually relate units of one single input, for example the value of labor cost, number of employees or worker days, to one single output, for example financial measures such as turnover or value added, or physical measures such as tonnes produced.

Productivity measures are applied by using "net output per employee", respectively "net output per capital":

Net output per employee	=	Value added p.a. / total number of employees
Net output per capital	=	Value added p.a. / total capital

Such productivity presentations can be useful for monitoring performance and making comparisons internally within the company, and externally with other companies in the same industry, or with other industries.

⁸ Ehmer (2002), p. 25.

3. Applying the concept of value added to the financial sector

Finding the correct definition of output is a major issue for research on the financial industry's productivity. As well known, measurement of output is problematic mainly in the service sector, due to problems such as aggregation and quality. But the output of financial institutions raises particular difficulties. One of the main difficulties regarding output measure in the financial service sector is the intangibility of its products.

At a practical level, the obvious starting point for measuring the sector's output is to look at the way it is treated in the national accounts. In national accounts such as the United Nations System of National Accounts (UNSNA),¹⁰ GVA is obtained by deducting intermediate consumption from gross output. Thus GVA is equal to net output.¹¹

Instead of using national accounts measures, most studies of productivity tend to adopt either the "production" or the "intermediation" approach. If one takes a look specifically at banks, according to the production approach, they are treated as firms using capital and labor to produce different categories of deposit, loan and other products. Output is measured by the number of these accounts or the number of transactions carried out on each type of product, while total costs are all operating costs to produce these outputs. In the intermediation approach, banks are treated as intermediaries of financial services rather than producers of loan and deposit account services. Furthermore, the values of loans and investments are used as output measures and labor and capital are inputs to this process, hence operating costs plus interest costs are the relevant cost measure. Deposits may be either inputs or outputs.¹²

The value added approach differs from these two approaches in that it considers all liability and asset categories to have some output characteristics rather than distinguishing inputs from outputs in a mutually exclusive way. According to this line of thinking, output is the production of the services to depositors and borrowers and other banking services.

3.1. The banking industry

A key difference between companies in the banking industry and the industrial sector lies in the definition of the output value. The revenues of banks consist for the most important part of net interest - the difference between interest received (primarily from loans) and interest paid (primarily on deposit accounts). By implication, banks provide services for which there is no explicit charge, and the cost of these services must be partly or wholly offset by net interest.¹³ The difference between the GVA-calculation for a bank and for an industrial or trading company lies in the treatment of interest expense: for an industrial company, interest payments are an element of distribution of GVA. The bank is an intermediary between the savor and the investor. This intermediation is the *raison d'être* of a bank, the net interest income is thus part of value added. Interest expense is not a distribution of GVA; it is kind of non-labor costs of inputs, respectively intercept income.

The output of banks equals the total revenue inclusive the fees and commissions receivable. The fees and commissions payable are part of the non-labor costs if inputs. The output consists of the following positions:¹⁴

⁹ Wood (1978), p. 19.

¹⁰ Fixler/ Zieschang (1991), p. 55.

¹¹ Collwell/ Davis (1992).

¹² Collwell/ Davis (1992), pp.112-113.

¹³ Fixler (1991), p. 54.

¹⁴ Göckeler (1975).

- net interest income
- fees and commissions receivable
- net profit and loss on trading operations
- other net non-interest income

For evaluating the GVA, the non-labor costs of inputs have to be deducted from the gross output. In the banking industry, the non-labor costs of inputs consist of the following positions:

- fees and commissions payable (provisions and similar expenditures for services business: performances provided by other financial institutions)
- costs of material relating to banking business: i.e. occupancy costs, operational costs
- other expenditures

For detailed information about the subtractive and additive calculation methods of a bank's GVA see the Appendix 1.

3.2. The insurance industry

The net output of an insurance company can be defined as the sum of GVA from insurance operations. Some of the "insurance operations" are linked to the investment of capital, primarily in the case of life insurance. The insurance function can be produced only by combining operations and investments. One major problem of determining GVA in the insurance industry is whether an item of the income statement belongs to the GVA from insurance (operations and necessary capital), or whether is it part of capital investments outside the insurance function. We calculate the output of the insurance operations by subtracting the payments to cover risks from the gross premiums, and we add the interest earned on the insurance funds. Realized capital gains and losses are part of the output of the insurance funds.

The key difference between the insurance and the banking industry is the following: in insurance, interest costs do not count as non-labor costs of inputs. In the insurance industry, the income from capital and the interest costs from non-insurance operations are neutralized.

Like for the banking industry, for evaluating the GVA, the non-labor costs of inputs have to be subtracted from the gross output. Concerning the non-labor costs of inputs, one has to distinguish between non-labor costs of inputs from the insurance operations, non-labor costs of inputs from capital investment and operational costs:¹⁵

- non-labor costs of inputs from insurance operations, such as expenditures for reinsurance "to cover risk" or provisions paid to freelance agents
- non-labor costs of inputs from capital investment of insurance function, such as custody fee or courtage paid to banks
- operational costs: costs of material relating to insurance business or capital investment of the insurance function, i.e. occupancy costs, other expenditures

For detailed information about the subtractive and additive calculation methods of an insurance company's GVA see Appendix 2.

¹⁵ Weinstock (1986).

4. Results

4.1. International comparison: How Switzerland compares to its peers

4.1.1. Data information

4.1.1.1. Banking data

Covering the period from 1991 to 2003, the sample includes the banking industries of Germany, Ireland, Luxembourg, Switzerland, United Kingdom and the United States.

We use annual data drawn from bank income statements aggregated at the country level. The data are taken from OECD Bank Profitability Data. The OECD Bank Profitability Statistics provides information of national banking data grouped and reclassified in common income and expenditure accounts of banks to fit, as far as possible, into a common framework that is comparable across countries.

The data include the different banking groups from the various countries:

- Germany: all universal banks operating in Germany
- Luxembourg: all credit institutions in Luxembourg
- Ireland: all licensed banks and building societies
- Switzerland: Bank groups 1.00 to 5.00 (no data for subsidiaries of foreign-owned banks 7.00 and private banks 8.00)
- UK: nine major British banking groups (prior to 1996, the Standard Chartered Group was included)
- US: domestic commercial banks and federally insured savings institutions (savings banks and savings and loan association)

The time span of the available data varies somewhat from country to country: For Switzerland, the United Kingdom and the United States it is 12 years (1991-2003), for Germany it is 10 years (1993-2003), for Ireland it is 8 years (1995-2003) and for Luxembourg it is 2 years for data computing GVA indices, and 10 years (1993-2003) for the rest of the data.

4.1.1.2. Insurance data

As in the banking industry comparison, the sample includes the insurance industries from Germany, Ireland, Luxembourg, Switzerland and the United Kingdom, covering the period from 1991 to 2001. There is no data available for US insurance companies.

Here again, the annual data was gathered from the OECD Insurance Statistics. Unfortunately, the database does not include enough data for evaluating GVA. For this reason, the analysis of the insurance sector is limited to net written premiums¹⁶.

The data include the following insurance sectors from the various countries:

- Germany: Figures from small mutual societies excluded; from the life insurance companies, pension and death benefit schemes are included as well as specialized health insurance companies in non-life.
- Ireland: Data do not include professional reinsurers which do not need a license and are not supervised. Health insurance premiums are not included.
- Switzerland: Insurance entities not included in statistical data: recognized Health Funds subject to the supervisory authority of the Federal Social Insurance Office, Swiss National Accident Insurance Organisation (SUVA), Swiss Public Fires Insurances (SPFI).
- UK: Reinsurance companies are included in the number of non-life companies.

The time span of the available data varies somewhat from country to country: For Switzerland and the United Kingdom it is 10 years (1991-2001), for Germany and Ireland it is 8 years (1993-2001) and for Luxembourg it is 6 years for the data analyzed.

The OECD banking and insurance data have been adjusted for inflation and currency.¹⁷ For inflation adjustment, we used the data of CES-IFO¹⁸; for currency adjustments, data from the University of British Columbia¹⁹.

4.1.2. International comparison of the banking industry

The table below summarizes the most important GVA figures across the different countries considered for 2003:

Table 1: Summary of the most important GVA-figures across different banking industries

	CH	DE	IRE	LUX	UK	US
GVA Banking industry/ GDP	12.5%	3.8%	5.9%	26.3%	6.7%	5.1%
Employment Banking industry/ Total Employment	3.3%	1.8%	2.0%	11.5%	1.6%	2.3%
GVA per Employee (in 1.000 USD)	300.5	136.3	264.6	232.6	272.4	176.1
GVA/ Capital	0.34	0.27	0.25	0.22	0.77	0.43

Source: OECD, own calculation

¹⁶ Net written premiums are defined as gross written premiums minus ceded premiums.

¹⁷ base year 2004; base currency US dollar.

¹⁸ http://www.cesifo-group.de/pls/dicguest/search.create_simple_search_page.

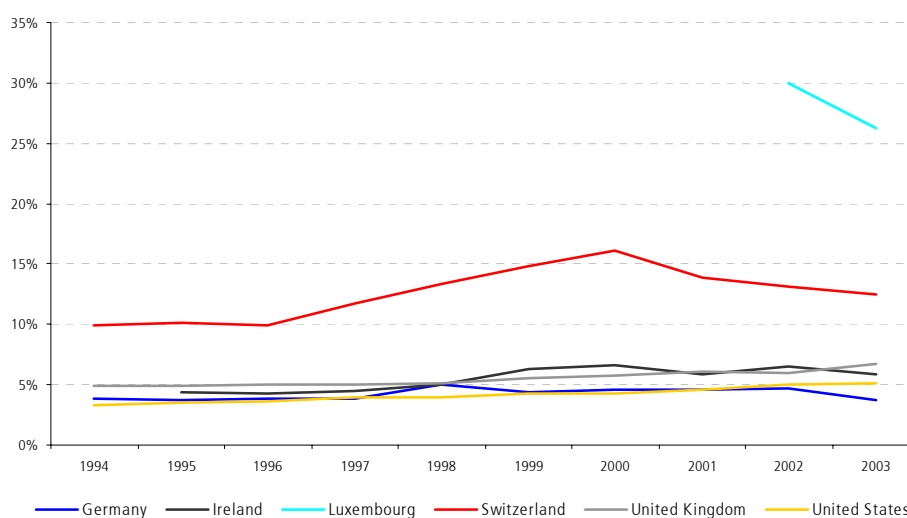
¹⁹ <http://fx.sauder.ubc.ca/data.html>.

4.1.2.1. Banking industry's contribution to national economy

4.1.2.1.1. Banking industry's contribution to the GDP

In analyzing the banking industry's contribution to the GDP, the values remained relatively constant over the time period. As we can see in the figure below, the values of the countries converge in the 4 to 5% bracket, except for Switzerland and Luxembourg. The Swiss banking industry accounts for 10 to 15% of the total GVA throughout; increasing between 1996 and 2000, and declining after 2000.

Figure 4: International comparison of banking industry's GVA to the GDP²⁰



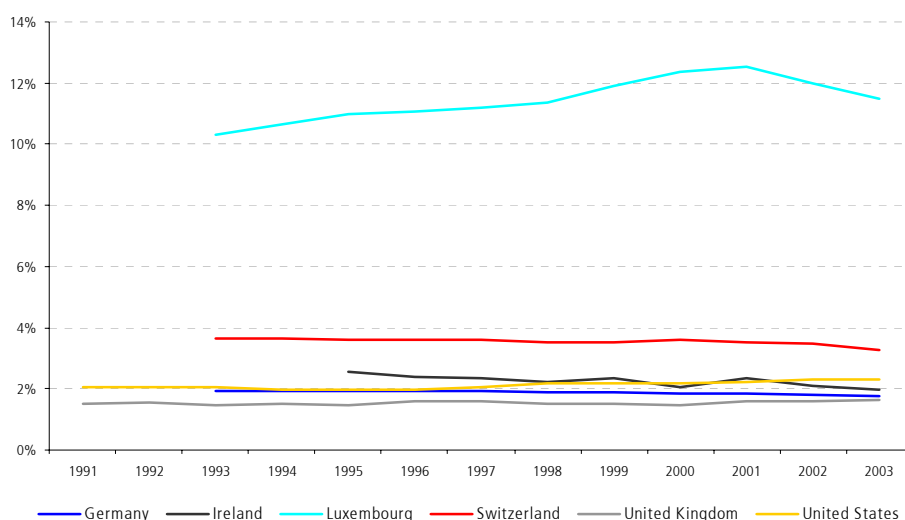
Source: OECD, own calculation

4.1.2.1.2. Banking industry's contribution to national total employment

The banking industry's significance to a country's economy is reflected both, in its contribution to the GDP and its contribution to total employment. Like the banking industry's contribution to the GDP, generally speaking, the labor force of this sector maintains a constant level of contribution to the total national employment over time.

²⁰ LUX: missing data before 2002; US: new calculation for gross output data before 2001.

Figure 5: International comparison of banking industry's contribution to the country's total employment



Source: OECD, own calculation

However, independent of the time period, the banking industry's contribution to national employment has been remarkable in Luxembourg. With more than 10%, Luxembourg's banking industry is top class with respect to the share of labor force. The contribution is over three times larger compared to the other countries. According to the data during the 12-year period (1991-2003), British banks provided the lowest contribution of the banking industry to total employment. Their contribution has not changed significantly. The Swiss banks regularly employ about 4% of all employees.

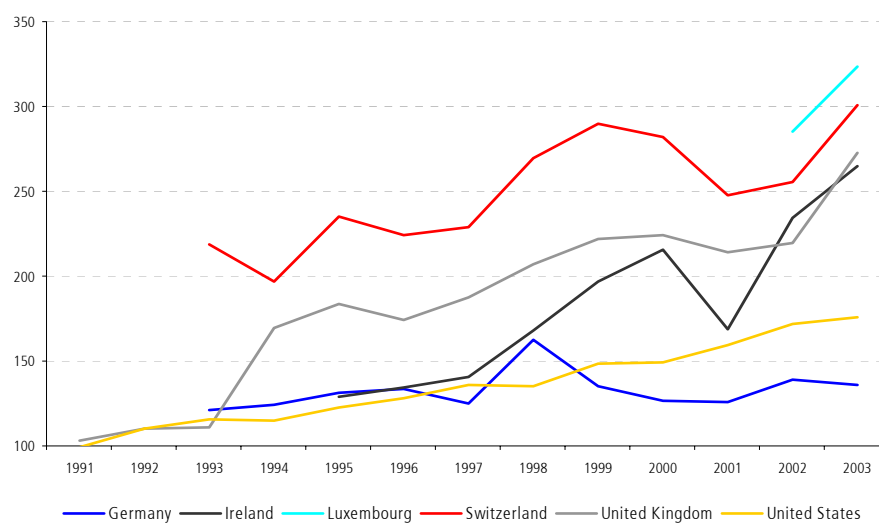
4.1.2.2. Productivity measures

4.1.2.2.1. Labor productivity

Comparing company data of net output put in relation to the number of employees can give further insight – particular since human capital is one of the most important input factors of banks. GVA per employee can be interpreted as a key figure for measuring the productivity of the banking industry.

As expected, the GVA per employee is generally highest among banks from Luxembourg and Switzerland. Moreover, it is clearly observable that these two countries stand out from their peers, although the gap between other banking industries is narrowing. The United Kingdom and Ireland have notably increased their labor productivity since 2001.

Looking across countries, labor productivity is showing a regular upward trend. Banks have improved their GVA with respect to their employees, with the exception of Germany.

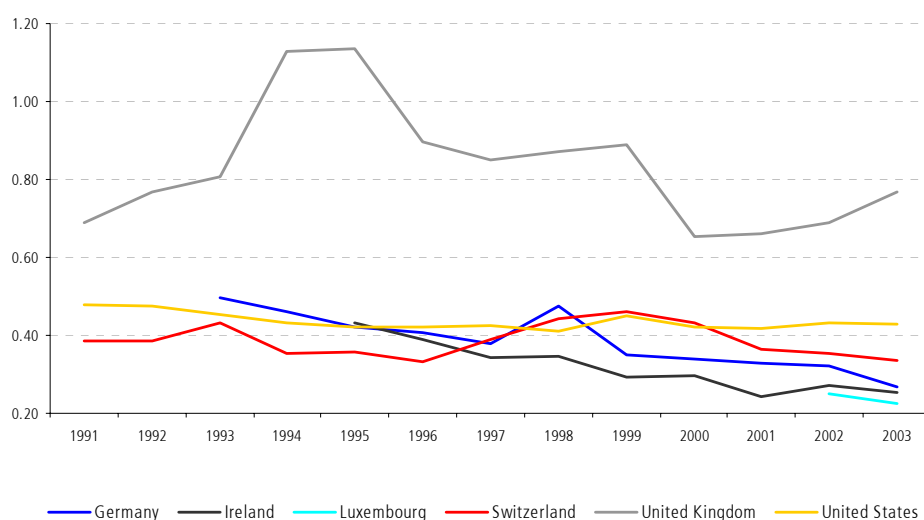
Figure 6: International comparison of labor productivity (in \$1.000)²¹

Source: OECD, own calculation

4.1.2.2.2. Capital productivity

Comparing net output put in relation to capital – the capital productivity can be interpreted as a second productivity measure. According to the data spanning of 12-year period (1991-2003), the highest capital productivity was experienced by the United Kingdom. The other countries show a rather continuous capital productivity of around 0.3 to 0.5.

²¹ LUX: missing data before 2002; US: new calculation for gross output data before 2001.

Figure 7: International comparison of capital productivity (GVA/Capital & Reserves)²²

Source: OECD, own calculation

4.1.2.3. "Outsourcing Rate"

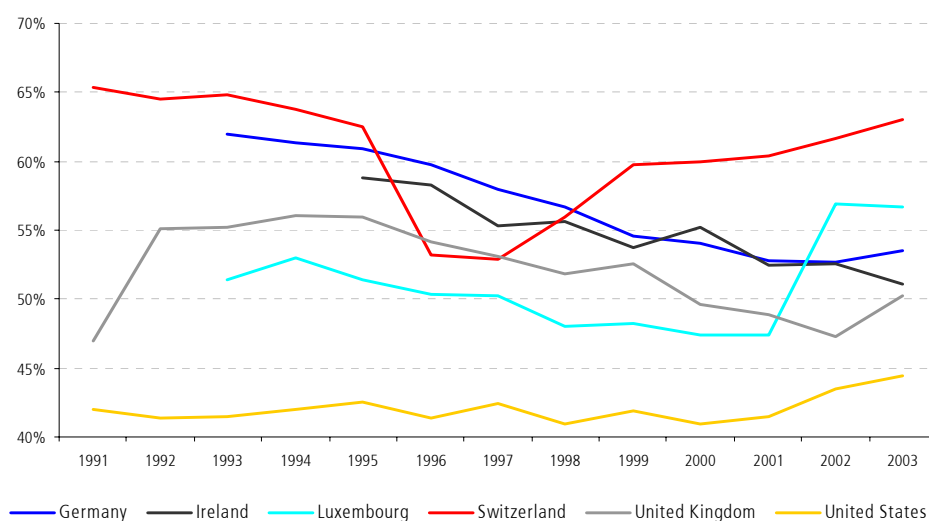
The "outsourcing rate" can be interpreted as total personnel costs to total costs.

By outsourcing one understands the spin-off of company activities which were settled so far within the company, to other companies.

The total amount of personnel costs in the U.S. banking industry are impressively low in relation to total costs during the period covered. Switzerland, in comparison, displays the highest ratio of total personnel costs to total costs. This can be interpreted as a highly integrated value chain, i.e., a low outsourcing rate, and a high level of salaries.

²² LUX: missing data before 2002, US: new calculation for gross output data before 2001.

Figure 8: International comparison of total personnel costs to total costs



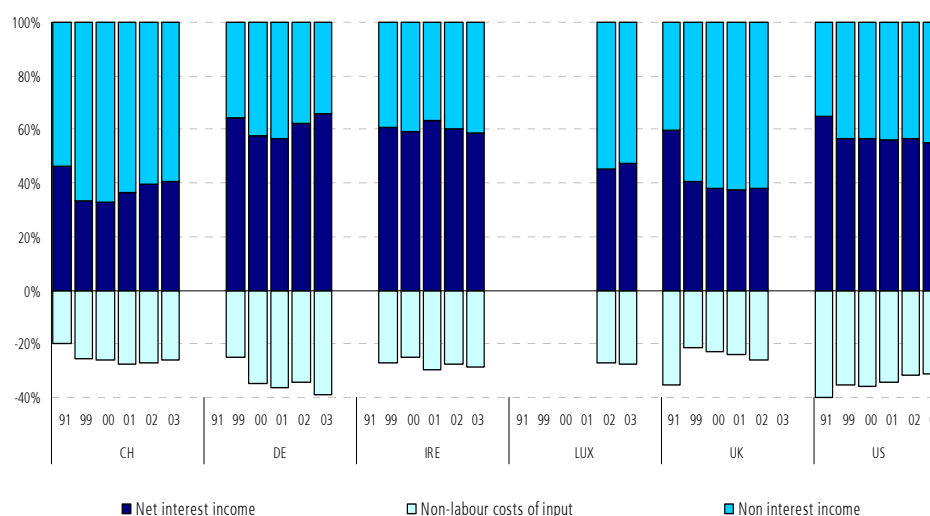
Source: OECD, own calculation

4.1.2.4. Analyzing GVA: Creation and distribution of GVA

The next two figures break down the GVA into its sources and distribution.

4.1.2.4.1. Creation of GVA

As mentioned above, GVA is defined as the difference between gross output and non-labor costs of inputs. Furthermore, in the banking industry, gross output can be subdivided into the following two parts: net interest income and non interest income (fees and commission receivable, net profit or loss on financial operations and other net non-interest income).

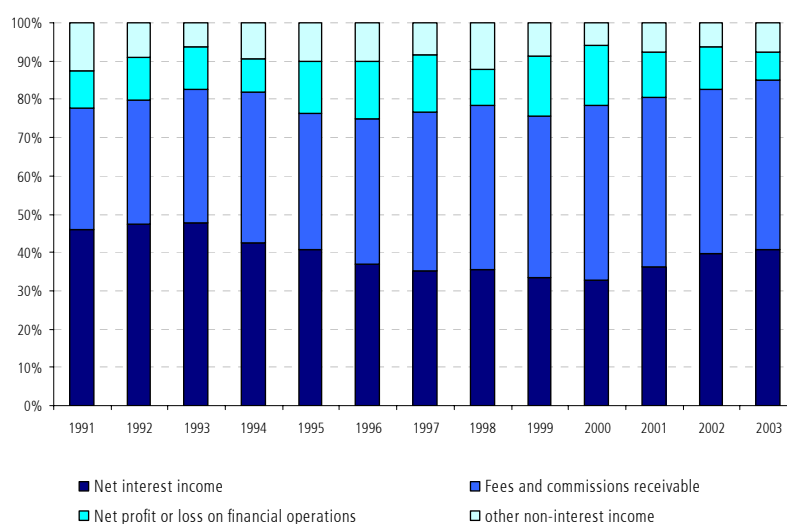
Figure 9: International comparison of source of GVA (in % of gross output)²³

Source: OECD, own calculation

As seen in figure 9, Swiss banks show the lowest interest income relative to gross output. The non-labor costs of inputs are the lowest for the United Kingdom.

The following figure shows further details of Swiss banks' gross output. The GVA is composed, in comparison to the other countries, of a comparatively small share of net interest income and a high share of fees and commissions receivable. This might be an indicator for a strong asset management industry.

²³ For detailed information about the calculation method see Appendix 1.

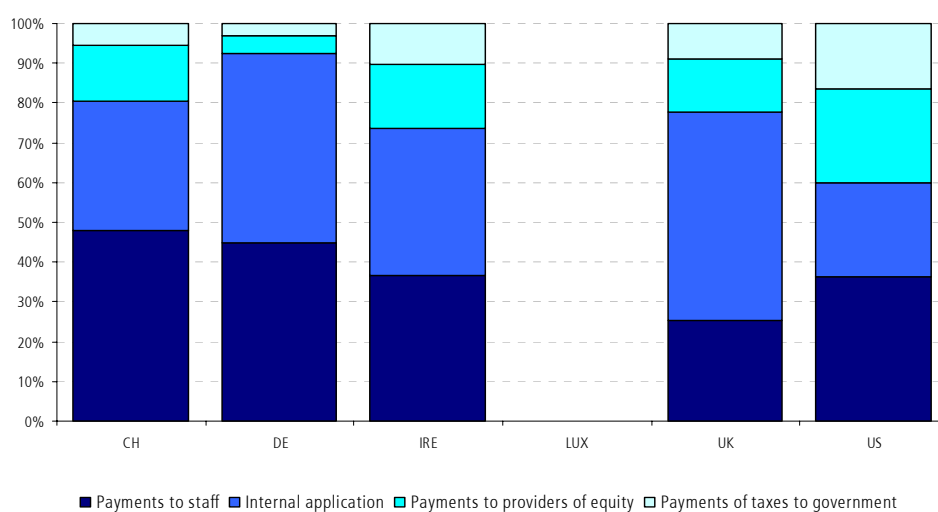
Figure 10: Segmentation of Gross Output – Switzerland (in % of gross output)²⁴

Source: OECD, own calculation

4.1.2.4.2. Distribution of GVA

Overall, the following figure summarizes the average distribution of GVA over the period 2001-2003. It is obvious that at 50%, the share paid to staff is the highest in Switzerland, whereas the percentage of payments to government is less than in the other countries, with the exception of Germany. In Germany and the United Kingdom, there is a large amount of amortization, retained GVA and investments. The U.S. banks show a large part of flows to government and to providers of equity.

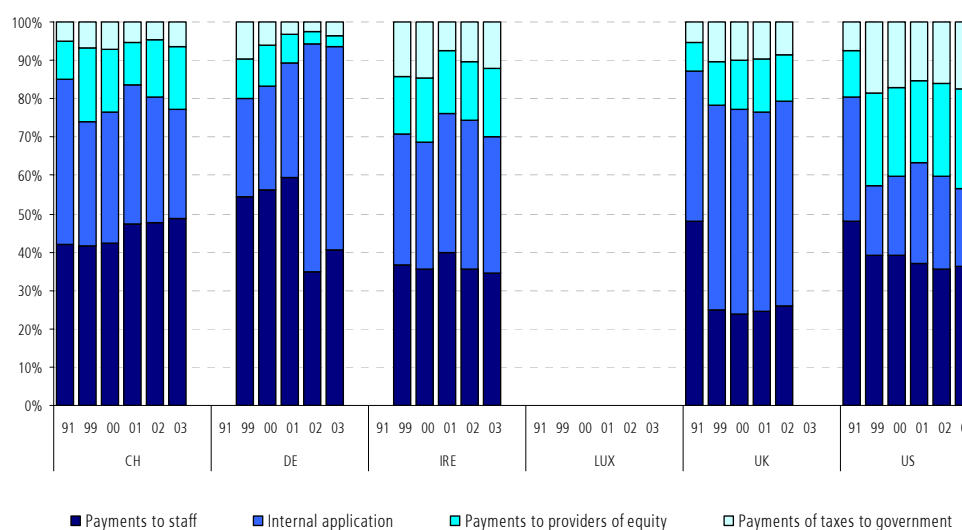
²⁴ For detailed information about the calculation method see Appendix 1.

Figure 11: International comparison of average distribution of GVA (2001-2003)²⁵

Source: OECD, own calculation

As illustrated in figure 12, the largest and growing part of the Swiss banks' GVA – around 50% - is paid to staff. In contrast, the share of internal application (amortization, retained GVA and investments) is comparatively high in the United Kingdom. In the United States, the payments to providers of capital are higher than in the other countries. In comparison to their peers, Swiss banks pay a small part of their GVA to government, whereas the United States show a larger share of payments in the form of taxes.

²⁵ LUX: no available data.

Figure 12: International comparison of distribution of GVA (in % of GVA)^{26,27}

Source: OECD, own calculation

4.1.2.5. Other profitability and efficiency measures

In analyzing financial firms, it is important to measure their performance in relation to other firms in the industry. Traditionally, this is done by using conventional financial ratios, such as the return on equity, cost-income ratio, level of capitalization, per employee data, etc.

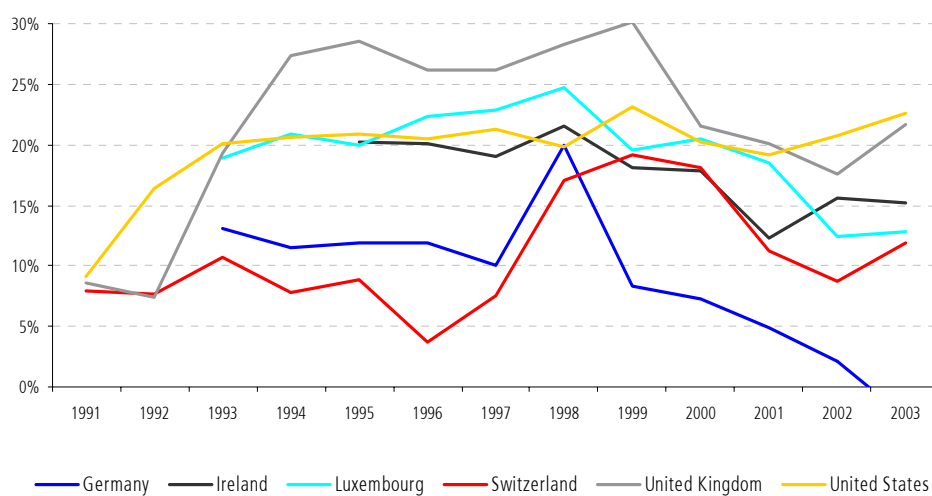
4.1.2.5.1. Profitability measures

4.1.2.5.1.1. Return on equity

Return on equity values have generally displayed approximately the same development for all countries during the period. Average return on equity is highest in the United Kingdom. German banks perform worst since 1999.

²⁶ LUX: no available data.

²⁷ For detailed information about the calculation method see Appendix 1.

Figure 13: International comparison of return on equity²⁸

Source: OECD, own calculation

4.1.2.5.1.2. Level of capitalization

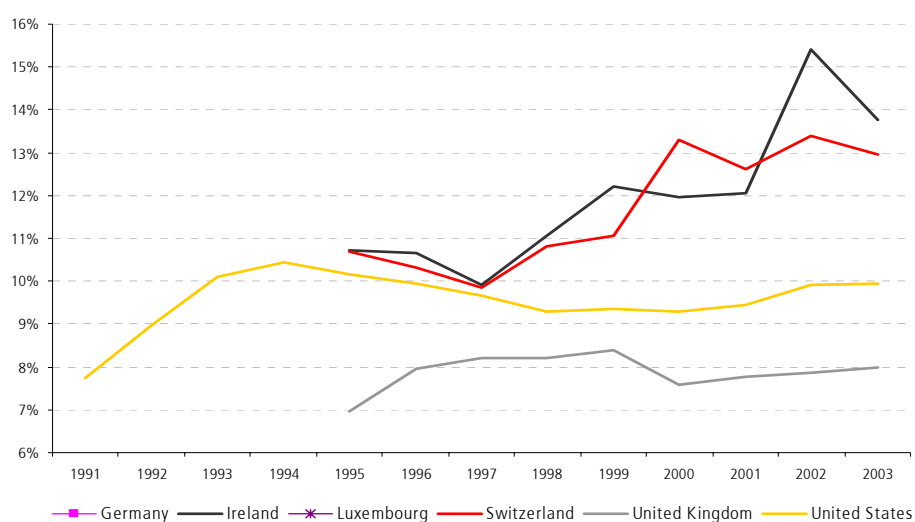
BIS-tier-one capital ratio:

Return on equity figures cannot be assessed without taking into consideration the various levels of capitalization. It is therefore helpful to look at the BIS-tier-one capital ratio which measures the capital level in relation to the risk weighted assets. Tier one capital is the core measure of a bank's financial strength from a regulator's point of view.²⁹

Swiss banks hold a larger amount of equity in comparison to their peers. This might explain the relatively poor performance of Swiss banks in terms of the return on equity. Swiss banks, like the banks from Ireland, have high costs of equity and are highly capitalized. Comparably, the British banking industry shows on average a small capitalization.

²⁸ LUX: missing data before 2002.

²⁹ Cocca (2005), p. 12.

Figure 14: International comparison of BIS-Tier-One capital ratio³⁰

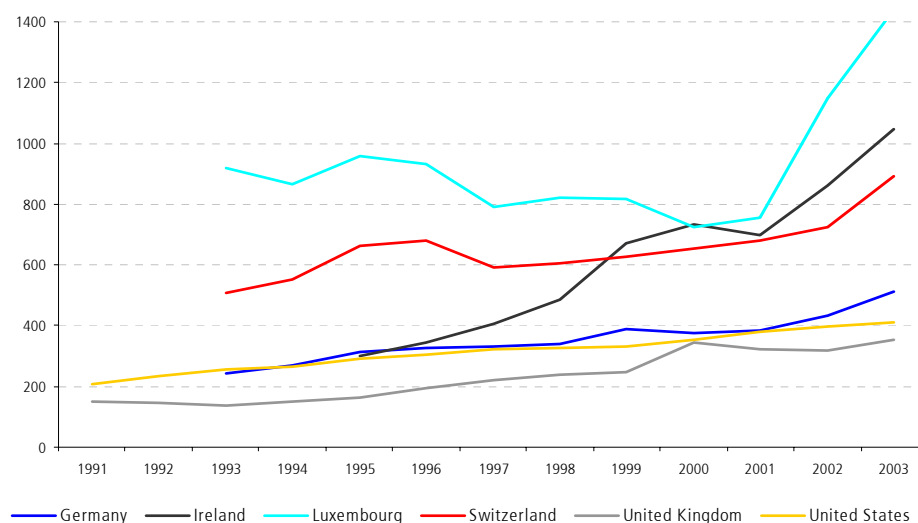
Source: OECD, own calculation

Equity per employee:

Switzerland's banks mainly rely upon advisory business. For this kind of business less equity is needed. The figure below shows the development of equity per employee to be rather flat until the year 2000 for most countries. The only exceptions are the large jumps experienced by the banking industries of Luxembourg and Ireland after 2001.

³⁰ Missing values for Germany and Luxembourg.

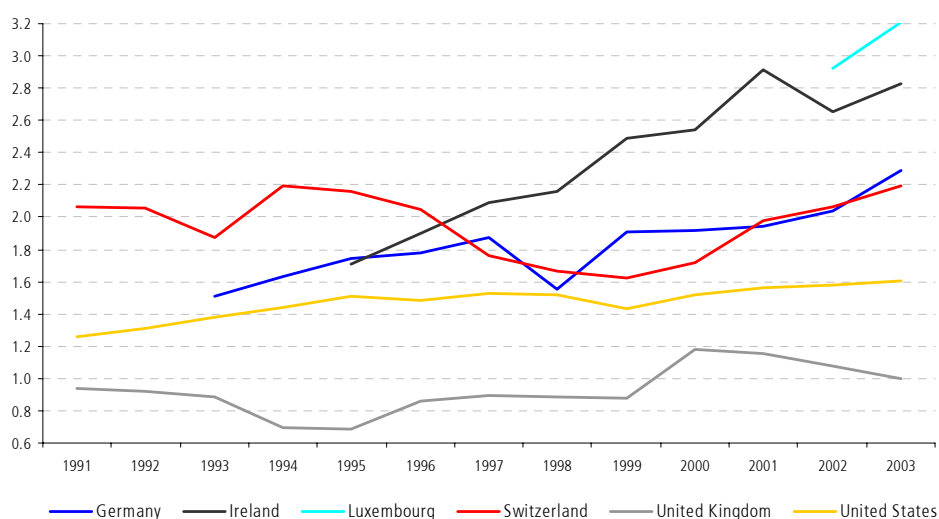
Figure 15: International comparison of capital & reserves per employee (in \$1.000)



Source: OECD, own calculation

Equity output-ratio:

The ratio shows the amount of units of equity needed to produce a certain level of output. It measures the average portion of employed equity to the amount of goods and services produced. A high equity output ratio means a large amount of equity is needed for producing one unit of gross income. The equity output-ratio is the reciprocal value of equity productivity.

Figure 16: International comparison of equity output-ratio³¹

Source: OECD, own calculation

³¹ LUX: missing data before 2002.

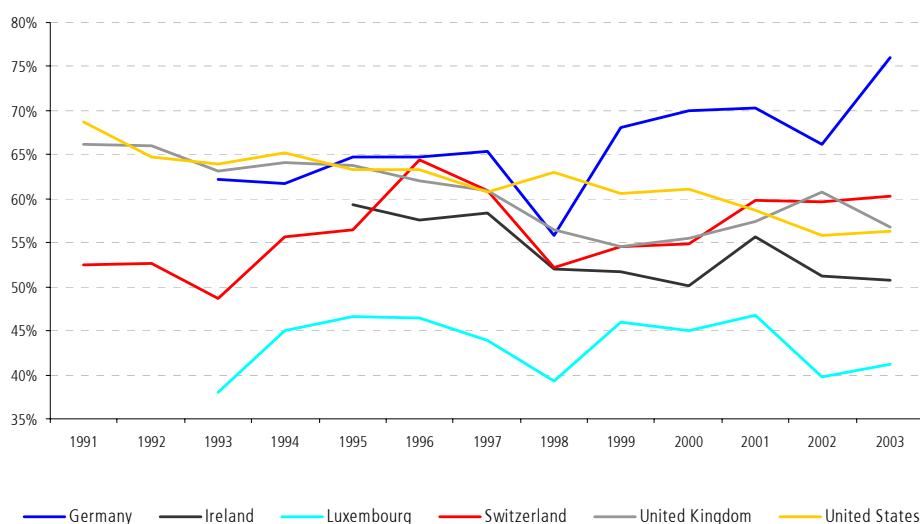
The above figure shows British banks requiring the smallest amount of equity to produce one unit of gross income.

4.1.2.5.2. Operational efficiency measures

4.1.2.5.2.1. Cost Income-ratio (before depreciation)

The cost income-ratio can be interpreted as a standard measure for assessing operational efficiency.

Figure 17: International comparison of cost income-ratio



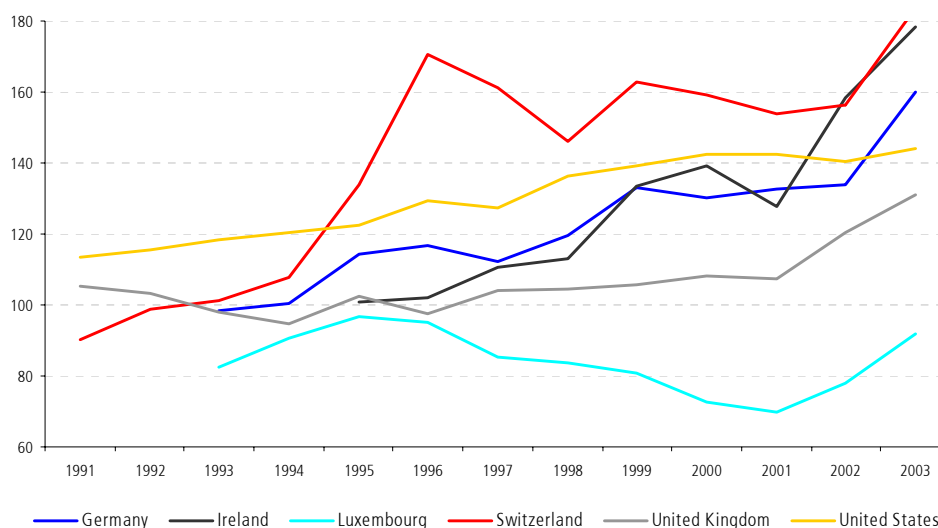
Source: OECD, own calculation

Overall, the development of the cost income-ratio over time is similar for all countries, although at different levels. Banks in Luxembourg have performed well. They seem to have a lower cost income-ratio than banks in other countries. Luxembourg is a small financial center. The banks operate essentially in the commission business. Compared to their peers, they are operating very efficiently. Ireland's cost income-ratio improved constantly. Switzerland is positioned in the middle. Obviously, Switzerland is not always one of the best performers. German banks seem to have the highest cost income-ratio in comparison to the others, especially in the last years. The cost income-ratio for German banks was approximately 70% in the period from 1998 to 2001. This ratio is dramatically higher than in other banking industries following 1999.

4.1.2.5.2.2. Per employee data

Total costs per employee:

Figure 18: International comparison of total costs per employee (in \$1.000)



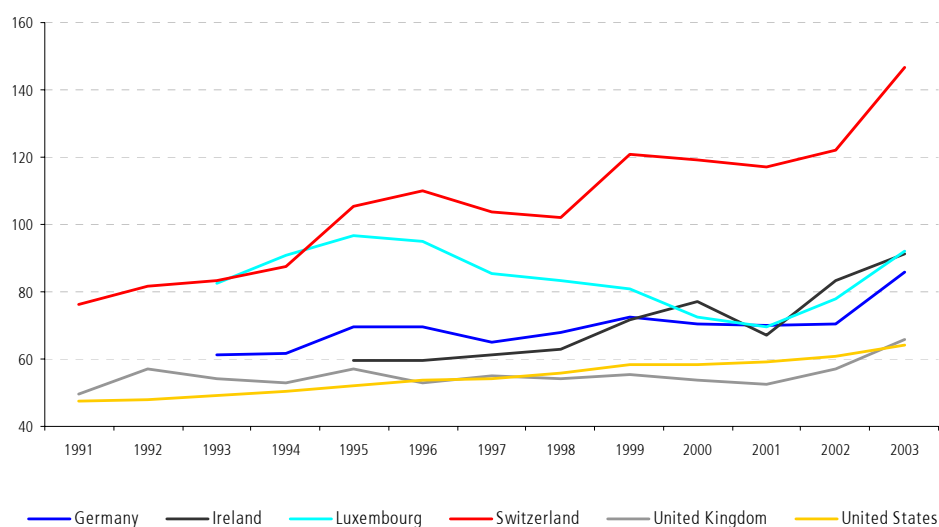
Source: OECD, own calculation

Obviously, Swiss banks have on average higher total costs per employee than their peers. The ratio has grown steadily and rather quickly in the past 12 years. In the international comparison, the United Kingdom and particular Luxembourg, show low total costs per employee.

Personnel costs per employee:

Like the total costs per employee, personnel costs per employee are by far the highest in Switzerland, whereas the United Kingdom and the United States show the lowest costs. Obviously, the banking industry in Luxembourg reduced their personnel costs per employee dramatically between 1996 and 2001. Following 2001, however, they increased again.

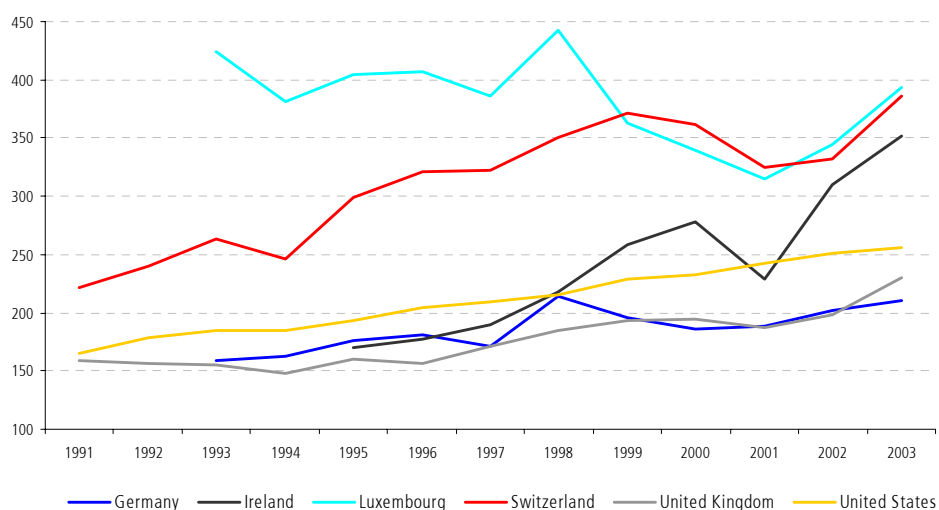
Figure 19: International comparison of personnel costs per employee (in \$1.000)



Source: OECD, own calculation

Revenue per employee:

Figure 20: International comparison of revenue per employee (in \$1.000)



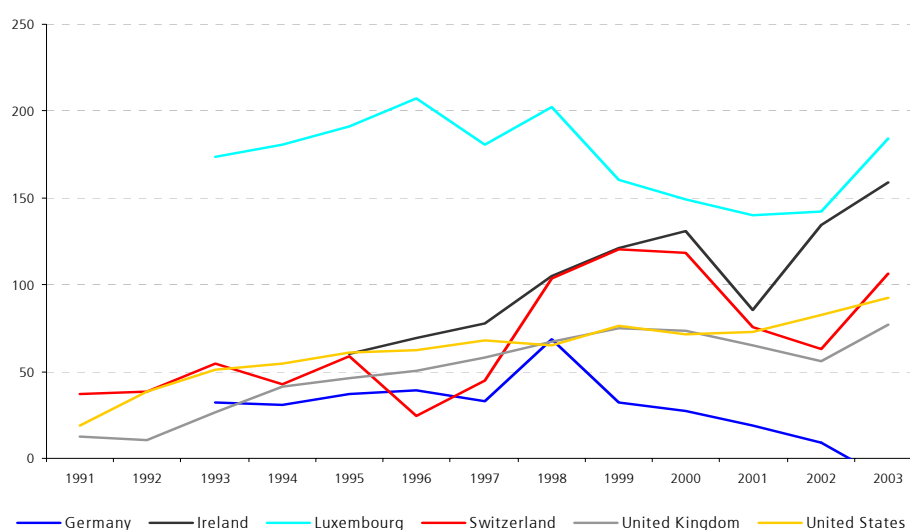
Source: OECD, own calculation

Switzerland and Luxembourg show higher revenues per employee than their peers. In Ireland the revenue per employee increased more than in the other countries.

Gross profit per employee:

This figure combines results from the two analyzes above. By subtracting the total costs from the revenues, the ratio increases for Luxembourg. Due to the high revenue on the one hand, and the generally low costs on the other, banks in Luxembourg show a comparatively high gross profit per employee. Switzerland, which is indeed generating high revenues but at the same time high costs, ranges on average.

Figure 21: International comparison of gross profit per employee (in \$1.000)



Source: OECD, own calculation

4.1.3. International comparison of the insurance industry

The table below gives a short summary of the most important net written premium figures across the different insurance industries for the year 2000:

Table 2: Summary of the most important net written premiums figures across the different insurance industries for the year 2000

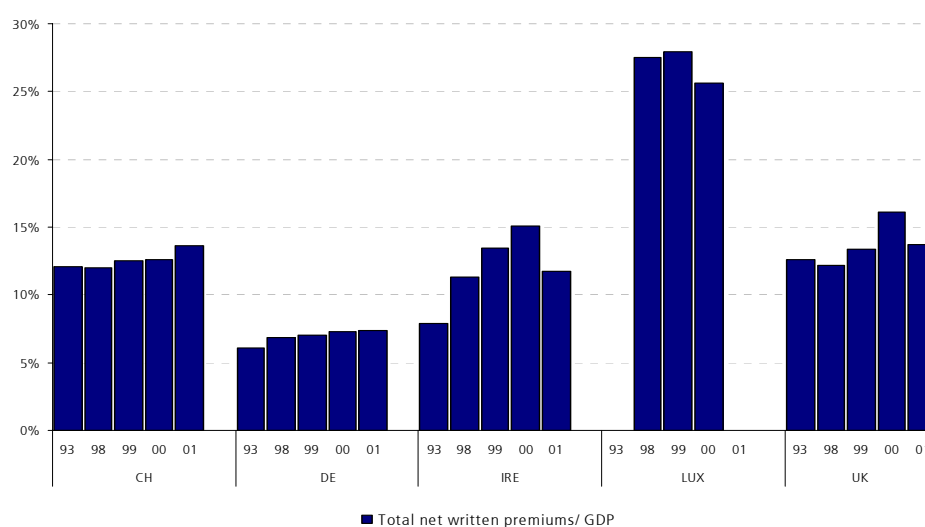
	CH	DE	IRE	LUX	UK
Total net written premiums / GDP	12.6%	7.3%	15.1%	25.6%	16.1%
Total net written premiums per employee (in \$1.000)	764	543	1.398	535	712

Source: OECD, own calculation

4.1.3.1. Insurance industry's total net written premiums to the GDP

Figure 22 shows the total net written premiums of the different insurance industries to the GDP. The ratio has been remarkable in Luxembourg. The net written premiums make up around 27% of the GDP during the analyzed period. The German insurance industry shows the lowest performance with around 6-7%. Except for Ireland, where the total net written premiums to the GDP increased constantly between 1993 and 2000 (from 8 to 15%), the other insurance industries' ratio remained at a constant level.

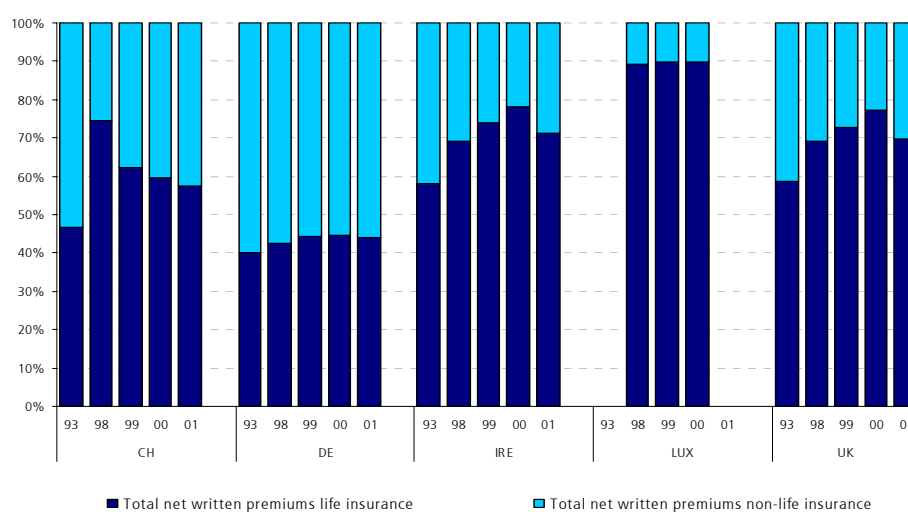
Figure 22 International comparison of total net written premiums to the GDP²



Source: OECD, own calculation

4.1.3.2. Insurance industry's contribution to total net written premiums

For international comparison, the total net written premiums of an insurance industry can be split into the net written premiums of the two insurance sectors: life and non-life. Switzerland, Ireland and the United Kingdom show approximately the same percentage: two thirds of the total net written premiums are earned by life insurance companies. For the German insurance industry, it's exactly the opposite. In Luxembourg, net written premiums of life insurance companies are the highest, making up 90% of the total net written premiums.

Figure 23: Comparison of net written premiums of life and non-life³²

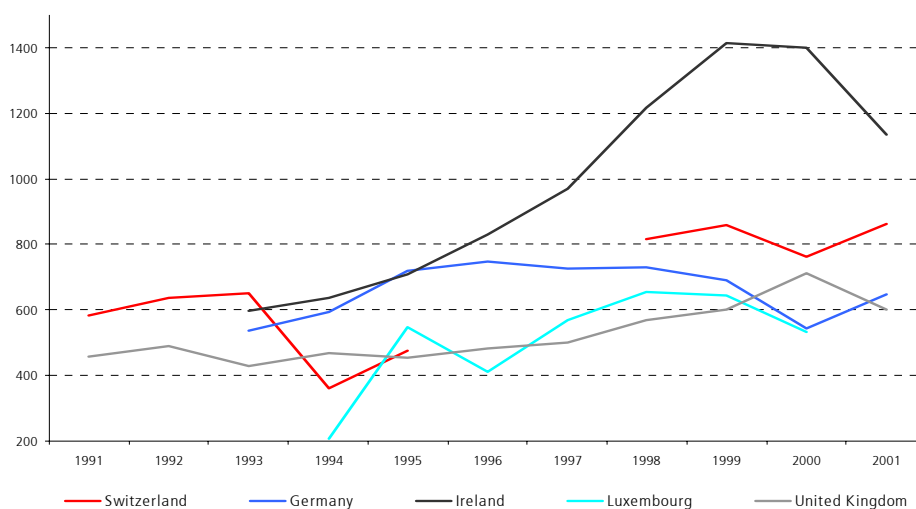
Source: OECD, own calculation

4.1.3.3. Total net written premiums per employee

Due to missing data, the GVA per employee cannot be computed. Instead, the total net written premiums per employee of the different insurance industries are compared.

³² LUX: missing values for 1993 and 2001.

³³ LUX: missing values for 1993 and 2001.

Figure 24: International comparison of total net written premiums per employee (in \$1.000)³⁴

Source: OECD, own calculation

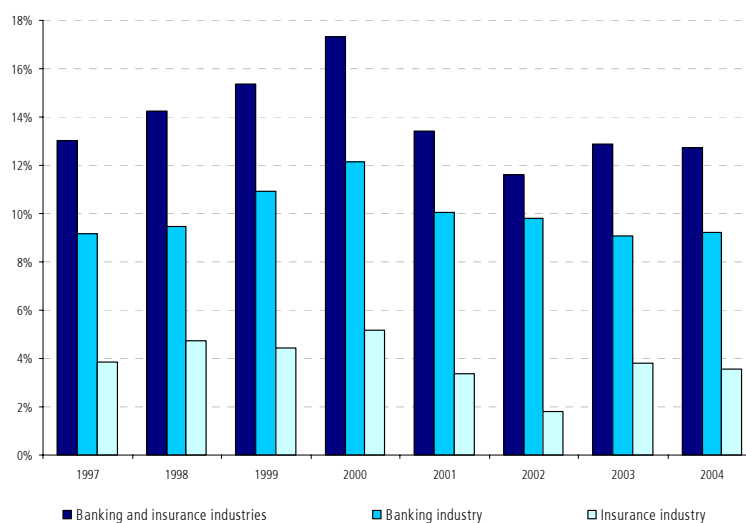
Irish insurance companies were able to increase their total net written premiums per employee from \$600.000 per year to \$1.400.000 per year between 1993 and 2000, decreasing in 2001 to \$1.100.000 per year. The Luxembourg insurance industry was also able to augment its average total net written premiums per employee: from \$200.000 per year to \$600.000 per year between 1994 and 2000. The other insurance industries show a similar development. They remained constant at around \$600.000 to \$800.000 per year for Swiss insurance companies, \$500.000 to \$700.000 per year for British insurance companies and an average of around \$600.000 per year for German insurance companies.

4.2. Analysis of the Swiss financial sector

The figures below summarize the significance of the banking and insurance industries for the Swiss economy. The importance of these two industries is reflected not only in the contribution to the GDP but also in terms of the number of jobs they provide to the economy.

³⁴ CH: missing values for 1996 and 1997.

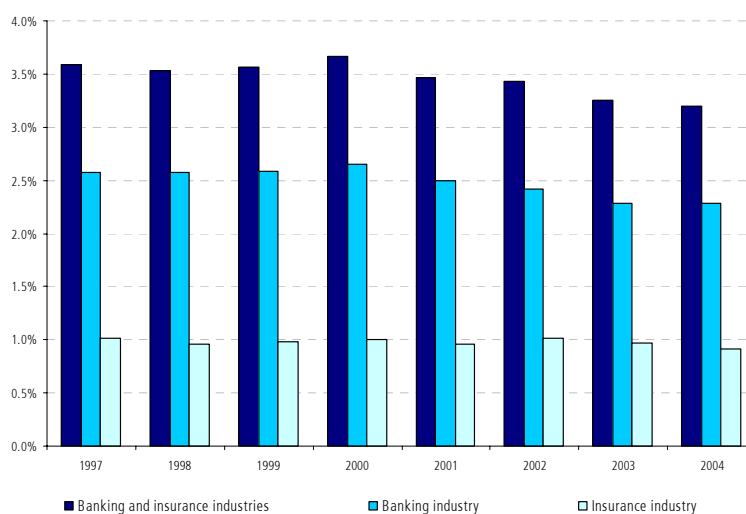
Figure 25: Contribution of the banking and insurance industries to the GDP



Source: SNB, own calculation

The contribution of the banking and insurance industries to the Swiss GDP fluctuated between 12 and 17% in the last eight years. It increased continuously, reaching 17% in the year 2000 and then dropping in the year 2001 to 14%. In the last three years, the contribution of the two industries has remained constant at a level of around 12 to 13%. The contribution of the banking industry is approximately twice to three times larger than the contribution of the insurance industry.

Figure 26: Contribution of the banking and insurance industries to total employment (in %)



Source: SNB, own calculation

In terms of the industries' contribution to total employment, figures decreased slightly between 1997 (3.6%) and 2004 (3.2%). Like the contribution to the GDP, the figures increased up to 2000, and then decreased again. This development is most notable in the Swiss banks.

We are not the first trying to evaluate the GVA of the banking and insurance industries. The Swiss Federal Statistical Office (Bundesamt für Statistik) has already published some data in their national accounts. In order to verify our calculation method, we show the results of the two different methods in the following table.

Table 3: Comparison of GVA data (in CHF1.000.000):

Banking industry	1997	1998	1999	2000	2001	2002	2003
BFS: "Kreditgewerbe" (NOGA 65)³⁵	31.471	36.573	37.931	44.698	40.403	40.189	40.210
SFCW: "Banken"	34.988	36.996	43.493	50.481	42.511	42.180	39.480
Insurance industry	1997	1998	1999	2000	2001	2002	2003
BFS: "Versicherungen" (NOGA 66)³⁶	16.680	16.883	16.187	17.067	14.337	19.240	22.646
SFCW: Privatversicherungen	14.639	18.547	17.644	21.478	14.160	7.852	16.575

Source: SNB, BPV, BFS, own calculation

As one can see, the values of GVA do not match totally. Especially with regard to the insurance industry, the values of GVA differ for the years 2002 and 2003. The discrepancy in our values of GVA and the values of the Swiss Federal Statistical Office may be due to the different evaluation methods of GVA in the banking and insurance industries and/or to the different calculation methods of domestic GVA and GVA abroad of these two industries.

4.2.1. The Swiss banking industry

Covering the period from 1987 to 2004, the sample includes all banking groups of the Swiss banking industry. We use annual data of bank income statements aggregated at the bank group level. This analysis is based on the Swiss National Banks statistics: "Die Banken der Schweiz 2004", which only takes into account banks domiciled in Switzerland and their branches abroad.

³⁵ http://www.bfs.admin.ch/bfs/portal/de/index/themen/volkswirtschaft/volkswirtschaftliche/blank/kennzahlen/produktionskonto/nach_branchen.html.

³⁶ http://www.bfs.admin.ch/bfs/portal/de/index/themen/volkswirtschaft/volkswirtschaftliche/blank/kennzahlen/produktionskonto/nach_branchen.html.

4.2.1.1. Contribution of the different banking groups to the total banking industry

4.2.1.1.1. Banking groups' contribution to the banking industry's GVA

The table below gives a short summary of the banking groups' GVA.

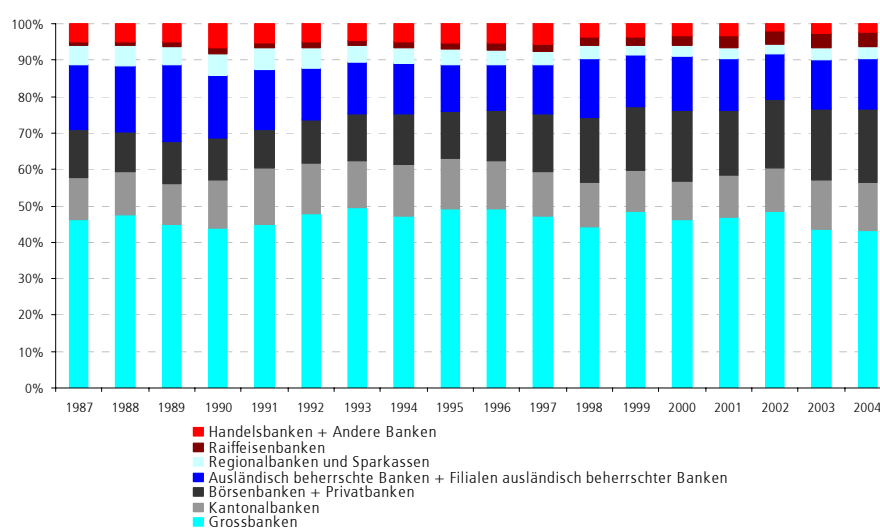
Table 4: Domestic GVA per banking group (in CHF 1.000)

GVA per banking group (in 1.000 CHF)	1987	1990	1995	2000	2004
Grossbanken	8.494.231	9.148.889	14.046.695	23.319.652	17.661.409
Kantonalbanken	2.089.894	2.741.861	3.992.211	5.394.650	5.513.936
Börsenbanken und Privatbanken	2.404.851	2.381.474	3.671.929	9.836.172	8.256.028
Ausländisch beherrschte Banken und Filialen ausländisch beherrschter Banken	3.289.799	3.556.058	3.708.864	7.494.273	5.713.139
Regionalbanken und Sparkassen	962.908	1.295.151	1.187.954	1.400.700	1.308.789
Raiffeisenbanken	208.229	318.501	539.846	1.285.487	1.613.900
Handelsbanken und Andere Banken	989.808	1.376.225	1.504.400	1.793.612	982.436

Source: SNB, own calculation

The two big banks generate about 40% of the total GVA in the Swiss banking industry. While the share of "Handelsbanken und Andere Banken" decreased during the period covered, the contribution of the "Raiffeisenbanken" to the banking industry's GVA has grown steadily and rather quickly, especially in the last six years. The share of "Börsen- und Privatbanken" has also been increasing; the contribution of the cantonal banks has remained constant. By comparison, the share of "Regionalbanken und Sparkassen" as well as of "Auslandsbanken" decreased during the period.

Figure 27: Banking groups' contribution to banking industry's GVA



Source: SNB, own calculation

4.2.1.1.2. Banking groups' contribution to the banking industry's employment

Table 5 gives a short summary of the banking groups' employment.

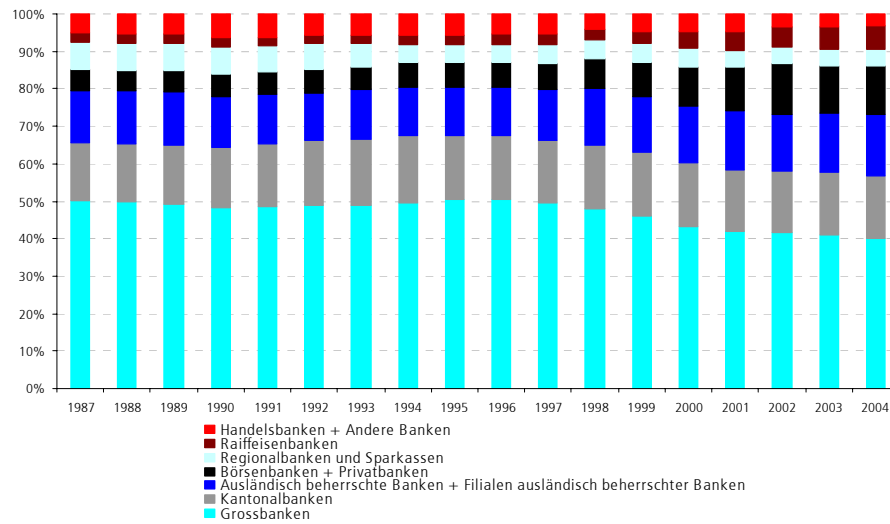
Table 5: Employment per banking group

Employment per banking group	1987	1990	1995	2000	2004
Grossbanken	55.146	56.339	54.785	48.194	40.015
Kantonalbanken	16.949	18.823	18.861	19.185	16.482
Börsenbanken und Privatbanken	6.174	7.107	7.150	11.827	12.858
Ausländisch beherrschte Banken und Filialen ausländisch beherrschter Banken	15.445	16.028	13.895	16.987	16.338
Regionalbanken und Sparkassen	7.990	8.518	5.224	5.443	4.320
Raiffeisenbanken	2.651	2.675	2.762	4.999	6.304
Handelsbanken und Andere Banken	5.673	7.477	6.189	5.285	3.230

Source: SNB, own calculation

The break down of employment in the different bank groups shows that the big banks have a continuously decreasing employment. While employment in cantonal and foreign owned banks has remained constant (at about 10%), the contribution of “Börsen- und Privatbanken” as well as of “Raiffeisenbanken” has almost doubled since 1987.

Figure 28: Banking groups' contribution to banking industry's employment



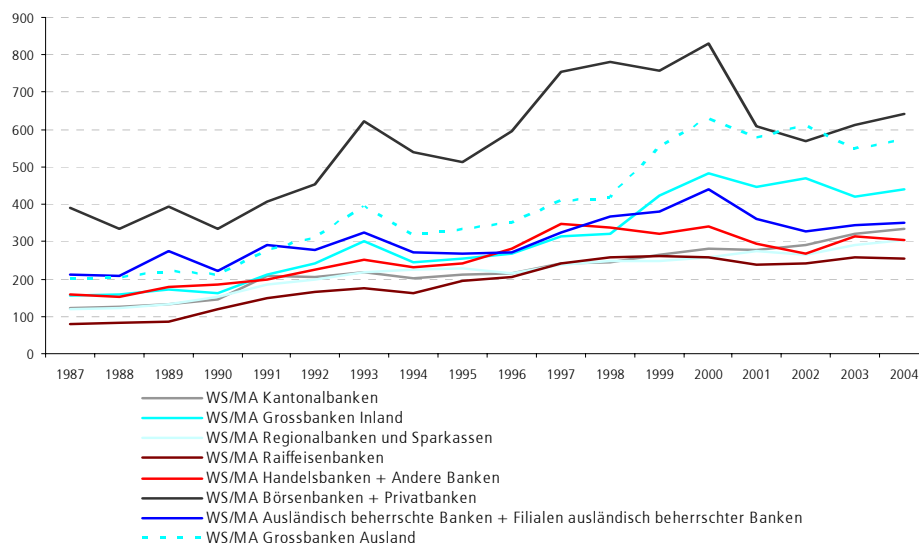
Source: SNB, own calculation

4.2.1.2. Productivity measures

4.2.1.2.1. Labor productivity

The labor productivity of the different banking groups can be derived from the tables 4 and 5.

Figure 29: Comparison of banking groups' GVA per employee (in CHF. 1.000)



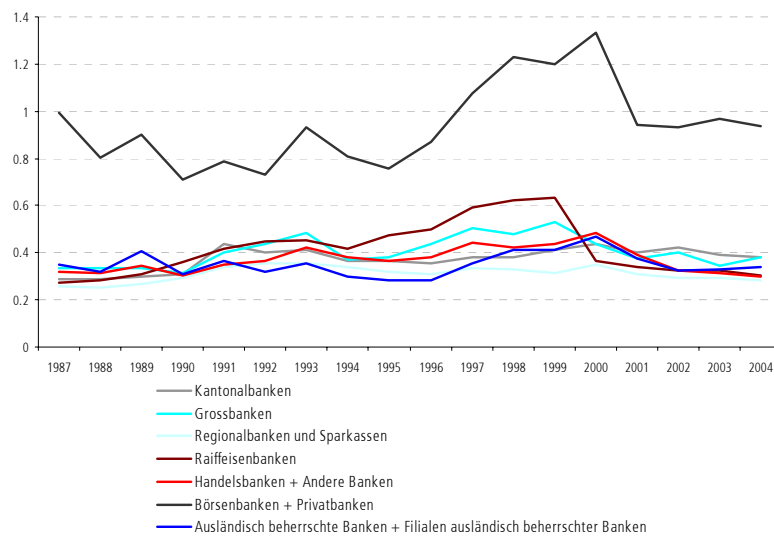
Source: SNB, own calculation

The "Börsen- und Privatbanken" obviously stand out in comparison to the rest of the banking industry. Following 1999, the average GVA per employee has grown faster for the big banks abroad than in Switzerland.

4.2.1.2.2. Capital productivity

As for the labor productivity, the "Börsen- und Privatbanken" are top class with respect to the capital productivity. According to the data during the 17-year period (1987-2004), their capital productivity is over two times larger compared to the other banking groups.

Figure 30: Comparison of banking groups' GVA per equity

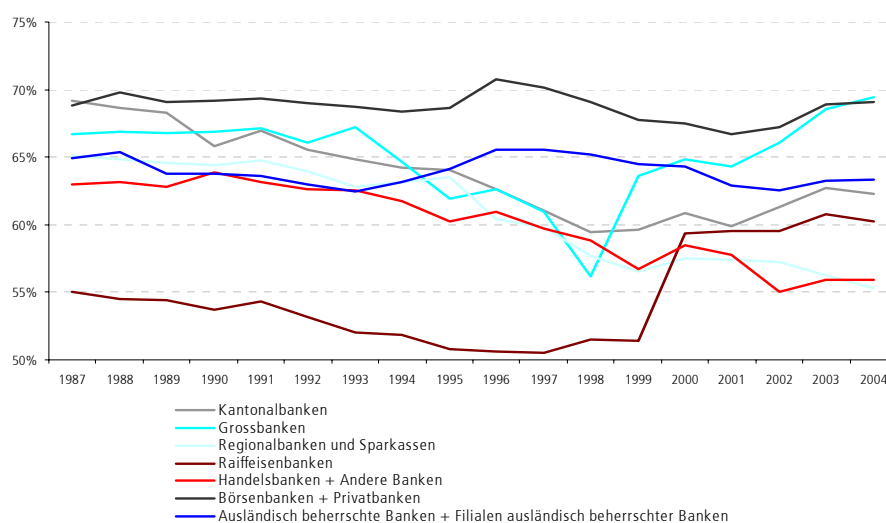


Source: SNB, own calculation

4.2.1.3. "Outsourcing rate"

Here again, the ratio of total personnel costs to total costs remained highest at a level of about 70% in the case of the "Börsen- und Privatbanken" during the covered period. For the "Raiffeisenbanken", the ratio rested low until 1999; while from 1999 to 2000 the ratio increased and persisted at a constant level afterwards.

Figure 31: Comparison of banking groups' total personnel costs to total costs



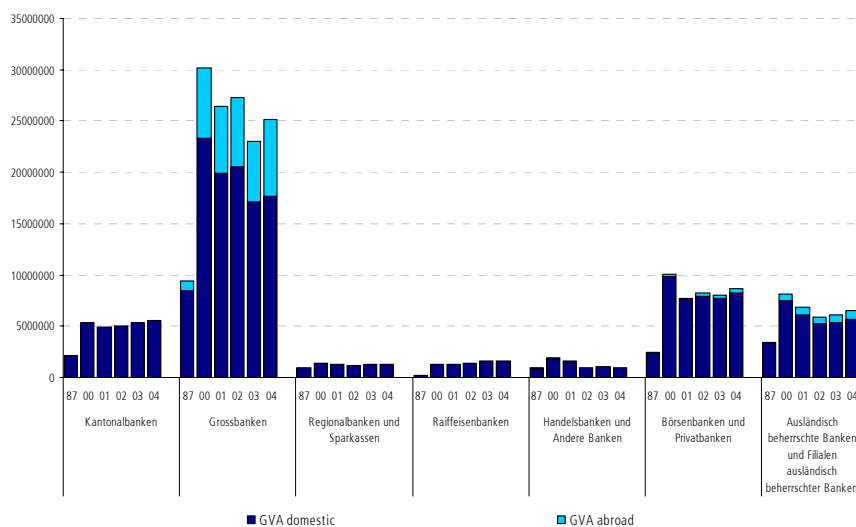
Source: SNB, own calculation

4.2.1.4. Analyzing GVA: domestic GVA and GVA abroad

The next two figures show the split-up of the Swiss banking industry's total GVA into domestic GVA and GVA abroad. As one can see, "Swiss banking" is basically a business accomplished within the geographic boundaries of Switzerland. Only the big banks have branched out successfully into foreign territories.³⁷

³⁷ For detailed information see SFCW (2006).

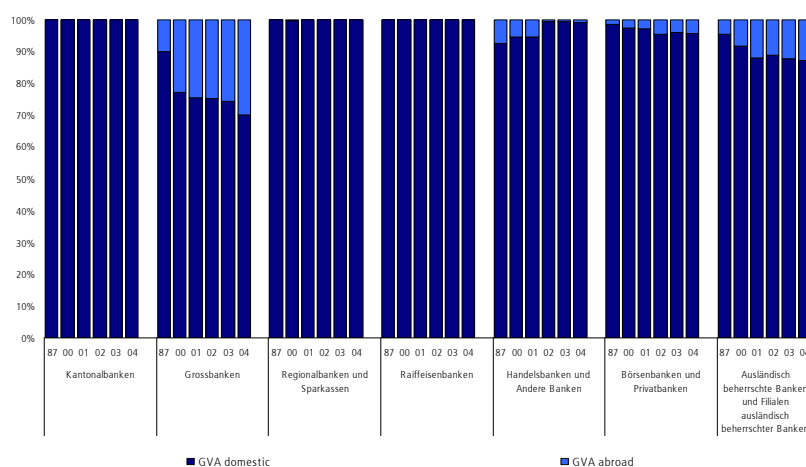
Figure 32: Domestic GVA and GVA abroad of the banking industry (in CHF 1.000)



Source: SNB, own calculation

In terms of the cantonal banks, “Regionalbanken und Sparkassen” and “Raiffeisenbanken”, the total amount of GVA was produced in Switzerland. The GVA produced by the big banks abroad increased from 10 to 30% between 1987 and 2004. These figures include branches abroad, but not subsidiaries outside Switzerland.

Figure 33: Banking groups' domestic GVA and GVA abroad



Source: SNB, own calculation

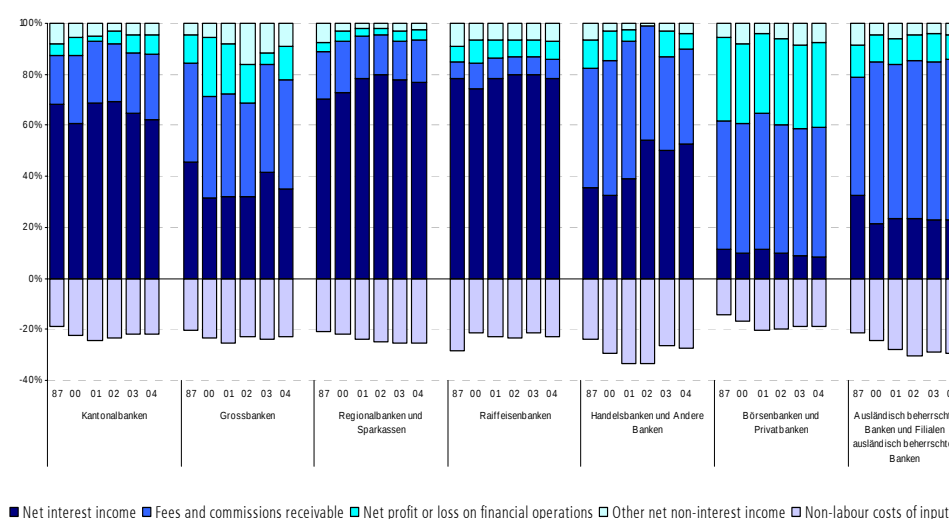
4.2.1.5. Analyzing GVA: Creation and distribution of GVA

As in the international comparison, the next two figures break down the GVA into its source and distribution.

4.2.1.5.1. Creation of GVA

GVA is the difference between gross output and non-labor costs of inputs. Furthermore, gross output can be subdivided into the following four subdivisions: net interest income, fees and commission receivable, net profit or loss on financial operations and other net non-interest income.

Figure 34: Comparison of banking groups' creation of GVA³⁸ (in % of gross output)



Source: SNB, own calculation

The cantonal banks, "Regionalbanken und Sparkassen" as well as the "Raiffeisenbanken" have a clearly higher portion of net interest income than the other banking groups. Regarding the "Börsen- und Privatbanken", the "Handelsbanken und andere Banken" and foreign owned banks, the gross output consists mainly of the income from fees and commissions.

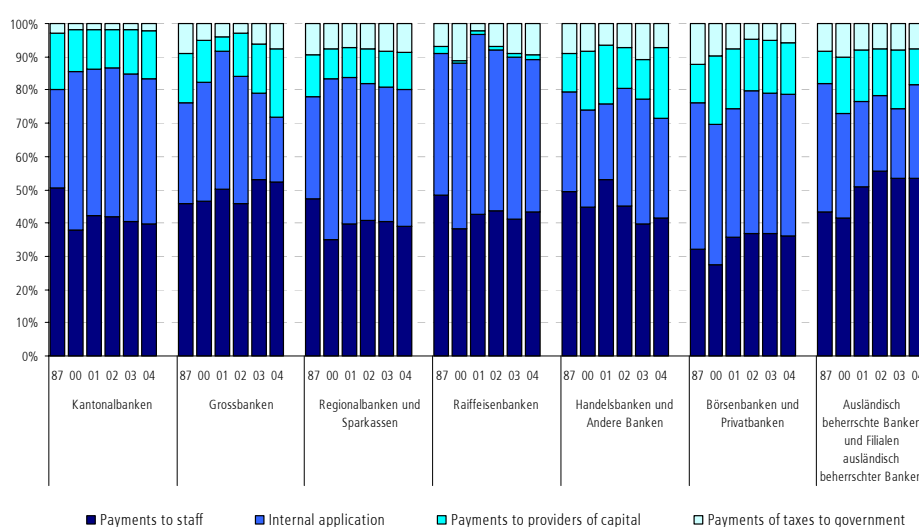
The non-labor costs of inputs account on average for 20 to 30% of gross output. The "Börsen- und Privatbanken" have less non-labor costs of inputs than the other banking groups.

³⁸ For detailed information about the calculation see Appendix 1.

4.2.1.5.2. Distribution of GVA

In general, the entire Swiss banking industry shows a similar distribution of GVA, with some exceptions. In contrast to the other banking groups, the "Raiffeisenbanken" pay a smaller part of GVA (1 to 5%) to their providers to capital. The cantonal banks are mostly tax exempt. That is the reason why their share paid to the government is smaller than for the other banking groups.

Figure 35: Comparison of banking groups' distribution of GVA³⁹ (in % of GVA)



Source: SNB, own calculation

4.2.2. The Swiss insurance industry

Covering the period from 1997 to 2004, the sample includes all three sectors (indemnity insurance, life insurance and reinsurance) of the Swiss insurance industry. We use annual data from the insurance income statements⁴⁰ at the insurance company level. The data are taken from the Federal Office of Private Insurance (BPV): "Zahlen und Fakten 2004".

³⁹ For detailed information about the calculation method see Appendix 1.

⁴⁰ Due to missing values for personnel costs in the company's income statements, personnel costs are assumed to make up 70 percent of the total amount of operating expenses.

4.2.2.1. Contribution of the different insurance sectors to the total insurance industry

4.2.2.1.1. Insurance sector's contribution to the insurance industry's GVA

Table 6 gives a short summary of the insurance industry's GVA.

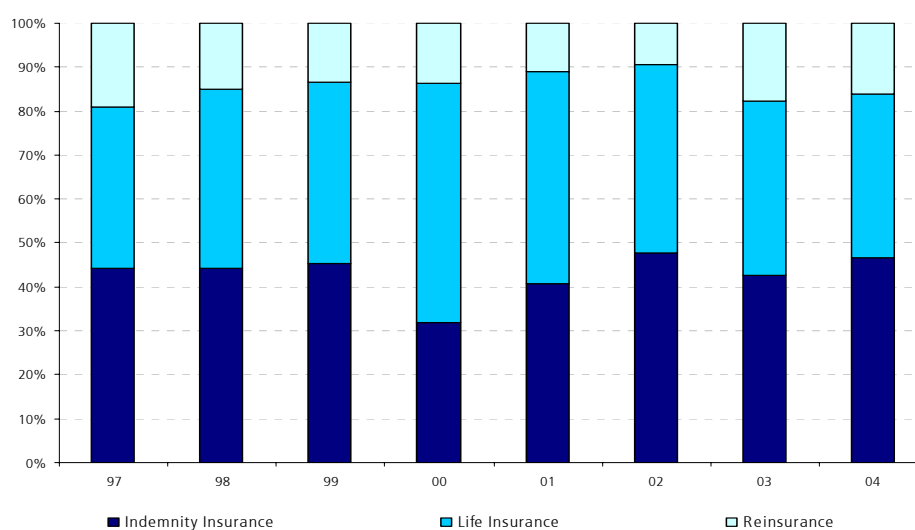
Table 6: Domestic GVA per insurance sector

GVA per insurance sector (in CHF)	1997	2000	2001	2002	2003	2004
Indemnity insurance	6.320.931	6.828.972	5.254.179	3.555.612	6.325.756	6.722.706
Life insurance	4.546.954	11.078.664	6.903.447	3.377.190	6.647.803	6.383.807
Reinsurance	3.771.658	3.570.670	2.002.523	919.895	3.601.937	2.762.005

Source: BPV, own calculation

In general, the contribution of the three insurance sectors to the insurance industry's total GVA remains constant during the analyzed period. Indemnity and life insurance companies together generate about 80 to 85% of the insurance industry's total GVA; the reinsurance companies make a contribution of 15-20%.

Figure 36: Insurance sectors' contribution to the insurance industry's GVA



Source: BPV, own calculation

4.2.2.1.2. Insurance sectors' contribution to the insurance industry's employment

The table below gives a short summary of the insurance industry's employment.

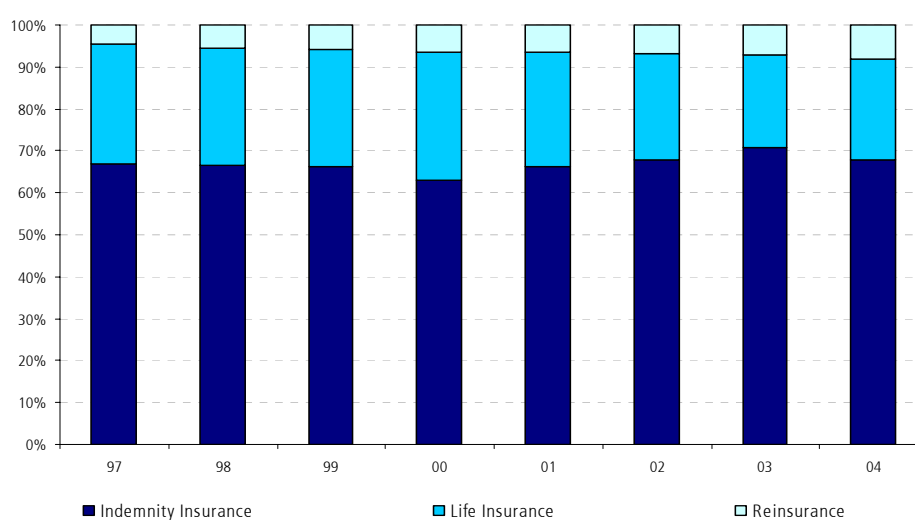
Table 7: Domestic employment per insurance sector

Employment per insurance sector	1997	2000	2001	2002	2003	2004
Indemnity insurance	28.569	26.784	25.801	28.617	28.341	25.752
Life insurance	10.540	12.341	11.730	11.174	10.039	10.688
Reinsurance	2.782	3.344	3.515	3.806	3.866	3.688

Source: BPV, own calculation

Similar to the contribution to the total GVA of this industry, the labor force of the different insurance sectors maintain on average a constant share between 1997 and 2004. The part of the labor intensive indemnity insurance companies makes up about 65-70%; the life insurance companies employ about 15-20% of the total labor force and the reinsurance about 5-10%.

Figure 37: Insurance sectors' contribution to insurance industry's total employment



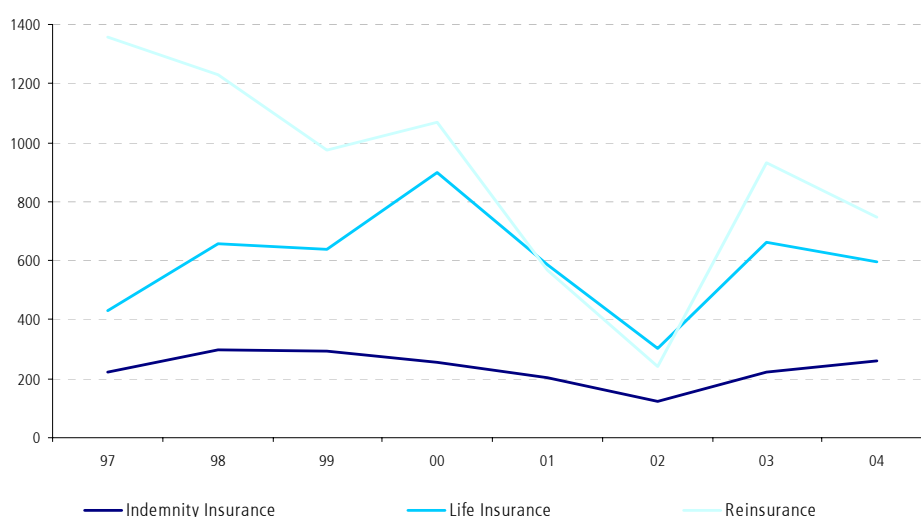
Source: BPV, own calculation

4.2.2.2. Productivity measures

4.2.2.2.1. Labor productivity

As with the banking industry, the labor productivity - GVA per employee - of the three insurance sectors can be derived. The three groups show different characteristics and developments. While the indemnity insurance companies show a rather continuous development, the life insurance companies and reinsurance companies started at a high level of labor productivity in 1997, but it continuously decreased until 2002. Subsequently, both were able to increase their productivity again, reaching level of CHF800.000 per employee for the reinsurance companies and CHF600.000 per employee for the life insurance companies in 2004. Obviously, the reinsurance companies have the highest GVA per employee over time in comparison to the other insurance sectors, while the indemnity insurance companies have the lowest productivity in Switzerland.

Figure 38: Comparison of insurance sectors' total (domestic and foreign) GVA per employee (in CHF1.000)

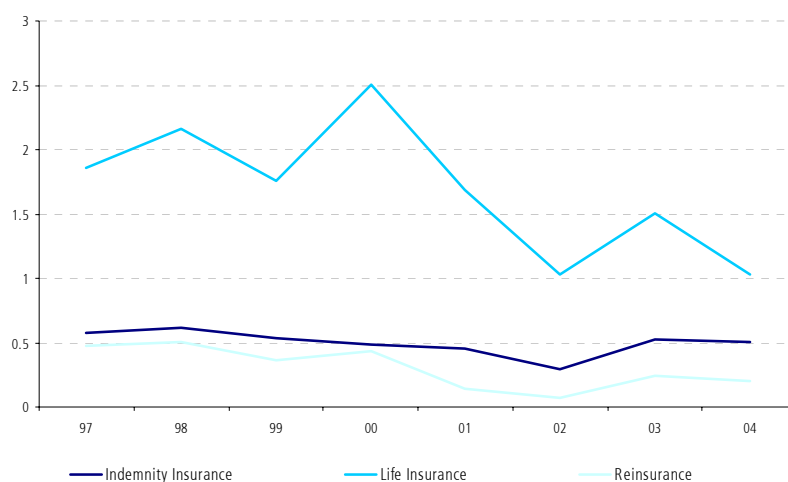


Source: BPV, own calculation

4.2.2.2.2. Capital productivity

In contrast to the labor productivity, the life insurance companies are top class in terms of capital productivity, although it decreased around half between 1997 and 2004. The capital productivity of the indemnity insurance and reinsurance sector remains at a constant level during the covered period.

Figure 39: Comparison of insurance sectors' total (domestic and foreign) GVA per capital

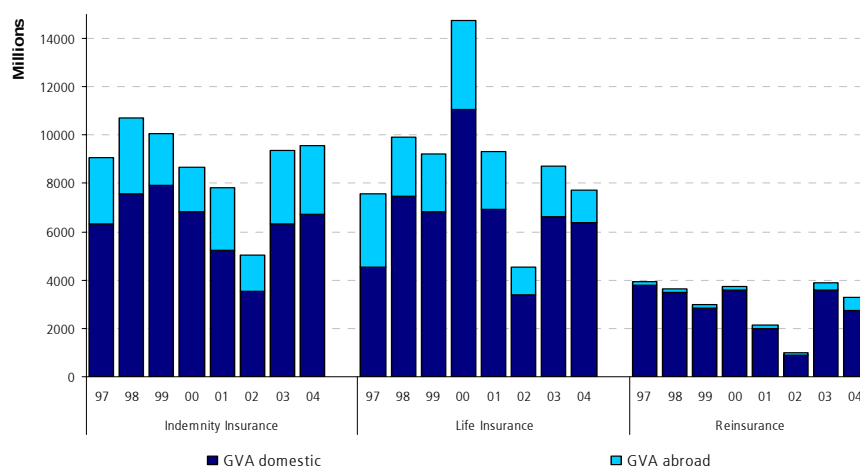


Source: BPV, own calculation

2.2.3. Analyzing GVA: domestic GVA and GVA abroad

The next two figures exhibit the split-up of the Swiss insurance companies' total GVA into the domestic GVA and GVA abroad.

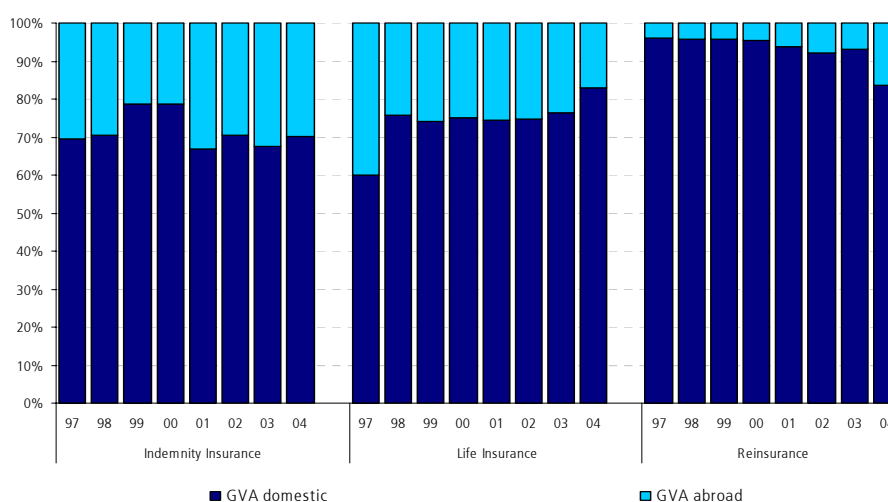
Figure 40: Domestic GVA and GVA abroad of the insurance industry (in CHF 1.000.000)



Source: BPV, own calculation

In terms of the indemnity and life insurance business, two thirds of total GVA were produced in Switzerland. The reinsurance companies mainly do their business in Switzerland. Approximately 5-10% of the reinsurance sector's GVA were produced abroad. Their foreign GVA shares grew from 5 to 15% during the period analyzed, while shares of the life insurance companies decreased from 35 to 20%.

Figure 41: Insurance sectors' domestic GVA and GVA abroad



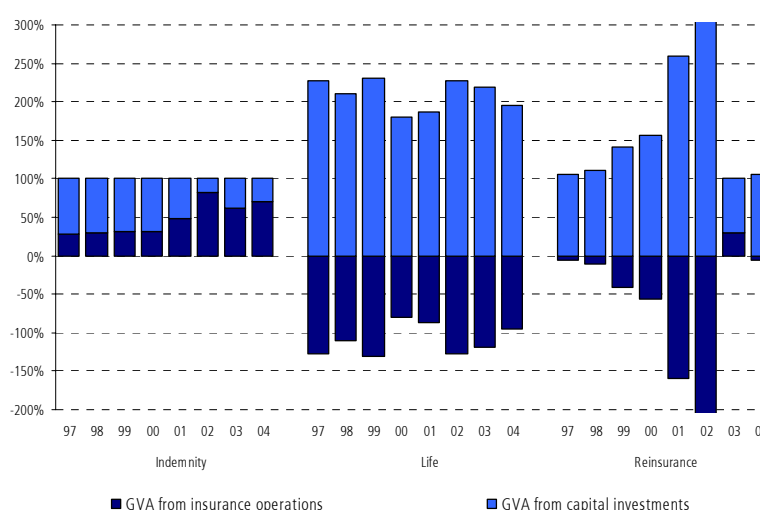
Source: BPV, own calculation

4.2.2.4. Analyzing GVA: GVA from insurance operations and from capital investment of insurance function

Another way to analyze the GVA in the insurance sector is to split it up into the GVA from insurance operations and from capital investment of the insurance function. The insurance function can only be produced by combining operations and investments. The analysis should not be interpreted as two different and separable business lines. It should rather help to explain the large fluctuation of GVA over time and should illustrate the difference in the underlying economic drives of the three sectors.

The next figure gives an overview of this subdivision of the three different insurance groups.

Figure 42: Creation of GVA (from insurance operations & capital investments)⁴¹ (in % of total GVA)



Source: BPV, own calculation

As one can see, the three insurance sectors show a different split. The indemnity insurance companies create GVA both – from insurance operations as well as from capital investments whereas the life and reinsurance companies mainly create GVA from capital investment of the insurance function. They show a negative GVA from insurance operations, excepted the reinsurance sector after 2002.

⁴¹ For detailed information about the calculation see Appendix 2.

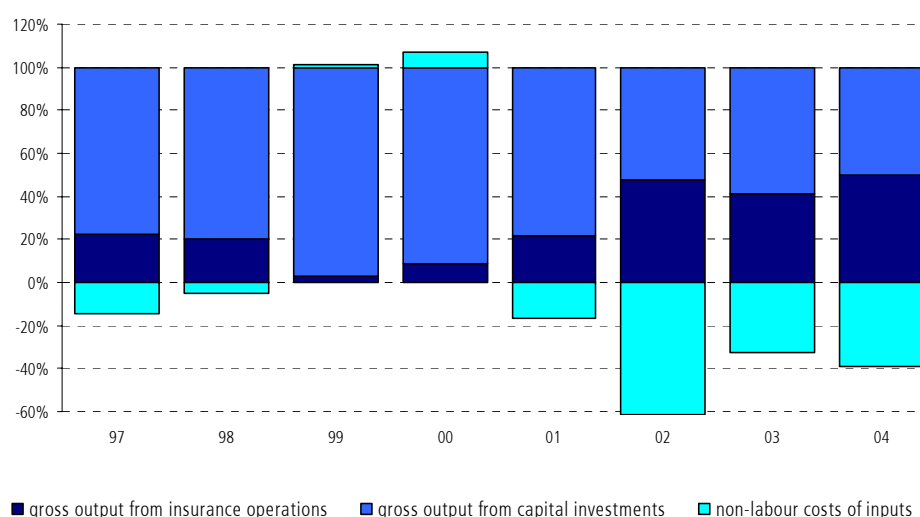
4.2.2.5. Analyzing GVA: Creation and distribution of GVA

The following figures break down the GVA into its source and distribution.

4.2.2.5.1. Creation of GVA

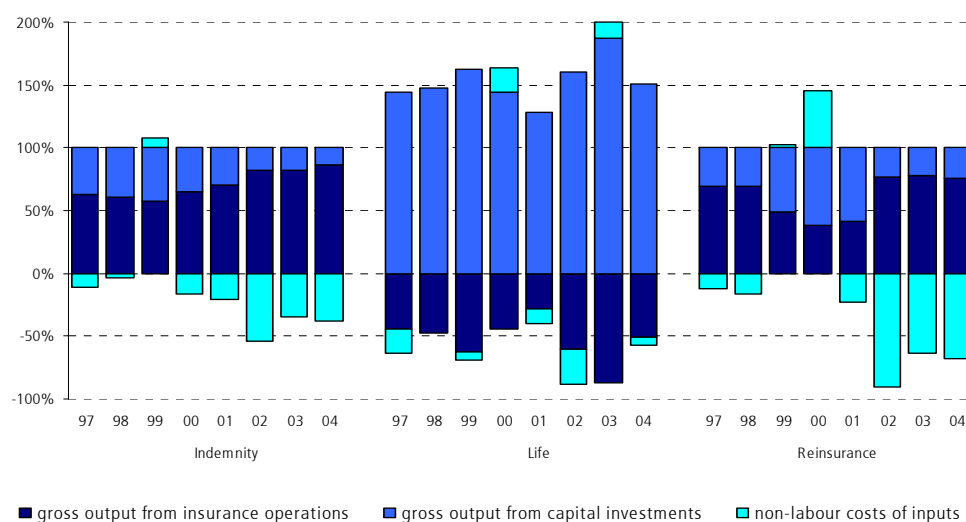
For insurance companies, the gross output can be divided into gross output from insurance business and from capital investment of the insurance function. The figure below summarizes the characteristics of the creation of GVA for the insurance industry as a whole between 1997 and 2004.

Figure 43: Total insurance industry's creation of GVA



Source: BPV, own calculation

In comparison to the indemnity insurance and reinsurance companies, the life insurance companies show a high negative gross output from insurance business between 1997 and 2004. Furthermore, from the development of the non-labor costs of inputs, one can see that the share of non-labor costs of inputs to gross output increased dramatically for indemnity insurance companies and notably for reinsurance companies following the year 2001. In 2002, the non-labor costs of inputs were the highest in the whole insurance industry: for the indemnity insurance sector they make up to 50% of the gross output, in the life insurance up to 30% and in the reinsurance sector up to more than 70%. An explanation for this considerable increase is the raise of the expenditures for reinsurance to cover risk.

Figure 44: Comparison of insurance industry's creation of GVA⁴² (in % of gross output)

Source: BPV, own calculation

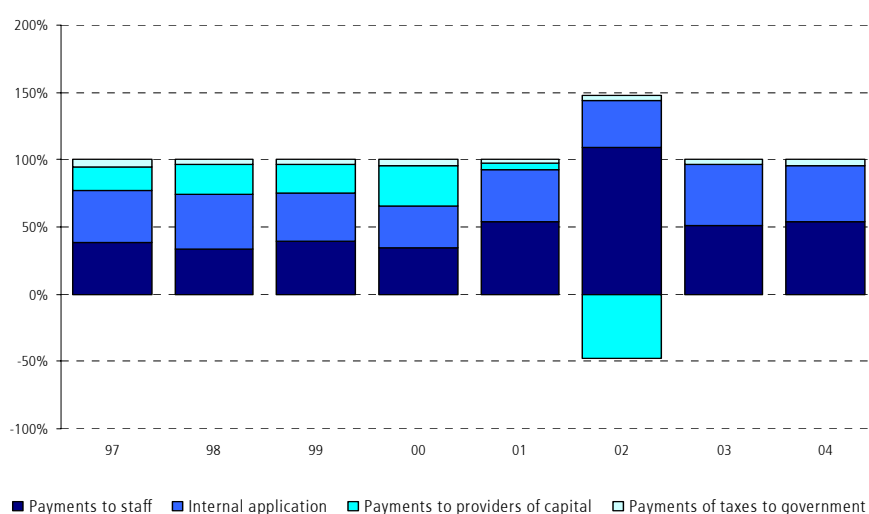
4.2.2.5.2. Distribution of GVA

In order to analyze the distribution of GVA in the insurance industry, the next two figures give some information about the segmentation into the four components: payments to staff, payments to providers of capital, corporation taxes paid to government and value retained within the company.

The following figure summarizes the characteristics of the distribution of GVA for the insurance industry as a whole between 1997 and 2004. Here again, the year 2002 stands out: the part of GVA paid to staff make up more than the entire GVA. That is the reason why the payments to the providers of capital reveal a negative value in the insurance industry for that year.

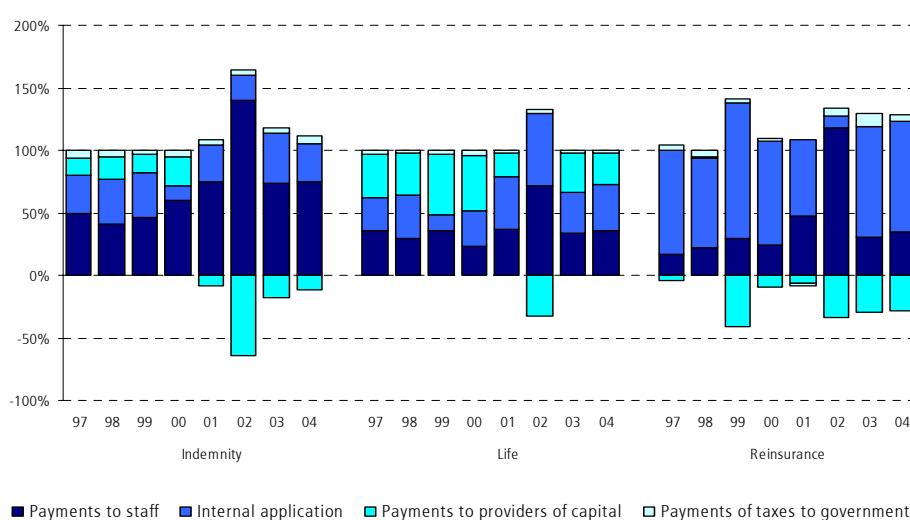
⁴² For detailed information about the calculation method see Appendix 2.

Figure 45: Total insurance industry's distribution of GVA (in % of total GVA)



Source: BPV, own calculation

On average, compared to the other insurance groups, indemnity insurance companies show the biggest share of payments to staff. The share paid to providers of capital is highest in life insurance companies: It makes up about 20 to 30% of GVA, while in indemnity insurance companies and in reinsurance companies the fraction of payments to providers of capital show negative values with -3% and about -20%. Regarding the payments of taxes to government, we see a similar percentage across the three insurance groups. On average, Swiss insurance companies used about 3 to 5% of the GVA for payments to government.

Figure 46: Comparison of insurance sectors' distribution of GVA⁴³ (in % of total GVA)

Source: BPV, own calculation

⁴³ For detailed information about the calculation method see Appendix 2.

5. Further steps and research

In addition to the banking and insurance industry, the other financial service providers as well as institutions which provide financial related services such as consulting or accounting – they are defined as “knowledge intensive business services” – will be analyzed. For the time being, we will focus on the evaluation of gross value added as well as of labor and capital productivity of institutions within Switzerland. Data about security dealers and independent asset managers have already been published by “Swiss Financial Center Watch”.⁴⁴

As next step concerning the banking and insurance industry, we will examine factors having influence on the development of gross value added and productivity of these two industries. For instance, the economic environments are likely to differ across countries, and could induce important differences in banking and insurance productivity through various channels. We will use econometric techniques in the panel data context that solve statistical drawbacks with available data from 17 countries observed over the period 1980-2003. In particular, three categories of determining variables are taken into account:

- Those that describe the main macroeconomic conditions
- Variables that characterize the structure and regulation of the financial industry
- Those that describe changes within the banking and insurance institutions

The empirical study will be conducted separately for banking and insurance industry using panel data from EU15 countries, Switzerland and the US. Econometric issues will be based on estimation of different panel models.

⁴⁴ SFCW (2006), pp. 50-54.

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Appendix 1

Detailed calculation of banks' gross value added: Subtractive Method - Creation of gross value added ⁴⁵		
+	Net interest income	} Gross output value
+	Fees and commissions receivable	
+	Net profit or loss on financial operations	
+	Other net non-interest income	
-	Fees and commissions payable	} Non labor costs of inputs
-	Operating expenses excl. staff costs	
=	Gross value added	

Detailed calculation of banks' gross value added: Additive Method – Distribution of gross value added ⁴⁶		
+	Staff costs	
+	Income tax	
+	Distributed profit	
+	Internal application	
=	Gross value added	

⁴⁵ Based on SNB: Die Banken der Schweiz 2004.

⁴⁶ Based on SNB: Die Banken der Schweiz 2004.

Appendix 2

Detailed calculation of insurance companies' gross value added: Additive Method - Distribution of gross value added ⁴⁷		
+	Ergebnis des Geschäftsjahres	
+	70% der Abschlusssaufwendungen für das direkte Geschäft	} Annahme Personalkosten
+	70% der Verwaltungsaufwendungen	
+	70% der Aufwendungen für die Verwaltung von Kapitalanlagen	
+	Direkte Steuern	
-	Ausserordentliche Erträge abzgl. ausserordentliche Aufwendungen	
-	Lfd. Erträge aus Kapitalanlagen in verbund. Unternehmen	} Neutralisierung der nicht versicherungsverbundenen Kapitalerträge und Zinsaufwendungen
-	Lfd. Erträge aus Aktien, etc.	
-	Lfd. Erträge aus eigenen Aktien	
-	Lfd. Erträge aus festverzinslichen Wertpapieren	
-	Lfd. Erträge aus Schuldscheindarlehen	
-	Lfd. Erträge aus Hypothekendarlehen	
-	Lfd. Erträge aus Policedarlehen	
-	Lfd. Erträge aus Festgeldern und sonstigen Kapitalanlagen	
-	Lfd. Erträge aus Kapitalanlagen für anteilgebundene Lebensversicherungen	
-	Depotzinsen	
+	Zinsaufwendungen an versicherungstechnische Rechnung	
+	Übrige Zinsaufwendungen und sonstige Aufwendungen für Kapitalanlagen	
+	Abschreibungen auf Kapitalanlagen	
-	Zuschreibungen zu Kapitalanlagen	
-	Sonstige Erträge abzüglich Aufwendungen für Kapitalanlagen	
=	Brutto-Wertschöpfung	

⁴⁷ Based on BPV: Die privaten Versicherungseinrichtungen in der Schweiz - Zahlen und Fakten 1997-2004.

Detailed calculation of insurance companies' gross value added: Subtractive Method - Creation of gross value added⁴⁸		
+ Gebuchte Bruttoprämien - Veränderung der Bruttoprämienüberträge + Sonstige versicherungstechnische Erträge für eigene Rechnung - Zahlungen für Versicherungsfälle, Bruttobetrag - Veränderung der Schadenrückstellungen, Bruttobetrag - Nicht anderweitig auszuweisende Veränderung der versicherungstechnischen Nettorückstellungen - Veränderung Deckungskapital, Bruttobetrag + Veränderung Zillmerabschlag	}	Brutto-Produktionswert versicherungstechnisch
- Abgegebene Rückversicherungsprämien + Veränderung des Anteils der Rückversicherer an den Bruttoprämien + Zahlungen für Versicherungsfälle, Anteil Rückversicherer + Veränderung Schadenrückstellungen, Anteil Rückversicherer + Veränderung Deckungskapital, Anteil Rückversicherer - Aufwendungen für Überschussbeteiligung - Provisionen für das in Rückdeckung genommene Versicherungsgeschäft - Veränderung Abschlussaufwendungen + Erhaltene Provisionen - Sonstige versicherungstechnische Aufwendungen	}	Vorleistungen versicherungstechnisch
- 30% der Abschlussaufwendungen für das direkte Geschäft - 30% der Verwaltungsaufwendungen	}	betriebliche Vorleistungen versicherungstechnisch
= Brutto-Wertschöpfung versicherungstechnisch		
+ Der technischen Rechnung zugeordneter Zinsertrag für eigene Rechnung + Erträge aus Grundstücken und Bauten	}	Brutto-Produktionswert Anlagen & Übriges
+ Nicht realisierte Gewinne aus Kapitalanlagen für anteilgebundene Lebensversicherungen - Nicht realisierte Verluste aus Kapitalanlagen für anteilgebundene Lebensversicherungen - 30% der Aufwendungen für die Verwaltung von Kapitalanlagen - Gewinne aus dem Abgang von Kapitalanlagen - Verluste aus dem Abgang von Kapitalanlagen	}	Vorleistungen Anlagen & Übriges
- 30% der Aufwendungen für die Verwaltung von Kapitalanlagen	}	betriebliche Vorleistungen Anlagen & Übriges
= Brutto-Wertschöpfung aus Anlagen & Übriges		

⁴⁸ Based on BPV: Die privaten Versicherungseinrichtungen in der Schweiz - Zahlen und Fakten 1997-2004.

