



KOF Bulletin

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EDITORIAL

Dear readers,

For the first time since 2008, the economic development in the eurozone was stronger than in the USA. Read more about the reasons in the first article. Further subjects of this edition: What were the consequences for Swiss companies of the abolition of labour market restrictions after the Free Movement of People was introduced? As the articles shows, innovations and employment have developed differently depending of the distance to the border. Another research project also focuses on companies but more on the employer itself. The question raised in this article is, if it is worthy for them to engage in vocational education and training. Does the effort pay off? The fourth article copes with a young research strand of KOF – the wine market. How do consumers behave if prices for white, rosé or red wine rises? The fifth article also copes with the forming of expectations. How can they be integrated into macroeconomic models and how do we adapt them?

We wish you a good read,

David Iselin, Anne Stücker and Solenn Le Goff

ECONOMY AND RESEARCH

Eurozone on the Fast Lane



In the past year, macroeconomic production in the eurozone expanded by 1.7 per cent, giving Europe a growth edge over the USA for the first time since 2008.

Among the bigger countries, economic expansion accelerated particularly in Germany (1.8%), Spain (3.2%) and the Netherlands (2.1%). However, even smaller countries in Central and Eastern Europe, especially Romania, Bulgaria and Slovakia, recorded significant growth. In the wake of Spain's performance, the Portuguese economy also picked up speed in the second half of the year. Similarly, macroeconomic production expanded in the Baltic states. In contrast, Italy (1%) and France (1.1%), two economic heavyweights, failed to gather momentum. The Greek economy stagnated due to low investor confidence and uncertainty regarding the further development of the international bailout programmes.

The broadly-based upswing is also having a positive effect on the labour market: Since its peak in 2013, the eurozone unemployment rate has been on the decline and has recently levelled out at 9.6 per cent. However, the situation is not the same in all member states. While the Czech

Republic (3.5%) and Germany (3.9%) recorded the lowest unemployment, rates in Spain (18.4%) and Greece (23%) are still substantially higher than the European average. The labour market situation also improved in France (9.6%) and Italy (12%), albeit at a slow pace.

Due to persistent, substantial overcapacities in the eurozone, economic pressure on inflation has been low. Core inflation, which excludes the volatile energy and food components and is thus a suitable indicator of economically driven upward trends, is rising very slowly and stood at 0.9 per cent in January.

The substantial rise in energy prices in December did in fact lead to an abrupt increase in eurozone headline inflation. Expressed as the YOY movement of the harmonised consumer price index, this increase amounted to 1.8 per cent in January. At present, inflation is thus more or less consistent with the European Central Bank's target of just

under two per cent. Once the energy price effects peter out, inflation is likely to decline sharply. The ECB is therefore maintaining its current low-interest policy. Although the volume of its monthly bond purchases will be reduced to 60 billion euros as of April, the buying programme has been extended at least until December 2017.

Favourable outlook for 2017 tainted by political uncertainty

Although some economic indicators are hinting at a slight downturn, the upswing in the eurozone is generally expected to continue. Dynamics face a certain downward risk in the form of the Dutch, French and German general elections (in March, May/June and September, respectively), with fears persisting that anti-EU and anti-immigration parties could make inroads into the electoral bases. This would hold back government formation and might affect

the EU's decision-making ability, for instance in regard of its approach to the Greek debt problem.

Given the quarrels among its governing party, new elections are also in the air in Italy. In KOF's opinion, Italy is the most likely candidate for political upheaval with a pan-European impact. In the case of an election victory, the MoVimento 5 Stelle protest party intends to offer a referendum on the abolition of the Euro in Italy. Two other major opposition parties are also critical of the joint currency. Just the prospect of a Euro referendum after the elections would be enough to give the financial markets the jitters.

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Businesses – the Winners from the Free Movement of Persons

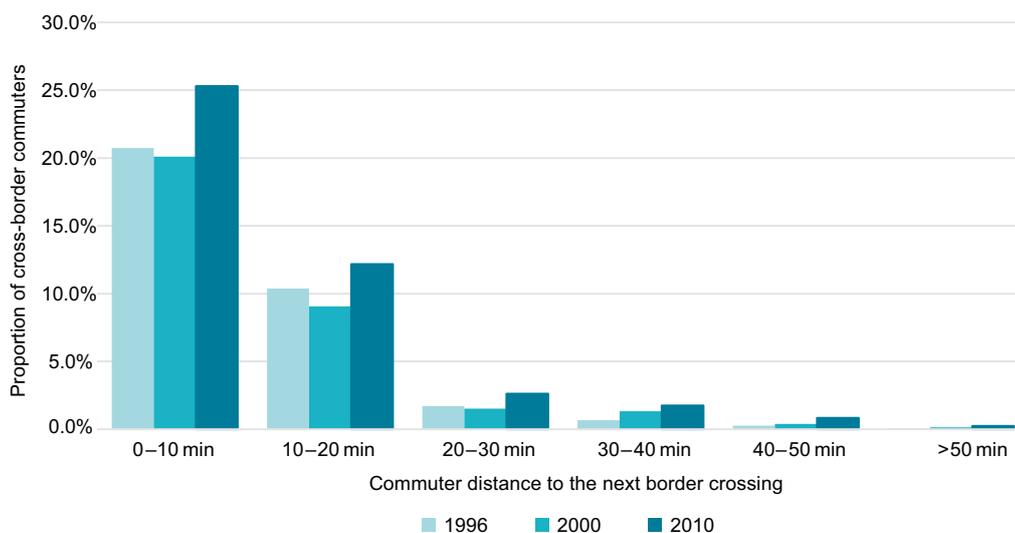
A large number of entrepreneurs in Switzerland say that free movement of persons is a key element in the success of their business. But has free movement of persons really made businesses larger, more productive and more innovative? A new KOF study shows that it has: businesses have indeed become larger and more innovative. In fact, due to free movement of persons, they are increasingly deciding to produce in Switzerland.

A decisive question in the discussion concerning the implementation of the initiative against mass immigration (MII) has been the influence that the reintroduction of immigration restrictions would have on businesses in Switzerland. According to indications provided by Swiss businesses, these implications could be significant. Would the new barriers to immigration thus have an effect on the growth of Swiss firms? Would these barriers result in firms transferring production abroad or a fall in the number of businesses establishing themselves in Switzerland?

Answers to these questions may be found in a new KOF study. The authors Jan Ruffner and Michael Siegenthaler examined how the abolition of barriers to immigration as a result of the introduction of free movement of persons impacted upon businesses. It was possible to infer from this not only whether the businesses benefited from free movement of persons but also some indications as to the effects which the reintroduction of obstacles to immigration would have on businesses.

One benefit for the analysis was that the liberalisation of the Swiss labour market has had an unintended side-effect: businesses situated near to the border benefited over the first few years, in particular from the abolition of various labour market obstacles. This was because the Swiss labour market opened up not only for immigrants from Europe but also for cross-border commuters.

Due to the opening-up of the Swiss labour market to cross-border commuters, their numbers in Switzerland increased significantly: today there are more than 150,000 more cross-border commuters than there were at the start of 2002. This increase occurred naturally, above all in regions close to the border. For example, the proportion of cross-border commuters out of overall employees has increased by around five percentage points since 2000 in municipalities less than 10 minutes by car from a border crossing (see G 1). Today, more than one out of every four employees in these municipalities is a cross-border commuter. The graph also shows how much the increase in

G 1: Changes to Cross-Border Commuters of Overall Employment

cross-border commuters was concentrated in areas close to the border. Businesses situated near to the border may thus wish to take advantage of the easier access to cross-border commuters.

Not only higher employment but also more innovation

What effects have the liberalisation of the labour market had on the size, productivity and innovativeness of firms near to the border? The authors approached this question by comparing growth for businesses situated near to border crossings with the growth of businesses that are further away from the border. Ruffner and Siegenthaler focused here above all on the years 2002 to 2007, as businesses close to the border were already benefiting from easier access to EU workers during this period, whilst various barriers on the employment of EU citizens continued to apply to businesses that were further away from the border. In these analyses, it is apparent that easier access to foreign workers has had a clear positive effect on the growth of businesses near to the border, which were able to increase turnover and employment over the period at a higher rate than businesses further away from the border. Free movement of persons has thus helped the businesses to grow.

How can the stronger growth in employment and turnover for businesses close to the border be explained? According to the study, three factors play a central role. First, some businesses were suffering from significant labour shortages over the years prior to the introduction of free movement of persons, which limited their growth. As a result of the opening-up of the labour market, businesses reported fewer problems in recruiting suitable staff – which in turn led

to significantly higher employment growth. The authors show that businesses close to the border, which suffered from a particularly significant shortage of skilled labour during the 1990s, became much more productive after 2002 compared to businesses elsewhere in Switzerland.

According to the study, a second explanation for the higher growth rates for businesses close to the border is that such businesses became more innovative. It is apparent that businesses close to the border expanded their research departments more than other businesses. A significant proportion of the new researchers employed were cross-border commuters. Improved access to foreign researchers and the lower shortage of skilled workers have also enhanced the innovativeness measured for businesses close to the border: for instance, over the years since 2002, their number of patent applications has increased at a significantly higher rate than those of businesses further away from the border.

Third, another significant effect resulted from the fact that businesses had increasingly transferred production activities towards the border in order to benefit from better access to European workers. In other words, free movement of persons has had an impact on businesses' decisions concerning their location. Over the years after 2002, the number of new businesses grew at a higher rate in regions near to the border than in regions further away from the border. In addition, the results also showed that businesses with branches in various parts of Switzerland before the introduction of free movement of persons increased their employment levels after 2002, in particular in the facilities situated near to the border.

All in all, the results show that businesses near to the border in Switzerland have benefited substantially from easier access to workers from the EU. Had they been unable to rely on cross-border commuters, the businesses would have grown at a slower rate and there would have been fewer businesses near to the border. However, the results also suggest that the businesses have been a joint cause of the substantial influx of foreign nationals over the years since the labour market was opened up. Free movement of persons has had the effect of creating jobs that would not even have existed without free movement of persons. The resulting increase in demand for workers helps to explain why the labour market outlook for local workers in labour markets close to the border has not deteriorated, despite high immigration. However, the results of the study also

show that a reduction in immigration to Switzerland cannot be achieved without dampening down the growth in jobs and thus putting the brakes on economic development.

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You can find the KOF Working Paper no. 424 “From Labour to Cash Flow? The Abolition of Immigration Restrictions and the Performance of Swiss Firms” by Jan Ruffner and Michael Siegenthaler at: <http://dx.doi.org/10.3929/ethz-a-010821915> →

Overview of Price Elasticity on the Market for Swiss Wines

Since 2015, KOF analyses, in cooperation with the Swiss Wine Market Observatory (OSMV)¹, have made it possible to set up a tool for analysing price elasticities on the Swiss wine market. As new results show, rosé wines have the highest price elasticity in Switzerland. This indicates that consumers should lower their purchases of rosé wine faster when the prices increase.

In order to assess price elasticity for different specifications, the figures have been aggregated according to colour (red, white, rosé) and AOC wine-growing region (Valais, Vaud, German-speaking Switzerland, Geneva, Ticino and three lakes) at monthly intervals over a period of five years (2012–2016). The variables - quantity and average price per litre - have been transformed into natural logarithms in order to be able to estimate price elasticity directly for the coefficients resulting from the econometric model of linear regression.

As shown in the table presenting the analysis (see T 1), the estimate of price elasticity for Swiss AOC wines over a period of five years is -2.01 . This figure is consistent with the various previous analyses carried out by the KOF using

OSMV data. It would thus appear that, for Swiss AOC wine sold through large retailers, an increase or a fall of 2.01 per cent of consumption in terms of quantity sold (litres) is associated with a fall or an increase of one per cent of the price per litre.

The statistical significance is indicated alongside each coefficient estimated by the following standard p values: highly significant (< 1 per cent), significant (< 5 per cent) and not significant (> 10 per cent). The coefficients “total per colour” and “total per region” have been estimated by panel regression with fixed effects over the types of wines and fixed temporal effects.

¹ The OSMV (www.osmv.ch) was established by Changins (Advanced Institute for Viticulture and Oenology in Nyon) on behalf of the Inter-Branch Organisation of Swiss Vines and Wines (IVVS).

T 1: Price Elasticity of Swiss AOC Wines in Major Retailers Over the Period 2012–2016

	Red	White	Rosé	Total (by region)
Valais	-1.21***	-1.35***	-3.56***	-2.67***
Vaud	-1.09***	-0.86**	-1.97***	-1.53***
German-speaking Switzerland	-1.76***	0.28	-6.01***	-3.82
Geneva	-1.14***	-1.51***	-2.56***	-1.70**
Ticino	-0.54	-4.16***	0.53	-0.72
3 lakes	-2.11***	-1.84***	-2.40***	-2.49***
Total (by colour)	-1.65***	-2.23***	-2.39***	-2.01***

*** p < 0.01, ** p < 0.05, * p < 0.1

Based on the results of a comparison of Swiss AOC wines according to colour, rosé wines (–2.39) appear to have a greater price elasticity than white wines (–2.23) and red wines (–1.65). Among the producer regions, wines from Valais (–2.67) and the three lakes (–2.49) overall have quite a high price elasticity, while price elasticity is average for Vaud (–1.53) and Geneva (–1.70), and not significant for German-speaking Switzerland and Ticino.

The reaction of the market in terms of quantities of red wine sold following a change in price appears to be relatively weak across the producer regions, in contrast to



Lavaux, Vaud, is well known for its white wines.

the position for rosé wines where price fluctuations point to the seasonal nature of the product and give rise to a stronger reaction on the part of consumers. There does not appear to be any significant correlation between quantities and prices for red and rosé wines from Ticino and for white wines from German-speaking Switzerland. This is probably due to the high level of heterogeneity among the different labels within these classes of wines.

Over the next stages, the structure of the panel with more than 100 different types of wine will be taken into account, along with other variables such as climate control (temperature), macro-economic (exchange rate) and agricultural (harvest) variables. In order to address endogeneity concerns between quantity and price, other econometric models, such as the instrumental variable model, will be applied to these data. The estimation of price elasticity with causal interpretation (effect of a percentage change in price on the percentage change in quantities sold) could be of major benefit for the Swiss wine-producing sector, in particular with a view to maximising the turnover of the wine-growing industry through the adoption of a suitable pricing policy.

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The Employer’s Dilemma: Is it Worth Engaging Employers in VET Reforms?

As skills mismatch and youth unemployment are high, vocational education and training (VET) systems in many countries are undergoing reforms in order to meet skills demand. Employer engagement is a known component of strong VET programs, but what should employer engagement look like during the reform process?

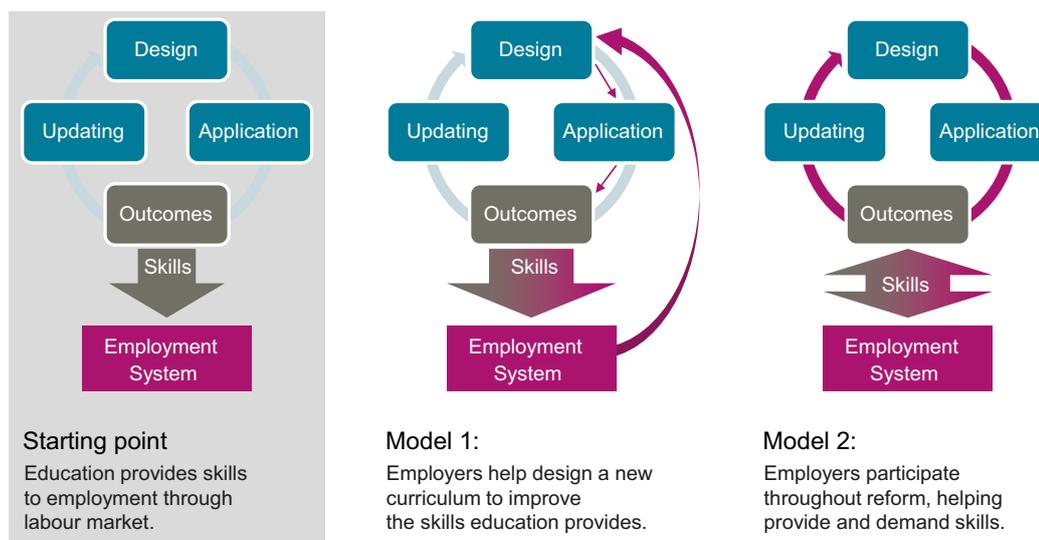
Most reforms start from systems where skills are produced in the education system and consumed by employers, and the VET reforms aimed at improving labour market outcomes take one of two forms (see G 2): In Model 1, employers contribute to curriculum development. In Model 2, employers participate in all VET processes: designing curricula, training apprentices, and initiating curriculum updates. In Model 2 employers go from being consumers of skills to being both producers and consumers.

In a new study that analyses employer engagement, Katherine Caves and Ursula Renold argue that Model 1 creates a prisoner’s dilemma that prevents engagement, even though it seems to be the option that requires the least commitment. If firms invest their time and expertise in VET curricula and their competitors choose not to, the competitors may benefit from better skilled graduates without having had to invest. As a result, the investing firms either drop out of the program or reduce their investments. Program quality suffers and the reform fails (see G 3).

Model 2 does not create the dilemma. Apprentices are productive and some stay on after training. This means that the training costs are recovered or even exceeded. Firms in Model 2 always benefit from participation regardless of the actions their competing firms take (see G 4).

Caves and Renold use case studies of eight ongoing reforms that started in July 2015 to examine engagement and implementation progress. Cases A, B, C, and D are major American cities or states. IA and IB are international reforms, and NA and NB are non-standard reforms carried out with non-government leadership. All cases were part of the 2015 CEMETS¹ summer institute, during which the participants studied VET, revised their reform plans, and participated in data collection. Caves and Renold scored these cases with a qualitative rubric (see KOF Working Paper²) regarding their employer engagement. After following each reform case for two years, they rated the progress of each as either stalled (1), progressing incrementally (2), or progressing radically (3).

G 2: Two Models of VET Reform



¹ <http://www.cemets.ethz.ch>

² <http://e-citations.ethbib.ethz.ch/view/pub:185752?lang=en>

G 3: Prisoner's Dilemma in Model 1

		Firm A	
		Participate	Refrain
Firm B	Participate	+, +	-, +
	Refrain	+,-	0,0

Explanation: costs to the firm are -, benefits are +, and maintaining the status quo is 0

G 4: Game for Model 2

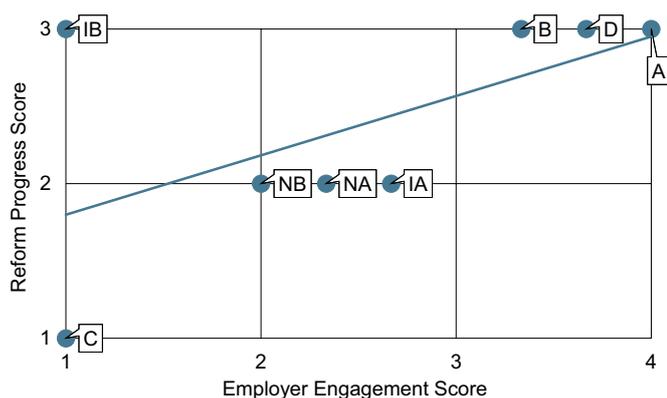
		Firm A	
		Participate	Refrain
Firm B	Participate	+, +	+, -
	Refrain	-, +	-, -

Explanation: costs to the firm are -, benefits are +, and maintaining the status quo is 0

More engagement, more implementation progress

A comparison of the eight reforms' progress shows that more employer-engaged reforms make more progress (see G 5). C excludes employers and is stalled. NB, NA, and IA somewhat engage employers and progress slightly. B, D, and A all involve high employer engagement and are progressing radically. IB is an exceptional case with low engagement and radical progress nevertheless. It is worth mentioning that this project was implemented by a strong top-down government.

G 5: Employer Engagement and Progress



The authors are able to show that projects which involve employers in the reform process make more progress toward implementing VET. However, employer engagement is not always a necessary condition: top-down reforms can make progress regardless of engagement, though they raise concerns about eventual quality and outcomes.

This study is qualitative; theory-building instead of causal. It is limited because employer engagement is not the only influencing factor. It does not investigate the quality of reforms in terms of outcomes as all of the reforms are still pilot projects. The underlying sample is deep but very small, and the variables are measured qualitatively by necessity. The authors will continue to follow all cases and will add new ones annually.

Employers can change from being consumers of skills to co-producers and consumers of skills. While asking employers to take on more responsibility seems like a counterintuitive strategy for reform feasibility, it actually resolves the prisoner's dilemma of lower-engagement reforms. As soon as employers are able to recover their investments through the productive contributions and future employment of trainees, they can afford to participate irrespective of the actions of other employers. Involving employers in the implementation of a new or better VET system might seem dangerous to education-based reformers, but it appears to be the safest bet for the progress of their reforms.

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You can find the KOF Working Paper No. 423 "The Employer's Dilemma. Employer engagement and progress in vocational education and training reforms" by Katherine Caves and Ursula Renold at: www.e-collection.library.ethz.ch/eserv/eth:50179/eth-50179-01.pdf →

On the Initialisation of Adaptive Learning in Macroeconomic Models

A new KOF Working Paper analyses how adaptive learning can be implemented into macroeconomic modelling.

How we form our expectations is an important question regarding all kind of economic modelling. It has become clear that the rational expectations hypothesis does not capture all dimensions of how expectations are determined in reality. Adaptive learning algorithms have been proposed to provide a procedural rationality view on agents' process of expectations formation. Reopening a long standing debate on how expectations should be modelled in macroeconomic models, the heuristics provided by learning algorithms come at the cost of introducing new degrees of freedom to the analysis.

One open question relates to how these recursive mechanisms should be initialised in order to be representative of agents' learning-to-forecast behaviour. Importantly, leaving the definition of initial beliefs unchecked risks opening the way for severe biases to economic inference, caused for instance by data overfitting and weak identification of model parameters. This is particularly relevant when the effect of interest takes place near the beginning of the sample of data, as in the case in historical assessments of the effectiveness of alternative policy designs.

The main characteristic of the adaptive learning approach is its reliance on recursive algorithms in order to represent how agents update their beliefs, as new observations about the economic relationship of interest become available. Such recursions naturally demand an initial starting point, and it is the numerical specification of these conditions that can be denoted as the initialisation problem. Clearly, the uncertainties affecting the initialisation of the learning process will propagate recursively into the predictions obtained with the model. It seems crucial that the researcher understands the magnitude of these distortions and how they can affect structural inferences.

In their new paper "On the Initialization of Adaptive Learning in Macroeconomic Models", Michele Berardi and Jaqueson K. Galimberti investigate this issue with particular attention to the applied literature of learning in macroeconomics.

They review and evaluate methods previously adopted in the applied literature of adaptive learning in order to initialise agents' beliefs. Previous methods are classified into three broad classes: equilibrium-related, training sample-based, and estimation-based.

They conduct several simulations comparing the accuracy of the initial estimates provided by these methods and how they affect the accuracy of other estimated model parameters. They find evidence against their joint estimation with standard moment conditions: as the accuracy of estimated initials tends to deteriorate with sample size, spillover effects also negatively affect the accuracy of the estimates of the model's structural parameters.

In other words, the larger the sample of data used to estimate the model and the corresponding initial beliefs, the larger the risks of incurring in misleading historical conclusions. Solutions to this problem are discussed in the paper.

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You can find the KOF Working Paper No. 422 "On the Initialization of Adaptive Learning in Macroeconomic Models" by Michele Berardi and Jaqueson K. Galimberti at: www.e-collection.library.ethz.ch/view/eth:50090 →

KOF INDICATORS

KOF Business Situation: Business Situation More Positive

The KOF Business Situation Indicator for the Swiss private sector improved in February 2017 for the first time in three months (see G 6). Although, considered from a long-term perspective, the current business situation can be classified as rather less favourable, businesses were able to catch their breath a little bit in February in structural terms.

The improvement in the business situation was driven in February by the economic sectors of banking and insurance alongside the manufacturing sector. The situation in the construction-related sectors of construction and project engineering is good and virtually unchanged. On the other hand, a decline was reported by retailers, who were already complaining of a rather negative business situation. Wholesalers, the hotel and catering sector and other service providers were most recently questioned in January. At that time, the situation had brightened up for other service providers, whilst it had barely changed in the hotel and catering sector. By contrast, wholesalers were more likely to report an unfavourable business situation.

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



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

	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17
Private sector (overall)	3.8	6.2	7.7	9.9	8.2	10.0	11.0	11.4	11.6	10.0	9.4	9.4	10.6
Manufacturing	-13.6	-9.9	-7.2	-6.1	-3.4	-8.6	-7.8	-7.6	-6.0	-9.6	-8.8	-9.8	-8.0
Construction	27.5	26.0	25.0	22.4	23.0	24.0	27.7	23.1	24.8	26.5	24.5	27.9	28.0
Project engineering	46.0	45.5	45.3	46.7	44.0	45.5	46.2	46.1	45.9	42.1	46.3	47.3	47.2
Retail trade	-9.1	-5.9	-8.1	-9.4	-8.3	-11.8	-10.3	-8.4	-8.0	-12.1	-9.8	-6.9	-11.7
Wholesale trade	-	-	-7.8	-	-	4.2	-	-	3.5	-	-	-6.9	-
Financial services	15.7	21.2	18.1	26.5	14.5	18.3	23.0	23.3	24.6	21.7	17.9	20.8	30.8
Hotel and catering	-	-	-16.7	-	-	-23.0	-	-	-16.9	-	-	-16.3	-
Other services	-	-	20.5	-	-	24.0	-	-	22.2	-	-	25.3	-

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.

Considered from a regional perspective, the business situation improved in most major regions used by the Federal Statistics Office (FSO). An improvement was apparent in North West Switzerland, Espace Mittelland, Eastern Switzerland, the Zurich region and the Lake Geneva region. The situation worsened in two regions: in Central Switzerland the situation is no longer as positive as it was last month. Ticino, which was previously already reporting the most unfavourable business situation, lost yet further ground.

Explanation of graphs

Graph G 6 shows the KOF business situation for all sectors of the economy covered by the survey. For sectors of the economy that are only surveyed quarterly, the business situation is maintained at the same level during the intervening months.

Graph G 7 reports the business situation in the major regions used by the Federal Statistics Office. The regions are coloured differently depending on the business situation. The arrows within the regions indicate the change in the business situation compared to the previous month. An arrow pointing upwards means that the situation has improved on 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

G 7: KOF Business Situation in the Private Sector



The angle of the arrows reflects the change in the business situation compared to the previous month

Source: KOF

Net balances

■ 55 to 100	■ 30 to under 55	■ 16.5 to under 30
■ 9 to under 16.5	■ 5 to under 9	■ -5 to under 5
■ -9 to under -5	■ -16.5 to under -9	■ -30 to under -16.5
■ -55 to under -30	■ -100 to under -55	

business situation is the percentage difference between the “good” and “bad” responses.

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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 Rises Markedly

In February 2017, the KOF Economic Barometer rose by 5.2 points to a new reading of 107.2 (see G 8). This pronounced upturn to a level clearly above its long-term average indicates that in the near future the Swiss economy should grow at rates above average.

The KOF Economic Barometer climbed by 5.2 points from 102.0 in January (revised up from 101.7) to 107.2, which is markedly above its long-term average and as high as it had last stood at the end of 2013. The Swiss franc appreciation shock from early 2015 appears to have been largely overcome.

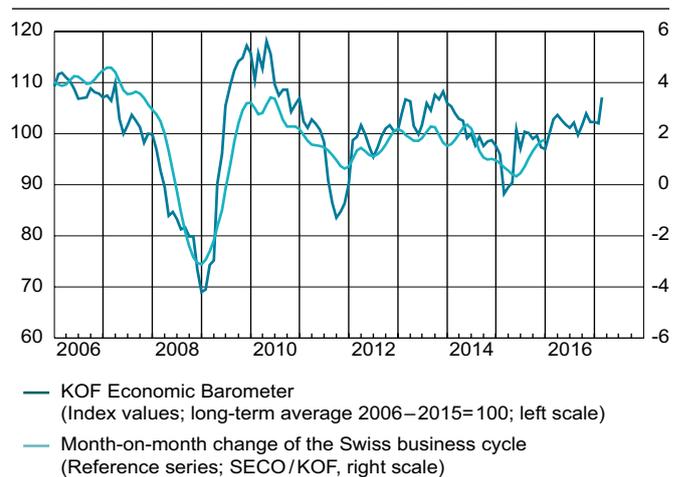
The strongest positive contributions to this result come from the manufacturing industry, followed far behind by the hospitality industry. Slightly positive signals come from the financial sector, the exporting industry and the construction sector, whilst the indicators relating to domestic private consumption have practically remained unchanged compared to January.

Within the manufacturing industry, the improved total outlook was primarily driven by the paper, textile, electrical and machine-building industries, and architects are also more optimistic than previously. The remaining industry branches, on the other hand, recorded hardly any change. The markedly improved sentiment in manufacturing as a whole is primarily a reflection of the more positive assessment of incoming orders, followed by the production and employment outlook as well as by the profit situation.

KOF Economic Barometer and reference time series: annual update

In September 2016, the scheduled annual update of the KOF Economic Barometer took place. The annual update of the Barometer includes the following stages: redefinition of the pool of indicators that enter the selection procedure, update of the reference time series, a new execution of the variable selection procedure and a procedure to estimate missing monthly values of quarterly variables. The updated reference series is the smoothed continuous growth rate of Swiss GDP according to the new System of National

G 8: Economic Barometer and Reference Series



Accounts ESVG 2010, released at the end of August 2015, which takes into account the release of the previous year's annual Gross Domestic Product (GDP) data by the Swiss Federal Statistical Office. As a result of the indicator variable selection procedure, the updated KOF Economic Barometer is now based on 272 indicators (instead of 238 as in the previous vintage) from a pool of more than 400 potential indicator series. They are combined using statistically determined weights.

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For detailed information on the KOF Economic Barometer, visit our website: www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-economic-barometer →

AGENDA

KOF Events

KOF Wirtschaftsforum

mit Vorträgen von Prof. Dr. Jan-Egbert Sturm, ETH Zürich,
Direktor KOF Konjunkturforschungsstelle:

«Die Frühjahrsprognose der KOF»

Martin Naville, Chief Executive Officer, Swiss-American
Chamber of Commerce:

«Einschätzung der Auswirkungen der neuen
US-Wirtschaftspolitik auf die Schweizer Konjunktur»

ETH Zürich, Mittwoch, 29. März 2017

11.30 bis 13.00 Uhr

www.kof.ethz.ch/news-und-veranstaltungen/event-calendar-page/kof-wirtschaftsforum →

EEAG Report 2017: Populism and Economic Policy

Harold James (Princeton and EEAG) and Jan-Egbert Sturm (KOF Swiss Economic Institute and EEAG) will discuss the challenges that lie ahead of us concerning the rising populism and its consequences for economic policy. Martin Meyer (Schweizerisches Institut für Auslandsforschung) will moderate the event.

Swiss Re Centre for Global Dialogue, Rüschlikon, Zurich

16 March 2017

17h30 – 19h30

www.cgd.swissre.com/events/EEAG_REPORT_2017.html#tab_3 →

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www.kof.ethz.ch/en/news-and-events/event-calendar-page/kof-research-seminar →

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TABLE KOF WINTER FORECAST 2016

SWITZERLAND

Real Gross Domestic Product by Type of Expenditure																
Percentage change against																
	2007-2015	previous quarter (annualised, trend cycle component)												previous year		
		2016				2017				2018				2016	2017	2018
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Private consumption	1.6	0.7	0.5	0.5	1.1	1.2	1.0	0.9	0.9	1.1	1.2	1.2	1.2	0.9	0.9	1.1
Public consumption	1.3	1.9	1.3	1.0	0.9	0.8	0.7	0.5	0.2	0.1	0.3	0.3	0.3	1.4	0.8	0.3
Gross fixed capital formation	1.6	3.2	2.5	0.4	-0.5	-0.2	0.2	-0.5	1.3	2.7	1.7	2.4	2.7	2.3	0.0	1.7
– Construction	2.0	-0.3	0.1	1.3	1.3	0.5	0.7	1.4	2.0	2.4	2.0	1.6	1.6	0.4	0.9	1.9
– Machinery and equipment	1.4	4.9	3.6	-0.1	-1.5	-0.5	-0.1	-1.8	0.8	2.8	1.6	2.9	3.5	3.6	-0.5	1.6
Exports of goods (1) and services	2.9	7.8	4.3	1.7	2.7	1.9	1.6	3.3	2.8	2.3	3.5	4.4	3.4	5.6	2.2	3.0
– Goods	2.2	9.9	4.4	2.5	1.6	0.9	1.1	1.8	3.2	4.1	4.0	4.0	4.3	6.7	1.7	3.4
– Services	2.7	3.1	2.2	1.6	1.5	3.9	2.9	1.9	2.9	3.0	3.1	2.6	2.7	3.2	2.7	2.8
Imports of goods (1) and services	3.1	4.2	1.2	1.1	2.7	4.1	2.5	1.1	1.9	3.3	3.7	3.9	3.7	3.2	2.5	3.0
– Goods (1)	1.8	5.9	1.2	2.1	3.4	5.2	3.1	0.4	1.5	3.4	4.1	3.8	3.5	4.1	3.1	3.0
– Services	6.0	0.7	-4.5	-1.7	1.0	2.6	2.8	1.0	2.0	3.5	4.1	3.2	3.7	1.5	1.2	3.0
Change in stocks (2)	0.1	-1.8	-1.4	-0.6	0.9	2.8	2.3	0.3	0.1	0.5	0.5	0.2	0.1	-2.1	1.5	0.4
Gross Domestic Product (GDP)	1.6	1.9	1.5	1.0	1.3	1.8	1.7	1.7	1.8	1.9	2.1	2.0	1.9	1.4	1.6	1.9

(1) Without valuables (i.e. precious metals including non-monetary gold, precious stones and gems as well as objects of art and antiquities)

(2) Percentage contribution to GDP-growth

Other Macroeconomic Indicators																
Percentage change against																
	2007-2015	previous quarter												previous year		
		2016				2017				2018				2016	2017	2018
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Real effective exchange rate of CHF (1)	2.5	-2.2	-1.7	1.6	1.6	-0.7	-0.7	-2.8	0.0	-2.4	-0.9	-2.8	0.0	-2.8	-0.3	-1.5
Short term interest rate (3-month Libor CHF) (2)	0.6	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
Yield of 10 years federal bonds (2)	1.5	-0.4	-0.4	-0.5	-0.2	-0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.3	-0.4	0.0	0.2
Consumer prices (3)	0.2	-1.0	-0.4	-0.2	-0.1	0.4	0.2	0.3	0.3	0.2	0.2	0.3	0.3	-0.4	0.3	0.3
Full-time equivalent employment (4)	1.3	-0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.6	0.8	0.8	0.0	0.4	0.4
Unemployment rate (2.5)	2.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.3	3.3	3.4

(1) Annualised

(2) Level

(3) Same quarter of previous year

(4) Annualised trend-cycle component

(5) Unemployed as percentage of labour force according to survey 2012-2014

GLOBAL ECONOMY

Percentage change against																
	2007-2015	previous quarter (annualised, seasonal adjusted)												previous year		
		2016				2017				2018				2016	2017	2018
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Real Gross Domestic Product (GDP)																
– OECD total	1.2	1.6	1.4	2.3	1.8	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.2	1.7	1.9	2.1
– European Union (EU-28)	0.7	2.0	1.6	2.2	1.6	1.5	1.5	1.6	1.7	1.6	1.6	1.6	1.6	1.9	1.6	1.6
– USA	1.3	0.8	1.4	3.2	2.1	2.1	2.0	2.1	2.2	2.4	2.6	2.7	2.8	1.6	2.2	2.4
– Japan	0.4	2.8	1.8	1.3	1.1	1.3	1.3	0.9	0.9	0.7	0.7	0.7	0.8	1.0	1.2	0.8
Oil price (\$ per barrel) (1)	88.5	35.2	47.0	47.0	51.1	55.2	55.4	55.7	56.0	56.3	56.6	56.9	57.3	45.1	55.6	56.8

(1) Level

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