KOF Bulletin

No. 116, March 2018

ECONOMY AND RESEARCH

KOF INDICATORS

KOF Swiss Economic Institute

EDITORIAL

Dear readers,

In our last issue of the KOF Bulletin, we presented the skills Swiss companies look for in their employees in the context of workplace digitalisation. According to the article, there is a need to catch up, and companies believe that many employees actually lack the preferred skills. In the current Bulletin, the second article in our digitalisation mini-series looks at the objectives companies try to achieve through digitalisation. For the majority of the companies, process efficiency plays the main role. The second article of this Bulletin, which is part of our Eurozone debt series, analyses the situation in the European financial sector. Although there has been some progress in terms of stabilising the financial system in the last 10 years, the situation is still fraught with risks in some countries, such as Italy. The last article takes stock of Swiss exports in 2017: Foreign sales reached pre-financial crisis levels for the first time in 10 years.

We wish you an informative read,

David Iselin

ECONOMY AND RESEARCH

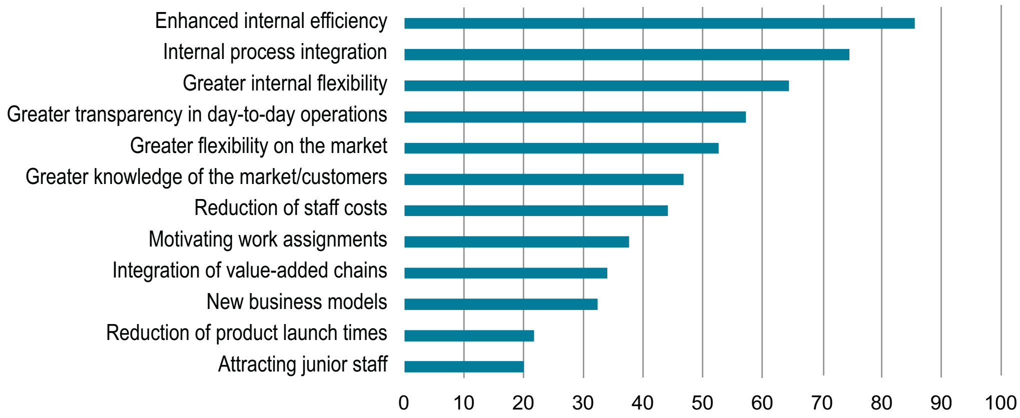
Digitalisation (2/2): Enhanced Efficiency Is Top Priority

Following the last Bulletin's article on the skills employers look for in their staff, our second article on the level of digitalisation in Switzerland focuses on possible digitalisation objectives pursued by Swiss companies. It was found that companies specifically hope to raise efficiency.

In the context of a joint study (Bienefeld et al., 2018), researchers of the Chair of Labour and Organisational Psychology at ETH Zurich, the University of Applied Sciences Northwestern Switzerland (FHNW) and KOF investigated the objectives pursued by companies in connection with the digitalisation of their activities. They found that companies across all industries and sizes are primarily interested in raising internal efficiency, an objective that was stated by 85.5% of all respondents (see Graph G 1).

The second and third most frequently stated objectives, *internal process integration* (74.6%) and *greater internal flexibility* (64.4%), also relate to internal company processes. External objectives, for instance *greater flexibility on the market* (52.7%) or *greater knowledge of the market/customers* (46.8%), were mentioned much less frequently. This came as a surprise given the manifold opportunities digital technologies offer when it comes to analysing market and customer knowledge (e.g. Big Data) (Bienefeld et al., 2018).

G 1: Companies' Digitalisation Objectives, Total
(share of companies pursuing one or several objectives, as a percentage)



Companies also appear to have little interest (as yet) in the risk of disruptive technologies on the market and the associated need for enhanced agility, as suggested by the percentages relating to the objectives of *pursuing new business models* (32.4%) and *reducing product launch times* (21.7%). In the area of Human Resources, the objectives of *reducing staff costs* came in at 44.1% and *creation of motivating work assignments* at 37.7%. The first point has a bearing on the current debate about the risks of digitalisation leading to job cuts. However, descriptive survey analysis of the first part of this study (Arvanitis et al. 2017) suggests that any potential effects of digitalisation on staff numbers predominantly relate to staff members with low qualifications. Scores of companies, especially larger ones, report an increased demand for employees with better qualifications.

T 1: Companies' Digitalisation Objectives by Sectors, Sub-Sectors and Total
(share of companies pursuing one or several objectives, as a percentage, in order of the total figures)

	Industry	High-tech	Low-tech	Construction	Services	Traditional	Modern	Total
Enhanced internal efficiency	90%	89%	90%	72%	84%	83%	87%	86%
Internal process integration	80%	82%	79%	58%	72%	68%	79%	75%
Greater internal flexibility	70%	70%	71%	53%	60%	60%	60%	65%
Greater transparency in day-to-day operations	63%	61%	63%	50%	53%	56%	48%	58%
Greater flexibility on the market	54%	50%	57%	33%	57%	54%	61%	53%
Greater knowledge of the market/customers	45%	45%	45%	29%	54%	56%	50%	47%
Reduction of staff costs	49%	48%	49%	31%	42%	42%	42%	44%
Motivating work assignments	39%	37%	41%	39%	36%	32%	44%	38%
Integration of value-added chains	37%	38%	37%	26%	32%	27%	41%	34%
New business models	30%	32%	28%	17%	40%	35%	49%	33%
Reduction of product launch times	30%	39%	23%	5%	15%	10%	26%	22%
Attracting junior staff	17%	19%	16%	21%	24%	21%	29%	20%

The objective of *attracting top junior staff* was mentioned with the lowest frequency, although social media (internal and external platforms) would offer ideal recruitment opportunities and as many as 77% of all companies are already actively using social media (see Arvanitis et al., 2017).

Construction industry shows little interest in digitalisation

Analysis of the different sectors displays a similar pattern in terms of the companies' objectives. Depending on the individual industry, this pattern is either more or less distinct (see Table T 1). The construction industry stands out for pursuing all of the objectives much less frequently and virtually not pursuing the *new business models and reducing product launch time* objectives at all. *Companies active in high-tech and low-tech industries and modern services* show the strongest interest in the *objectives* most frequently pursued in the above *overview* (enhanced internal efficiency and internal process integration). *Flexibility on the market and the endeavour to better understand the market/customers are predominantly pursued by modern and traditional service providers.* On top of this, modern service providers are pioneers where the aims of *creating new business models* and *creation of motivating work assignments* are concerned.

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Literature

Arvanitis, S., G. Grote, A. Spescha, T. Wäfler and M. Wörter (2017): Digitalisierung in der Schweizer Wirtschaft – Ergebnisse der Umfrage 2016, eine Teilauswertung im Auftrag des SBFI (Digitalisation of the Swiss Economy: Results of the 2016 Survey, Partial Analysis on Behalf of the SBFI), KOF Studies No. 93, Zurich.

Bienefeld, N., Grote, G., Stoller, I., Wäfler, T., Wörter, M., Arvanitis, S. (2018): Digitalisierung in der Schweizer Wirtschaft: Ergebnisse der Umfrage 2016, Teil 2: Ziele, berufliche Kompetenzen und Arbeitsorganisation (Digitalisation of the Swiss Economy: Results of the 2016 Survey, Part 2: Aims, Professional Skills and Work Organisation), KOF Studies Nr. 99, Zurich.

Note

This text is an adapted version of the section 'Companies' digitalisation objectives' of the study entitled 'Digitalisierung in der Schweizer Wirtschaft: Ergebnisse der Umfrage 2016, Teil 2: Ziele, Berufliche Kompetenzen und Arbeitsorganisation' (Digitalisation of the Swiss Economy: Results of the 2016 Survey, Part 2: Aims, Professional Skills and Work Organisation) (2018) by Nadine Bienefeld, Gudela Grote, Irina Stoller, Toni Wäfler, Martin Wörter and Spyros Arvanitis, Irina Stoller, Toni Wäfler, Martin Wörter und Spyros Arvanitis. Link to the first part of this two-part series: 'Digitalisation (1/2): Companies Consider Lack of Skills Among Staff to Be the Biggest Obstacle to the Spread of Digitalisation':
www.kof.ethz.ch →

Eurozone Debt (2/3): Financial Sector

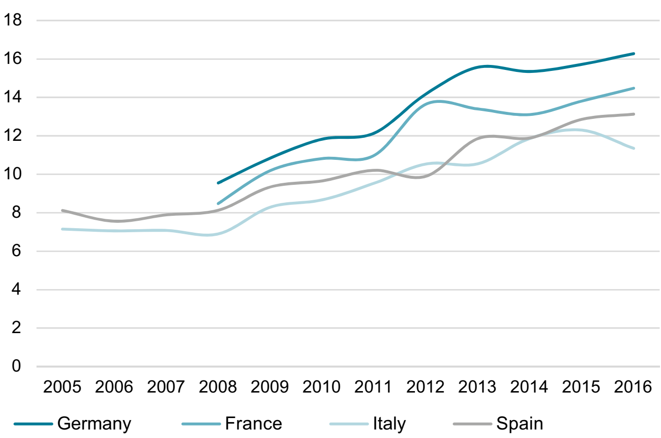
The second of three articles on Eurozone debt is dedicated to the financial sector. During the crisis years, many financial firms were criticised, inter alia, for their dependency on public support measures. Since then, a few changes have been introduced in the currency union's institutional regulations, and systemic risks have been reduced in many countries, albeit not in all of them.

Since, in the case of government budgets, it is difficult to determine equity capital as a parameter, economic performance is often used as a benchmark for acceptable debt levels (see first article on public of household debt in the February Bulletin). By contrast, in the case of private companies and especially banks, the relevant parameter of debt sustainability and hence credit protection is the debt-to-equity ratio, or financial leverage.

For a long time, implied disincentives such as the 'too-big-to-fail' problem led to a socially inefficient level of risk adoption among numerous European banks. During the financial crisis, this was reflected by insufficient capital adequacy, which necessitated government support measures in the case of institutes of systemic relevance. As a consequence, the European banking union was established in 2014 with the aim of enhancing the resilience and harmonisation of the financial system. The banking union is based on a uniform set of regulations which are binding on all financial institutions in the European Union. In specific, this includes regulations pertaining to capital adequacy and liquidity requirements, the resolution of failing banks and a deposit guarantee scheme.

G 2: Tier 1 Capital

(as a percentage of risk-weighted assets)



Source: IMF Financial Soundness Indicators

The first pillar of the banking union consists of the Single Supervisory Mechanism affiliated with the European Central Bank (EBC), which supervises approximately 120 significant[1] institutes and hence 82% of all bank assets in the Eurozone and the participating EU member states which are not part of the Eurozone. Banks which are not classified as significant continue to be subject to their national supervisory authorities. The latter are supported by the European Banking Authority (EBA), which was established in 2011. The EBA develops supervisory standards based on the Basel III provisions, promotes exchange between national supervisory authorities and carries out stress tests.

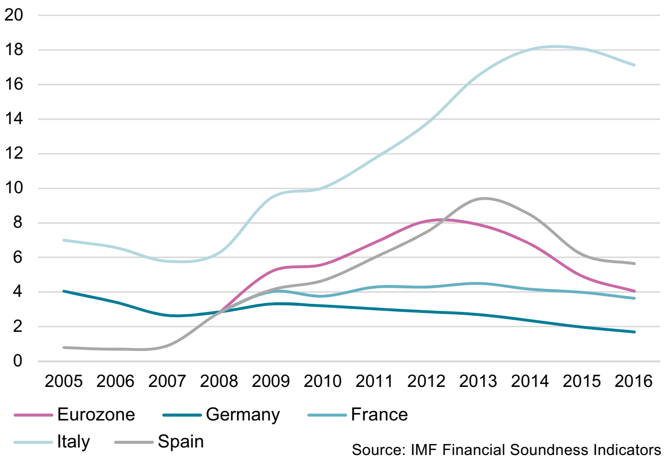
[1] Significant banks are defined as banks with total assets in excess of EUR 30 billion, assets in excess of 20% of the GDP of the participating country and a minimum of EUR 5 billion, or the three biggest banks in each participating country.

The second pillar of the banking union is the Single Resolution Mechanism, which ensures uniform regulations pertaining to the orderly resolution or restructuring of illiquid banks and provides a common resolution fund. While the ECB is responsible for the resolution of significant institutes, all other banks are subject to their national authorities. This is to ensure that losses are borne by the creditors and government bailouts are no longer permitted. The resolution of the Spanish 'Banco Popular', for instance, was successful in this respect, while government funds were still involved in the resolution of struggling banks in Italy last year. The introduction of a deposit guarantee scheme is currently being discussed as a third pillar.

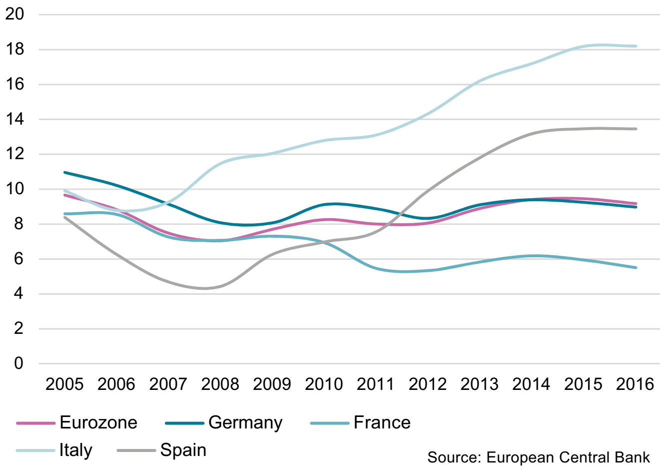
Thanks to gradual debt reduction since the financial crisis, the regulatory provisions are now fulfilled, although substantial differences persist between the individual countries. A relevant parameter in this context is the tier 1 capital ratio, which indicates the percentage of a bank's risk-weighted positions that are covered by equity. The average of Eurozone core capital in relation to risk-weighted assets has risen from 8% in 2007 to 14% (see graph G 2).

While Germany has the highest capital adequacy ratio amongst the big countries, the ratio has recently declined in Italy. Core capital held by Eurozone banks has also dropped in relation to unweighted assets, namely by one

G 3: Loans at Risk of Default, Eurozone
(as a percentage of all outstanding loans)



G 4: Cluster Risks in Bank Balance Sheets
(loans to governments and government bonds, as a percentage of the balance sheet total)



percentage point to approximately 6.5%. On the one hand, this is due to a decrease in high-risk investments, on the other hand, additional equity capital has been accrued via profit retention and capital increases. However, this adjustment of bank balance sheets has affected the banks' lending activities and is likely to have played a role in the slow recovery of the Eurozone economy.

Risks inherent in Italy's financial sector

A further indicator of debt sustainability in the financial sector, albeit on the asset side, is the percentage of loans at risk of default[2] in all outstanding loans. Although this percentage has declined slightly in 2014, it is still very high in individual countries (see graph G 3). In Italy, the percentage almost tripled between 2008 and 2016 and is currently close to 17%. Due to the size of the Italian financial sector, Italy now accounts for around one third of all non-performing loans in the Eurozone.

The problems faced by the Italian banking sector are also reflected by the asset side of the balance sheets. At 11%, the share of domestic government bonds in Italian bank balance sheets is twice as high as the Eurozone average. The situation is similar for loans extended to the government, which make up 7% of the balance sheets (see graph G 4). Should the government get into financial difficulties in

[2] Loans are considered to be at risk of default or non-performing when the debtor has failed to meet their payment obligations for a period of 90 days or more.

the case of a crisis, this would impact directly on the solvency of the domestic banks. Combined with a high percentage of non-performing loans and the Italian banks' low tier 1 capital ratio, this could result in bankruptcies.

Do the supervisory authorities face a conflict of interest?

The banking union also pursues the aim of reducing interaction between governments and domestic banks in order to avoid any associated mutual contagion in the future. However, there is a risk that placing the European supervisory mechanism under the umbrella of the ECB may lead to a conflict of interest with the latter's monetary objectives.

This article is the second in a three-part series on debt in the euro area. The first article, which focuses on public debt, can be found here:
www.kof.ethz.ch →

The third part, which will be published in April, deals with the indebtedness of households and non-financial companies.

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Swiss Foreign Trade in 2017: Financial Crisis Dip Compensated After Close to 10 Years

Last year, export companies managed to emulate the export figures of the period before 2008. Finally, foreign trade appears to have recovered from the recession and the Swiss franc shock.

Review of 2017: back to 2008 levels

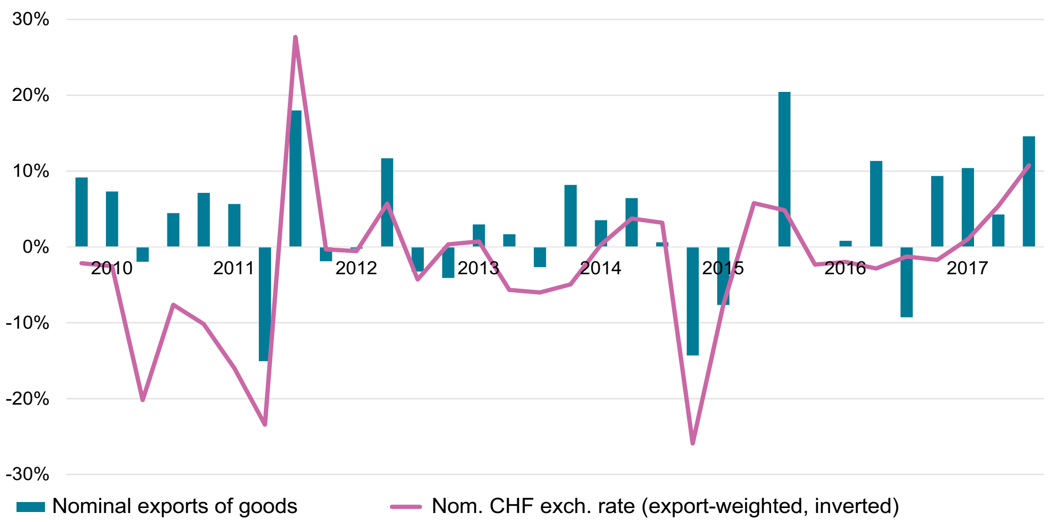
The Swiss export industry ended last year on a good note. According to the foreign trade statistics, the domestic industry exported goods were worth over CHF 220 billion in 2017. This represents a 4.7% increase over the previous year. Exports of goods were back at the level of the year 2008 and hence the period before the big recession and the subsequent waves made by the Swiss franc appreciation and its negative impact on the export industry (see graph G 5).

Thanks to the robust global economy, exports expanded on a broad basis. A slight dip in the currency allowed prices in CHF to rise, which should have resulted in a certain improvement of exporters' margins. On a price-adjusted basis, exports of goods in 2017 rose by 1.7% over the previous year. Robust export demand has also driven up imports of goods. Despite higher prices, imports rose by a nominal 6.9% last year.

Sector analysis: strong watch industry

In terms of sectors, the chemical-pharmaceutical industry once again delivered a substantial contribution to export growth in 2017. However, this result primarily arose from a statistical overhang from the year 2016 when the industry's foreign sales expanded by more than 10%. By contrast, the trend in 2017 remained largely flat. Other sectors were far more dynamic. Following two difficult years, the watch

G 5: Swiss Exports of Goods and Their Environment
(annualised qoq change as a percentage)



Source: EZV, SNB

industry was picking up again and increased its exports by just under 3%. Demand rose particularly in the key Hong Kong and Chinese markets. Foreign sales of precision instruments, which also include medical devices as well as measuring and test equipment, also met with healthy demand abroad and have now reached a level of 80% of watch exports. Growth in this sector amounted to approximately 4.5%. On top of this, the lively global economy, especially in the Eurozone, is finally having an effect on the MEM (mechanical engineering, electronic, metal) industry. While the last M in MEM, the metal companies, raised exports by 12%, overseas sales of machinery, electronics and instruments expanded rather slowly – especially in the second six months of the year.

Country analysis: China's importance is growing

On the one hand, the positive export trend in the last year is due to stable growth of demand in the industrialised countries. On the other hand, sales opportunities have also improved in most emerging markets. Big emerging markets, such as Brazil and Russia, have finally come out of recession and demand in Asia has also regained some of its previous dynamics. The only exception were the oil exporting countries, where demand remained on the weak side. However, China is becoming an increasingly important market for Swiss industry. Given an export volume of CHF 11.4 billion, China has overtaken the UK and is now the fifth most important trading partner. On the import side, China was also playing an increasingly important role in the last year.

Outlook remains favourable

At the beginning of the current year, the international environment remained positive for the Swiss export industry. The dynamic foreign trade trend of the last two quarters appears to continue, as reflected by the foreign trade statistics' January figures. Current business tendency surveys also indicate that domestic industrial companies expect further strong impulses from their export business. All in all, it looks like the Swiss export industry has embarked on a solid path of recovery.

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KOF INDICATORS

KOF Business Situation: Indicator Still on the Rise

In February 2018, the KOF Business Situation Indicator for the Swiss private economy continued to rise. With one single exception, the business situation has thus been improving from month to month since January 2017. The Swiss economy is visibly gaining strength.

In February, the Business Situation indicator went up in the majority of the surveyed sectors (see Graph G 6). The rising tendency of the previous months continued in the manufacturing industry. In the project engineering sector and the retail trade, the indicator recovered after a decline in the preceding month. Only the construction industry and the financial and insurance service providers did not see a continuation of the positive trend in January, and the respective indicators hardly changed in February. Wholesalers, hotel and catering businesses and the other service providers were last surveyed in January. At the time, all three sectors reported an improvement in their business situation.

G 6: KOF Business Situation Indicator
(balance, seasonally adjusted)

T 2: KOF Business Situation for Switzerland (seasonally adjusted balances)

	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Jan 18	Feb 18
Private sector (overall)	13.0	15.2	18.3	18.8	19.8	19.9	21.3	23.6	20.2	20.9	22.1	24.5	26.1
Manufacturing	-7.1	-5.0	-1.9	-1.2	3.8	4.0	6.5	9.8	10.7	13.4	13.4	14.6	19.7
Construction	28.1	31.7	31.7	29.4	32.9	32.5	31.8	31.3	31.0	32.2	31.5	33.3	33.1
Project engineering	47.3	49.1	50.2	47.2	46.7	46.5	46.8	47.3	49.4	48.8	49.8	46.2	48.7
Retail trade	-11.4	-7.0	-3.2	-11.3	-0.8	-2.1	-1.3	2.7	1.5	0.6	3.8	1.3	7.3
Wholesale trade	-	-	9.2	-	-	15.6	-	-	20.5	-	-	30.4	-
Financial services	31.8	32.7	31.9	37.7	36.6	29.9	33.6	36.3	30.5	33.4	38.3	41.5	41.3
Hotel and catering	-	-	-14.4	-	-	-2.0	-	-	0.3	-	-	3.7	-
Other services	-	-	32.1	-	-	32.5	-	-	24.3	-	-	25.9	-

Answers to the question: We assess our business situation as good/satisfactory/bad. The balance is the percentage of 'good' answers minus the percentage of 'bad' answers.

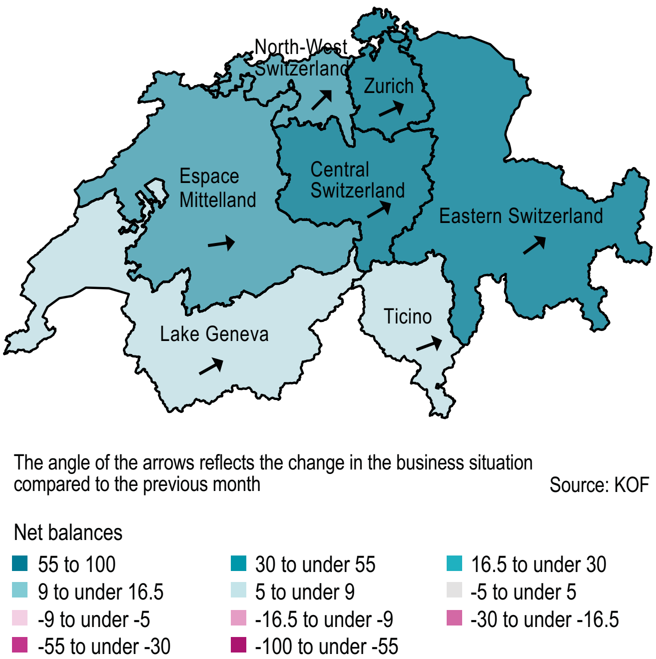
From a regional perspective, the Business Situation Indicator has risen in all of the main BFS regions. In Eastern Switzerland, Central Switzerland and in the Zurich Region, the positive business situation improved even further. North-West Switzerland recorded a substantial increase in the Business Situation Indicator, which also advanced in the Ticino and Lake Geneva regions. By contrast, the rise in the indicator in Espace Mittelland was hardly noticeable. (see Table T 2).

Explanation of graphs:
Graph G 6 presents the KOF business situation across all sectors covered by the survey. The business situation in sectors which are surveyed on a quarterly basis is kept constant during the intervening months.

Graph G 7 presents the business situation in the main regions according to the Federal Statistics Office (FSO). The regions are coloured according to business situation. The arrows in the regions indicate the change in the business situation compared to the previous month. An upward-pointing arrow, for instance, indicates that the situation has improved over the previous month.

The KOF business situation is based on over 4,500 reports by Swiss companies. Every month, businesses are surveyed in the following sectors: industry, retail trade, construction and project engineering as well as financial and insurance services. Businesses in the hotel and catering sector, wholesalers and the other service providers are surveyed in the first month of every quarter. Among other questions, the businesses are asked to assess their current business situation. They may rate their situation as 'good', 'satisfactory' or 'bad'. The balance of the current business situation is the percentage difference between the 'good' and 'bad' responses.

G 7: KOF Business Situation in the Private Sector



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You can find more information about the KOF Business Tendency Surveys on our website:
www.kof.ethz.ch/en/surveys/business-tendency-surveys →

KOF Economic Barometer Stabilises at a High Level

In February 2018, the KOF Economic Barometer rose by 0.4 points to a new reading of 108.0. (see Graph G 8). After the previous month's decline, it thus stabilised its position on a level clearly above its long-term average. This indicates that the Swiss economy should continue to grow at rates above average in the near future.

In February 2018, the KOF Economic Barometer climbed from 107.6 in January (revised up from 106.9) by 0.4 points to a level of 108.0. Accordingly, the barometer at least partly corrected its decline in January. From a longer-term perspective, the early 2017 improved sentiment appears to continue.

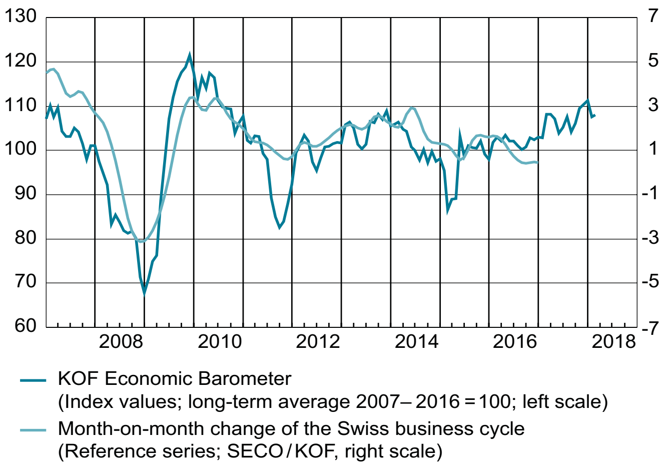
The strongest positive contributions to this result come from the construction sector, followed by the hospitality industry and the indicators relating to domestic private consumption. The indicators from the financial sector and the exporting industry have practically remained unchanged. An overall slightly negative signal stems from manufacturing.

Within the manufacturing industry, the slightly impaired total outlook can be attributed to diverging signals. A clearly deteriorating sentiment is visible in mechanical engineering. The electrical and the paper industries, on the other hand, reveal an improving sentiment and the wood and textile industries are somewhat more optimistic, too. The remaining industry branches record hardly any change.

KOF Economic Barometer and reference time series: annual update

In September 2017, the scheduled annual update of the KOF Economic Barometer took place. The annual update involves the following steps: redefinition of the pool of indicators that enter the selection procedure, update of the reference time series, and renewed execution of the variable selection procedure. The updated reference series is the smoothed continuous growth rate of the Swiss Gross Domestic Product (GDP) according to the new System of National Accounts ESVG 2010, released in early September 2017, which takes into account the previous year's annual GDP data published by the Swiss Federal Statistical Office (FSO). As a result of the indicator variable selection procedure, the updated KOF Economic Barometer is now based on 273 indicators (instead of 272 as in the previous vintage), from a pool of almost 500 potential indicator series. They are combined using statistically determined weights.

G 8: Economic Barometer and Reference Series



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For detailed information on the KOF Economic Barometer, visit our website:
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