



KOF Bulletin

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EDITORIAL

Dear readers,

What is the economic outlook for the new year? KOF anticipates weak growth dynamics in the Swiss economy. Private consumption will be restrained and the export sector will not regain its former strength. GDP will rise by a moderate 1.6 per cent in 2017. On 12 February, the Corporate Tax Reform III (CTR III) bill will be put to the vote. KOF studies show that the reform will have positive effects on the real economy which will be juxtaposed by lower tax revenue. A further article in this latest edition of Bulletin investigates the reasons why companies develop and apply new energy technologies and the reasons why they don't. It emerges that taxes, in this case the level of energy taxes, once again play an important role. Last but not least, we present new KOF research on the Swiss labour market. There is an increasing trend for companies to require job applicants to have initial work experience. However, not every type of experience is highly valued, with work placements abroad and voluntary work having little prospect of success.

We wish you a good read and a successful year!

David Iselin, Anne Stücker and Solenn Le Goff

ECONOMY AND RESEARCH

KOF Economic Forecast: Slow Recovery in Uncertain Times



Growth dynamics in the Swiss economy remain weak. Private consumption is restrained and the export industry is not regaining its former strength. In 2017, GDP is expected to rise by a modest 1.6 per cent, accompanied by a mediocre employment trend. However, with immigration on the decline, the unemployment rate according to SECO will remain more or less stable at 3.3 per cent. Inflation will turn slightly positive again.

International environment

In the third quarter 2016, the global economy put in a burst of speed. Thanks to a favourable trade balance, the USA expanded at an above-average rate compared to the previous quarters, although non-recurring effects played a substantial role in this development. The European economy continued to recover slowly. Thanks to fiscal stimulation, China managed to largely maintain its growth dynamics. KOF is expecting slightly weaker global dynamics in the fourth quarter 2016. While lower growth contributions are anticipated from the main global regions, the crisis states Brazil and Russia are the only countries expected to continue their gradual recovery. In the subsequent quarters, global economic dynamics are likely to pick up slightly.

Donald Trump's election as US President is affecting the global economic outlook – primarily by increasing forecast uncertainty. At present, it is unclear to what extent Trump will, or wants to, implement his election promises of fiscal impetus through infrastructure programmes and tax cuts as well as increased protectionism. Although KOF cannot forecast the political action that will be taken in the USA, it's taking account of the new situation by imputing certain fiscal measures. Nevertheless, any direct increase in US import demand resulting from such fiscal measures will be small. In contrast, it is likely that the exchange rate level will have certain effects on the global economy: Fiscal impetus will increase price pressure in the USA from 2018 onwards and the FED will allow interest rates to rise

slightly faster than previously assumed. On top of this, KOF assumes that the protectionist leanings of the new US government will have a restraining effect on international trade integration. KOF does, however, not expect an impact on global trade before the medium or longer-term. These aspects notwithstanding, global trade is likely to grow at a relatively slow pace in the forecast period.

Italy currently presents a downside risk for the European economy. In the case of another election, and consequently a referendum on euro area membership as promised by the opposition, uncertainty among investors would rise considerably. If it came to this, the extreme scenario of a banking and public debt crisis could not be excluded.

Swiss economy

Economic activity in Switzerland slowly returned to normal in 2016. While production increased, prices continued to decline until the end of the year due to the 2015 Swiss franc revaluation and the lower oil price. The significant appreciation also emphasised the need for productivity increases, which resulted in a stagnation in the employment of labour that started at the beginning of 2015. In this period, wage rises were weak although the average purchasing power of wages still rose in consequence of the falling prices.

Deflation phase coming to an end

Due to the latest rise in the crude oil price, the period of declining prices is generally coming to an end. Nevertheless, KOF believes that consumer prices will remain low in

the short term (2016: -0.4%, 2017: 0.3%), (see G 1) allowing the Swiss National Bank (SNB) to continue its loose monetary policy. With the Swiss franc gaining slightly against the euro in the last few months, KOF has revised its previous technical assumption for the euro from 1.10 to 1.08 and will be leaving the exchange rate at this level over the entire forecast period.

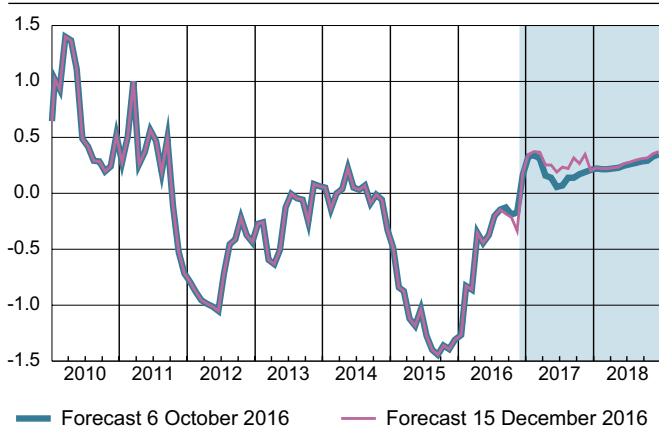
Weak investments

Despite ample liquidity, fixed investment in Switzerland is on the weak side and is expected to remain so for the time being. Investment in rail vehicles and aircraft, which also played a domineering role in preceding KOF forecasts, remains the mainstay. Little impetus is expected from the construction industry (2017: 0.9%). Building activities are already at a high level and the increase in transport infrastructure investments is not likely to manifest itself before 2018. Residential construction has reached an unsustainable level, with the increase in housing stocks substantially exceeding the increase in the number of households. Consequently, KOF does not expect any notable growth in the field of residential construction.

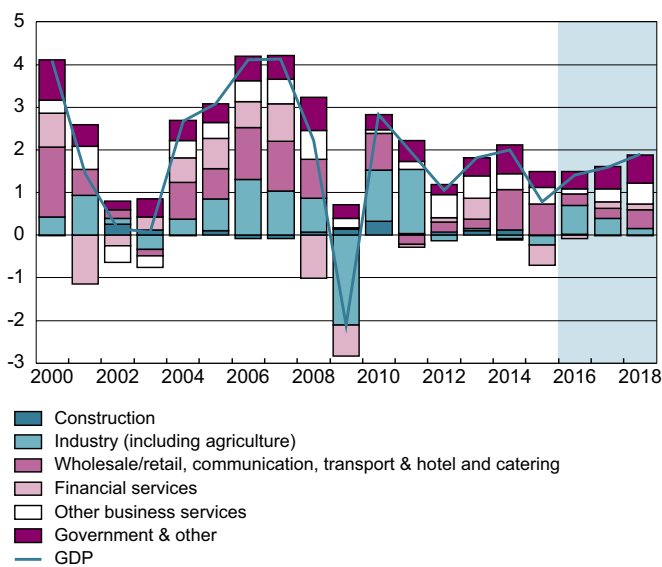
Structural change continues

After gaining both in terms of employment and value added throughout the weak franc period in comparison to the rest of the economy, the relevance of the manufacturing sector has been declining since the financial crisis. At present, the manufacturing industry accounts for approximately 18 per cent of value added. According to the latest KOF forecast, this share will contract further (see G 2), with only the pharmaceutical sector remaining in a position to gain further weight. Both the hotel and catering industry and the industrial sector are affected by the high exchange rate and are likely to record further losses. Forced structural change is expected to continue and will result in an increase in business and personal services. Growth in the financial services sector will be below average and the construction industry will also lose significance.

G 1: Consumer Prices
(year-on-year change, in %)

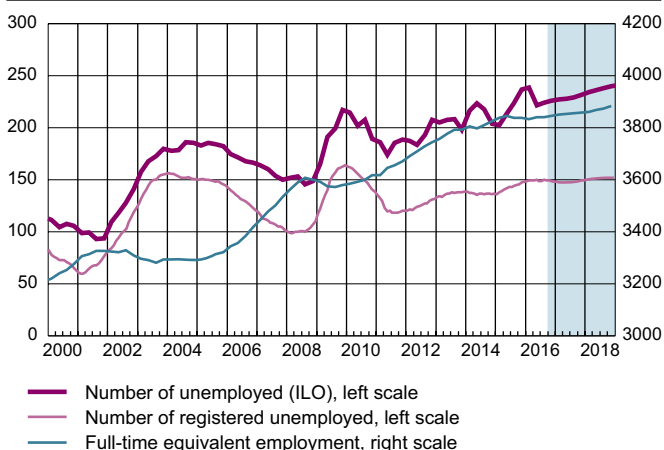


G 2: Production-Based Contributions to Real GDP Growth
(in pp of GDP)



Given this consistently difficult environment for the manufacturing sector, KOF expects the trend in goods exports to be on the flat side in the coming quarters, while service exports are likely to rise. All in all, the current forecast anticipates a 2.2 per cent increase in exports in 2017 and three per cent growth in 2018. In terms of imports, KOF expects faster growth with imports focussing predominantly on intermediate inputs.

G 3: Employment and Unemployment with Forecast
(in 1,000 persons, seasonally adjusted)



Slower immigration

The conversion into law of the constitutional article on immigration curbs approved in 2014 appears to be following the soft approach. Nevertheless, weaker economic activity and the need for productivity increases are likely to result in lower economic immigration in the coming years than in the past. KOF therefore expects a moderate rise in employment (in full-time equivalents: 0.4 per cent in 2017 and 2018) and no notable change in the unemployment rate (see G 3). The rate according to the International Labour Organization (ILO) is expected to average 4.6 per cent in 2017, the rate according to the State Secretariat of Economic Affairs (SECO) 3.3 per cent. With a weak wage trend predicted, growth in private consumption will be limited (2017: 0.9 per cent).

No end to low-interest phase in sight

Owing to the weak price trend and revaluation pressure, KOF does not anticipate any change in short-term interest rates in the forecast period, which will thus remain substantially below zero. However, long-term interest is expected to turn positive again in the near future and continue rising at a very slow pace. At the end of 2018, we expect a 0.25 per cent return on 10-year Swiss government bonds. Given this background, KOF projects a GDP growth rate of 1.6 per cent in 2017 and 1.9 per cent in 2018.

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The current forecast table can be found on page 16. You can find more information about the KOF Economic Forecast at:
www.kof.ethz.ch/en/forecasts-and-indicators/forecasts/kof-economic-forecast →

Compensation of the Costs Associated with CTR III: Impact of Taxation on Capital Gains

In mid-February, Swiss citizens will vote on the third corporate tax reform (CTR III). To mitigate the effect of lower tax revenues, the Swiss parliament decided in favour of an increase in taxes on dividends but against the introduction of a capital gains tax. KOF researchers have investigated which impacts an additional taxation on capital gains on gross domestic product, investment, employment, consumption and tax revenue could have.

Switzerland, a small open economy, depends to a large degree on migration, trade and international capital flows. Given the increasing mobility of companies and Switzerland's low tax rates in international comparison, the number of enterprises choosing Switzerland as their domicile has grown significantly in the last few years. Special tax regimes offered by the Swiss cantons, for instance, provide competitive tax conditions for holding companies. These special cantonal tax regimes are based on the principle of lower tax on income generated abroad than on income generated in Switzerland.

New fiscal measures compensating for the scrapping of the special tax regimes

This form of discriminating taxation has become subject to growing criticism from the European Union (EU) and the Organisation for Economic Cooperation and Development (OECD). Pressure to scrap the special tax regimes and replace them with an internationally acceptable taxation system has prompted the authorities to launch a third corporate tax reform (CTR III), which was passed by Parliament in June 2016. On 12 February 2017, the Swiss population will vote on this reform in a referendum.

The law passed by Parliament provides for the abolition of the current special cantonal tax regime. In addition, as partial compensation for the higher taxes payable by some companies, but also as an innovation incentive, the law proposes the introduction of a license box system that reduces taxes on income from intellectual property rights, for instance patents. Furthermore, the new law allows the cantons to introduce an allowance for excess corporate

equity that goes hand in hand with an obligation that at least 60 per cent of dividends should be subject to taxation at the cantonal level. Finally, the reform provides for a reduction of the cantons' ordinary tax rate on earnings. This last measure, however, is not part of the referendum and will be decided individually by each canton.

Economic and budgetary impact of CTR III: which compensatory measures?

The choice of suitable fiscal compensatory measures in the context of CTR III was the subject of numerous debates before the Swiss parliament ultimately decided to raise taxes on dividends. In its first draft, the Federal Council had also suggested higher taxation on capital gains than currently applicable. According to this proposal, income tax would have been levied on the newly taxed gains. In a recent study, KOF experts investigated the effects of CTR III on the economy and the budget (Chatagny et al., 2016). The article focuses on the various measures, both decided and planned, that have been devised to compensate for reform-related tax deficits. The authors of the study developed three different scenarios (see T 1). In the first scenario (columns 1 and 2), the reform is implemented without any specific compensatory measures. Positive effects arise with regard to GDP (+0.72%), investment (+1.85%), employment (+0.18%) and private consumption, both in the short term (+0.13%) and in the long term (+0.88%). With respect to the tax base, the reform would result in a deficit of 1.6 billion Swiss francs in the short term and 0.3 billion Swiss francs in the long term. Assuming an elasticity factor of 1.1, losses in tax revenue amount to 2.4 billion Swiss francs in the short term and to 1.08 billion Swiss francs in the long term.¹

¹ Elasticity (ϵ_s) measures the sensitivity of the income of enterprises with special tax regimes to changes in the taxation differential between Switzerland and abroad. A high elasticity factor indicates higher sensitivity. In other words, high elasticity indicates that, given the same increase in the SPC tax burden in Switzerland relative to the foreign tax burden, the probability of a move abroad is higher.

T 1: The Impact of Various Reform Scenarios on the Economy and the State Budget

Reform scenarios	Abolition of the special regimes		CTR III			
			Without taxation of dividends		With taxation of dividends	
Elasticity	$\epsilon_s=0.4$	$\epsilon_s=1.1$	$\epsilon_s=0.4$	$\epsilon_s=1.1$	$\epsilon_s=0.4$	$\epsilon_s=1.1$
GDP	0.002	0.001	0.723	0.723	0.631	0.631
Investments	0.005	0.004	1.848	1.848	1.605	1.605
Employment	0.001	0.000	0.180	0.180	0.157	0.157
Household consumption, short-term	0.633	-0.426	0.130	-0.070	0.545	0.344
Household consumption, long-term	0.649	-0.412	0.881	0.679	1.120	0.919
Tax base of enterprises under the regime	-32.01	-65.38	-6.338	-16.480	-6.338	-16.480
Tax revenue from enterprises under the regime	41.95	-27.72	22.180	8.953	22.170	8.951
	(2.11 CHF bn)	(-1.4 CHF bn)	(1.126 CHF bn)	(0.452 CHF bn)	(1.120 CHF bn)	(0.452 CHF bn)
Total tax	2.35 (CHF bn)	-1.51 (CHF bn)	-1.6 (CHF bn)	-2.357 (CHF bn)	-1.286 (CHF bn)	-2.018 (CHF bn)
(Ø 3 years / long-term) ¹⁾	2.34 (CHF bn)	-1.52 (CHF bn)	-0.343 (CHF bn)	-1.075 (CHF bn)	0.461 (CHF bn)	-0.271 (CHF bn)

1) The first figure shows the change in average taxes over a 3-year period, the second shows the long-term change.

Second scenario (columns 3 and 4): This scenario assumes an increase in dividend taxation to limit the reform-related tax deficits. The results show slightly lower positive effects on GDP, investment and employment, while the positive impact of the reform on private consumption increases due to higher transfers in favour of private households. According to the results, an increase in dividend taxation leads to a limitation of tax losses in the short run and even results in an increase in tax revenues in the long run. Assuming an elasticity factor of 1.1, compared to a lower elasticity factor, the positive effects on private consumption go down slightly both in the short and in the long run due to higher tax deficits.

The third scenario (columns 5 and 6) assumes both taxation of capital gains and an increase in the tax on dividends. With a tax gain of 0.36 billion Swiss francs in the short term and 0.56 billion Swiss francs in the long term, and an elasticity factor of 0.4, this scenario is clearly associated with the lowest costs. Given an elasticity of 1.1, the tax losses decline to 0.37 billion Swiss francs in the short run and 0.18 billion Swiss francs in the long run. However, the results also show that taxation of capital gains would have a negative effect on the real economy. The impact on GDP, investment and employment is negative, amounting to -0.7, -1.76 and -0.178 per cent, respectively. Although higher transfers will boost the positive momentum in the field of private consumption in the short run, the effect will

tip over in the longer term, due to a reductive impact on growth, and turn negative for any elasticity factor.

In conclusion, it can be stated that all of the case studies show positive effects on the real economy, which are, however, juxtaposed by lower tax revenue. An increase in dividend taxation would allow the government to limit the tax deficit and maintain the positive economic effects of the reform. An additional increase in the capital gains tax would allow the government to minimise the tax losses or even generate higher tax revenues. However, this measure would have a negative impact on the real economy that eliminates the positive effects of the reform.

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The KOF Working Paper No. 416 "Introducing an IP License Box in Switzerland: Quantifying the Effects" by Florian Chatagny, Marko Köthenbürger and Michael Stimmelmayer can be found on our website:

www.e-collection.library.ethz.ch/eserv/eth:49868/eth-49868-01.pdf →

The Impact of Political Measures on the Introduction of New Energy Technologies

Why do companies decide in favour or against the application of new energy technologies? And which political measures are considered decisive by companies? These are the questions an international team of researchers investigated in the context of the national “Managing Energy Consumption” research project.

One of the key objectives of the Federal Council’s “Energy Strategy 2050” programme is the utilisation of existing energy efficiency potential, the size of which size depends on the development of new technologies and their dissemination within an economy. Economic incentives to develop such technologies for other companies or to apply them in the own company do not always exist. In many cases, the risks associated with the technological success and development costs of such technologies are too high, the willingness to pay is lacking or the pay-off period is too long (see article in KOF Bulletin No. 102 of December 2016). These are some of the main reasons why energy policy measures are required to increase the use of environmentally-friendly energy technologies.

With the financial support of the Swiss National Fund and within the framework of the national “Managing Energy Consumption” research project (NFP 71), KOF joined forces with the Austrian Institute of Economic Research in Vienna (WIFO) and the Centre for European Economic Research in Mannheim (ZEW) to analyse and compare introduction

patterns and technological activities as well as effective policies in Germany, Austria and Switzerland.

Political measures: energy taxes are key

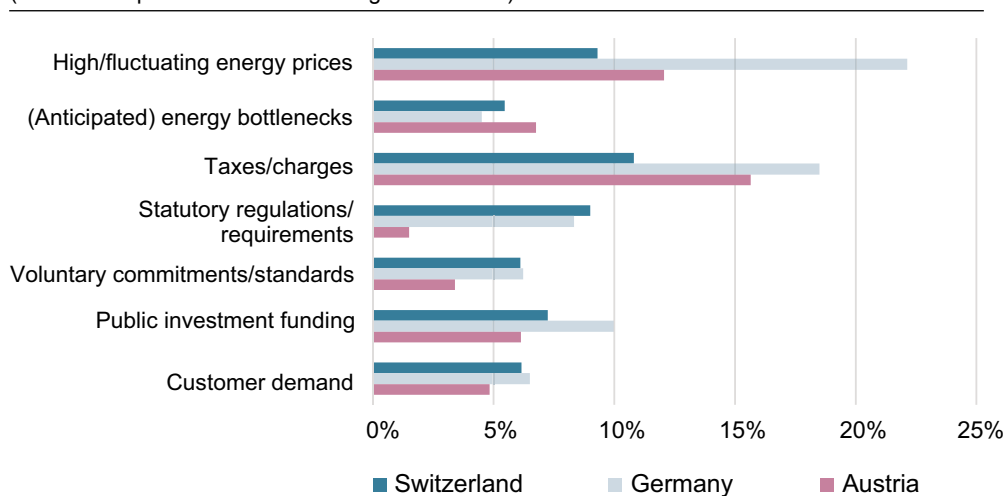
The governments in Germany, Austria and Switzerland seek to achieve their environmental targets via political measures that promote the introduction and development of energy technologies. However, up until now, little information has been available regarding the extent to which companies consider such measures and other energy-related factors as decisive (see G 4).

Effectiveness of political measures

The creation of energy policy framework conditions is one matter – whether these conditions have a positive impact on the introduction of energy technologies is another. The survey data show that companies which place high relevance on taxes or voluntary agreements, public subsidies or demand for products/services manufactured with energy-efficient methods were more likely to introduce energy technologies in the period from 2012 to 2014.

G 4: Energy-Related Factors/Measures

(in % of companies which stated “high relevance”)



In contrast, regulation does not show any effect. It is likely that most of the companies were meeting the regulatory requirements before the period under review and no further effects were obvious thereafter. This finding indicates the dynamic disadvantages of regulatory measures, which either do not adapt to new technological developments at all or do so with a significant delay. Not only does this slow down the introduction or demand for new technologies, it also leads to a lack of incentives to develop such technologies.

However, it should be noted that, with the exception of public subsidies, none of the political factors shows a significant correlation with the level of energy technology investment. This indicates that, although large parts of energy policies do have a positive impact on decisions to introduce energy technologies, the extent of the companies' propensity to invest is not affected; other company-specific factors, such as the level of energy costs, are likely to be more relevant in this context.

Political measures promote development and marketing

Energy policy framework conditions mainly have positive effects when the measures promote demand for energy technologies or when they relate directly to the companies' investment efforts – as is the case with public subsidies. Where this is not the case, individual political instruments, such as taxes/charges and regulation, may actually reduce innovation incentives. This negative impact is owing to the fact that taxes/charges and regulations primarily result in operating costs which can, for instance, be counteracted by the introduction of energy-efficient manufacturing processes. In this case, companies will lack the necessary funds for other investments, for instance the development and marketing of new energy technologies. This explains why individual policy measures may actually have a

negative impact on the innovation performance of companies, especially if the additional costs are not juxtaposed with potential income from increased demand.

All in all, the preliminary results show that the current energy policy framework predominantly has a positive impact on the introduction of energy technologies. They also indicate that the assumed positive effect of political measures on the development of energy technologies only materialises when the policies stimulate demand for energy technologies. Otherwise, the cost effect predominates and the innovation propensity of the companies declines.

The results of the project are based on a written survey of a representative sample of 5,789 Swiss, 6,374 German and 7,091 Austrian firms. The samples from the three countries were stratified according to company size and sector. The response rate was 31.4 per cent in Switzerland, 36.4 per cent in Germany and 7.6 per cent in Austria. The surveys were carried out at the same time in all three countries and on the basis of a uniform questionnaire.

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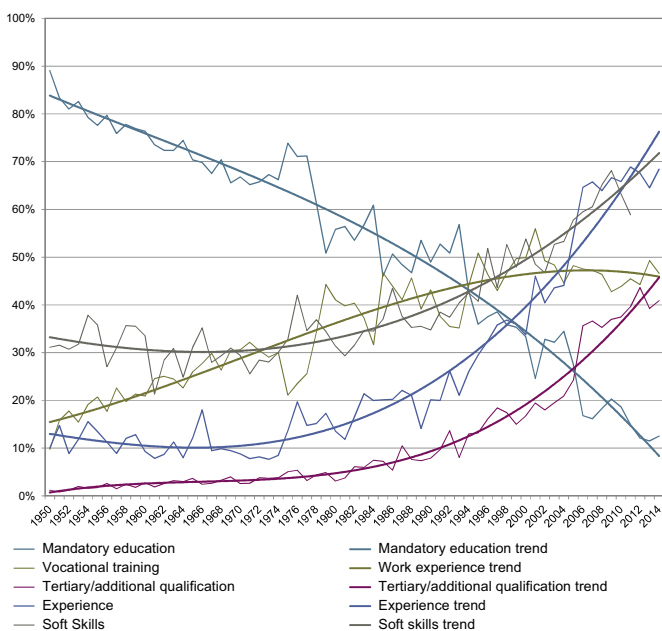
Further information may be found in KOF Study No. 77 "Creation and Adoption of Energy-related Innovation – the Main Facts":
www.e-collection.library.ethz.ch/eserv/eth:49541/eth-49541-01.pdf →

Job Without Work Experience?

Companies are increasingly asking for a certain amount of work experience in job advertisements. How can graduates gain such experience and which type of experience will actually help them get the job? A recent KOF study shows that work placements abroad and voluntary work, in particular, seem to have little prospect of success.

Qualifications are generally expected to guarantee future success in the world of work. However, the transition from university to professional life is not always easy. Graduates looking for jobs consider lack of work experience to be the biggest hurdle, as the results of the Federal Statistical Office’s biennial graduate survey shows (Koller & Rüber, 2014). The University of Zurich’s “Stellenmonitor” (job market guide) is also reporting increasing demand for work experience in job advertisements (see G 5). In 2014, around 70 per cent of all job advertisements mentioned work experience as one of the main requisites, tendency rising.

G 5: Trend in Demand for Work Experience and Other Qualities in Job Advertisements



Source: Adjusted graph, Egg & Renold (2015), based on data provided by Stellenmarktmonitor Schweiz (<http://www.stellenmarktmonitor.uzh.ch/de.html>)

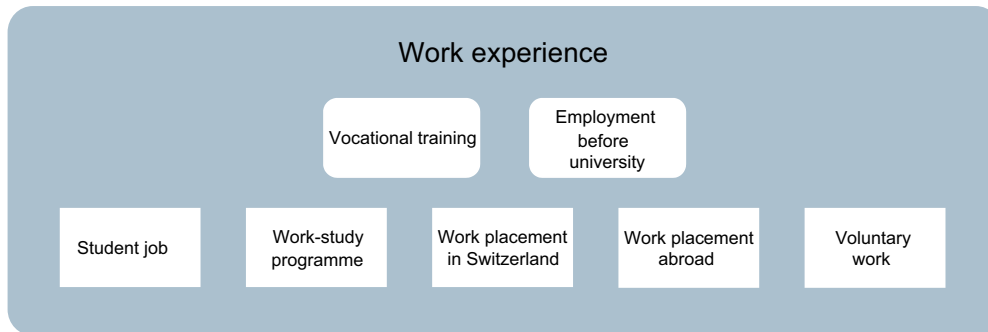
This trend goes hand in hand with growing demand for tertiary education (i.e. higher vocational training and university education), additional qualifications and soft skills. When new employees arrive with work experience, orientation periods are shorter and recruitment costs lower. Consequently, students no longer work exclusively for financial reasons but also with a view to improving their chances on the employment market.

Opportunities for graduates to gain work experience

In general terms, there are seven different ways in which graduates can gain work experience (see G 6). Before university, they have two options: Students choosing a vocational course will gain work experience during their apprenticeship. Grammar school graduates who opt for universities of applied sciences will complete a so-called “work experience year” which they must undertake in the field of their future studies before entering university. Furthermore, there are the casual evening, weekend or holidays jobs that students take, as well as any gainful employment that takes place between upper secondary and university.

While at university, students can gain work experience in five different ways. First, they can take up a student job. Another option is work-study programmes, which allow students to follow a degree course while working in their chosen field. Those who do not have the time to work during the semester can look for work placements in the holidays or during a sabbatical. Work placements can be done either in Switzerland or abroad. In Switzerland, voluntary

G 6: Types of Work Experience Before University (Round Boxes) and During University (Square Boxes)



work for associations or other organisations is quite popular. These kind of jobs also provide students with work experience as they allow them to acquire human capital while training children or organising events.

The chart shows the numerous options students have to gain work experience. University graduates can also gather several different types of work experience, which, however, will not be discussed in the following.



For university graduates there is a wide range of opportunities to gain professional experience.

Which type of work experience do employers look for in graduates?

To investigate whether the different types of work experience make it easier for graduates to enter the employment market and whether employers consider all types to be of equal value, KOF's Ursula Renold and Maria Esther Egg use data from the first survey of university graduates in the years 2011 and 2013. Their focus is on graduates with bachelor and master degrees who started work instead of continuing their studies and are 35 years or younger. The researchers used length of job search, number of applications, employment status in a work placement situation one year after graduation and income one year after graduation as indicators of a successful transition into the labour market. The independent variables consist of the various types of work experience: vocational training, employment before university, student job, work-study programme, work placement in Switzerland, work placement abroad and voluntary work.

37 per cent of the graduates had gained work experience during vocational training, 37 per cent during employment before university, 33 per cent in student jobs, 13 per cent during a work-study programme, 43 per cent during a work placement in Switzerland, 10 per cent during a work placement abroad and 41 per cent while doing voluntary work.

The results show that some types of work experience apparently do not make it easier for graduates to find employment. Independent of the indicator, no significant effects were found in the case of work placements abroad or voluntary work. Among the other types, work-study programmes had the biggest impact, followed by vocational training.

The preliminary study (KOF Analyses No. 4, 2016) will be developed and expanded in the coming months. It is therefore too early to formulate any advice for the political sphere regarding changes that should be made or trends that should be supported. Nevertheless, the report makes it clear that the subject of “work experience” is a worthwhile object of investigation, one that university graduates in particular will benefit from.

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Literature:

Egg, M. E. and Renold, U. (2015): Entwicklung der Reglementierung von 10 MEM-Berufen im Kontext von Bildungsreformen und dem Wandel in der Arbeitswelt, KOF Studies, 63, Zurich.

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Koller, P. and Rüber, S. (2014): Von der Hochschule ins Berufsleben: Erste Ergebnisse der Hochschulabsolventenbefragung 2013. Neuenburg: Bundesamt für Statistik.

KOF Health Expenditure Forecast, Autumn 2016: Uptrend Set to Continue into 2018

Health expenditure in Switzerland continues to rise. In line with its Health Expenditure Forecast Spring 2016, KOF expects an increase of 3.6 per cent in total health care spending in 2016, followed by a more pronounced rise of 3.9 per cent in 2017. This trend is set to continue in 2018, with another expected increase in expenditure of 3.9 per cent. KOF predicts that health care spending as a percentage of GDP will grow to 12.2 per cent in 2018. These are the results of the semi-annual KOF Health Expenditure Forecast, conducted with the support of a research grant from comparis.ch.

Health expenditure data for Switzerland are published with a time lag. In October 2016, the Federal Statistical Office published definitive health spending data for the year 2014. Compared to the provisional data released in spring, the final figures revealed an additional 167.9 million Swiss francs in health expenditure in 2014, leading to an upward revision in the year-on-year growth rate from 2.8 to 3.0 per cent.

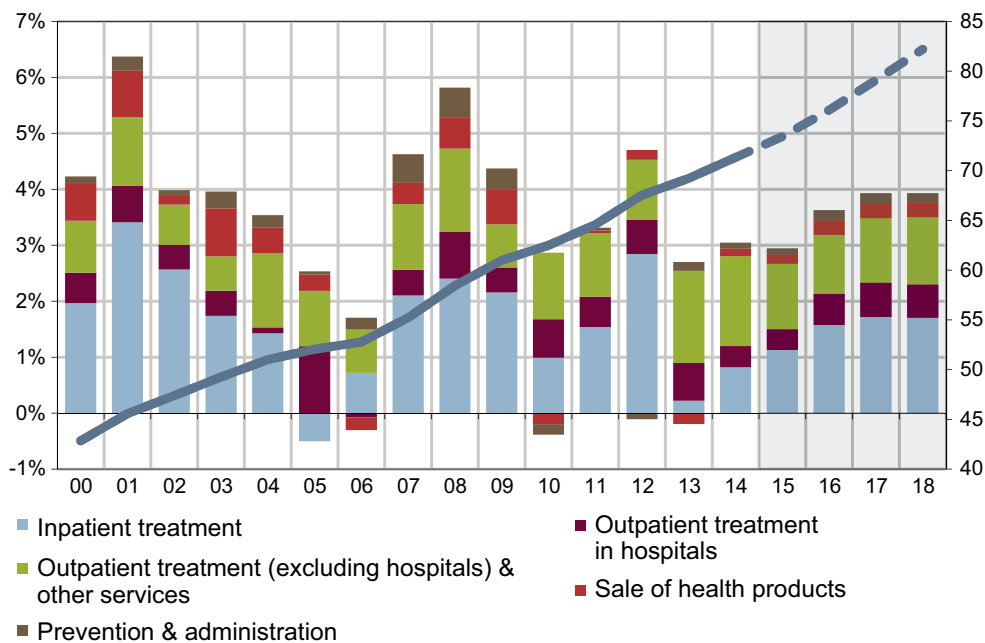
The general picture portrayed by KOF in its Health Expenditure Forecast Spring 2016 remains largely unchanged. The latest forecast includes a new estimate of health care spending for the year 2018. In the forecast period from 2015 to 2018, the increase in health expenditure is expected to remain moderate at first, with a subsequent gain in momentum. KOF anticipates that health care spending rose at only a modest rate of 2.9 per cent in 2015, due primarily to weaker economic conditions, as well as a

reduction in prescription drug prices that came into effect in June 2013. According to the Swiss Federal Office of Public Health (FOPH), these price cuts resulted in savings of 720 million Swiss francs by 2015. The shift in expenditure from inpatient to outpatient treatment continued. Spending on outpatient treatment continued to gain momentum, predominantly in the “Spitex” and “Physiotherapy” categories [see G 7].

Economic conditions for the year 2016 have been rather subdued to date. However, the performance of health expenditure is more greatly impacted by demographic trends than by prevailing economic conditions. Growing numbers of senior citizens contribute to a steady rise in health care spending, reflecting the increased demand for health care services that comes with old age. As a result, health expenditure is expected to expand at a higher rate of 3.6 per cent in 2016. In 2017, overall economic performance

G 7: Growth Contributions by Service

(in bn CHF)



will gain momentum, leading to an increase in health care spending of 3.9 per cent. KOF anticipates that the economic uptrend will continue into 2018, accompanied by a moderate increase in wages, and forecasts steady growth in health expenditure of 3.9 per cent.

In line with its “Health 2020” strategy, the Swiss Federal Council is pursuing substantial additional savings in the health care sector over the medium-to-long term. However, the impact on health care expenditure of the measures planned as part of this strategy remains too vague to be accurately predicted over the forecast period to 2018; with the exception of prescription drug policy, the potential impacts of the “Health 2020” strategy have therefore been excluded from the forecast. Moreover, the planned reform of TARMED, the Swiss national framework for medical

provider remuneration, was not successful; as a result, the current price structure will remain in place until the end of 2017.

Importance of the health care sector

The health care sector plays an increasingly important role in the Swiss economy. In 2015, the health care industry employed more than 266,000 people (full-time equivalents), representing almost seven per cent of the Swiss workforce. The sector’s value-added share is five per cent, while health care spending as a percentage of GDP (the health expenditure ratio) was 11 per cent in 2014, up from 10.4 per cent in 2004. The health expenditure ratio is set to rise to 12.2 per cent by 2018.

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With the “Health 2020” Strategy, the Federal Council aims to achieve savings, for example in the area of pharmaceuticals.

About the Study

The KOF Swiss Economic Institute at ETH Zurich publishes a semi-annual forecast of Swiss health expenditure. The spring forecast is supported by a research grant from the company TopPharm, while the autumn forecast is supported by the online price comparison service comparis.ch.

www.e-collection.library.ethz.ch/eserv/eth:50239/eth-50239-01.pdf →

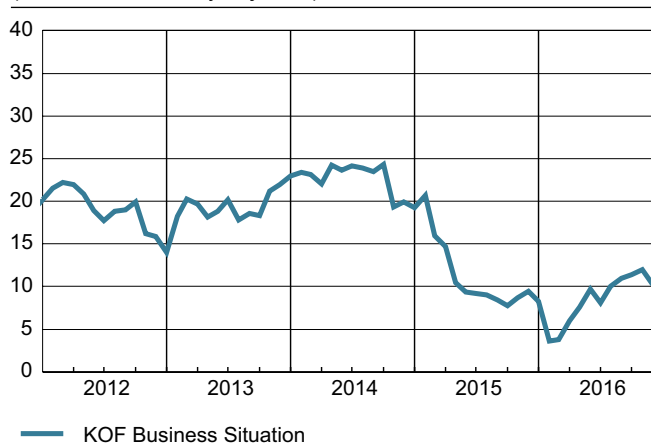
KOF INDICATORS

KOF Business Situation Indicator Shows Faltering Business at the End of the Year

In December, the KOF Business Situation Indicator for the Swiss private economy went down slightly for the second consecutive time (see G 8). According to the responses of the Swiss companies, the business trend was somewhat slow-moving towards the end of the year.

Broken down by sector, the business trends in December were rather heterogeneous (see T 2). The excellent situation in the project engineering sector improved even further, while the other sectors failed to keep up. Although both retail and manufacturing saw an improvement in their business situation, the gain was rather small. The business trend in the construction industry and the financial and insurance sectors slowed down. Wholesale, hotel and catering and the other service providers were last surveyed in October. Both the wholesale and the hotel and catering sectors reported a slight recovery. In contrast, the other service providers suffered a small setback.

G 8: KOF Business Situation Indicator
(balance, seasonally adjusted)



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

	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	Oct 16	Nov 16	Dec 16
Private sector (overall)	8.3	3.6	3.8	6.0	7.6	9.7	8.1	10.0	11.0	11.4	12.0	10.3	9.5
Manufacturing	-12.9	-13.2	-13.1	-10.0	-7.2	-6.1	-3.6	-8.5	-7.8	-7.6	-6.0	-9.6	-8.9
Construction	26.3	24.3	27.5	25.9	24.9	22.3	23.0	24.0	27.3	23.0	24.7	26.1	23.9
Project engineering	45.3	46.8	46.3	45.5	45.3	46.7	43.9	45.5	46.2	46.1	45.7	42.1	46.4
Retail trade	-12.1	-10.9	-11.4	-5.6	-8.9	-10.9	-8.9	-11.8	-10.8	-8.6	-7.7	-12.0	-10.8
Wholesale trade	-	-17.0	-	-	-8.0	-	-	3.6	-	-	6.4	-	-
Financial services	20.2	10.0	16.8	21.3	18.2	27.1	14.6	18.5	23.4	23.8	25.1	22.1	18.0
Hotel and catering	-	-20.9	-	-	-16.6	-	-	-21.2	-	-	-16.5	-	-
Other services	-	20.8	-	-	20.4	-	-	24.0	-	-	21.9	-	-

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.

In most sectors, the business situation did not change significantly during 2016. Wholesale was the only sector that saw a considerable improvement. Compared to the beginning of the year, manufacturing, financial and insurance services as well as hotel and catering closed the year in a slightly stronger position. The situation in the retail sector, the other services and the construction-related building trades and project engineering did not change much over the year.

From a regional perspective, the most prominent trend in December was the marked slowdown of the business situation in North-West Switzerland, which was largely due to the manufacturing sector. The indicator also declined slightly with respect to the Zurich and the Lake Geneva regions as well as Eastern Switzerland. Ticino and Espace Mittelland reported little change, while the business situation in Central Switzerland had improved.

Explanation of graphs

Graph G 8 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 9 presents the business situation in the main regions according to the Federal Statistics Office. 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

G 9: KOF Business Situation in the Private Sector



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

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	

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.

Contact

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You can find more information about the KOF Business Tendency Surveys on our website:
www.kof.ethz.ch →

KOF Economic Barometer Unchanged

In December 2016, the KOF Economic Barometer stayed at its previous month's reading of 102.2 (see G 10). The currently observable sideward trend, at a level slightly above the long-term average, indicates that the Swiss economy should grow at rates close to its long-term average in the near future.

In December 2016, the KOF Economic Barometer, with an unchanged value compared to the previous month of 102.2, continued to be slightly above its long-term average. Positive impulses to the unchanged total balance came from the manufacturing industry, weighed up by negative signals from the construction sector. The remaining areas that can be identified within the Barometer (hotel and catering industry, financial sector and indicators relating to private consumption as well as to the international economy) have practically not changed as compared to November.

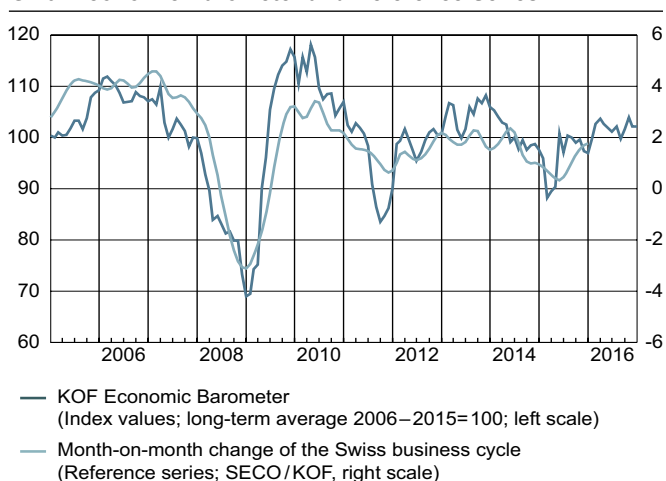
Within the manufacturing industry, the slightly improved total outlook was primarily driven by the textile and wood-processing industries as well as by the category "others". These positive tendencies were to some degree counteracted by deteriorating outlooks in the food-processing, electrical and paper industries.

The slightly improved sentiment in manufacturing as a whole is primarily a reflection of the more positive assessment of incoming orders, followed by the employment outlook. The assessment of the general business situation, on the other hand, has become more sceptical.

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 Accounts ESG 2010, released at the end of August 2015,

G 10: Economic Barometer and Reference Series



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 Innovationsleistungen und Innovationspolitik

Dr. Georg Licht, Leiter Innovationsökonomik und Unternehmensdynamik, ZEW Mannheim, Deutschland
«Herausforderungen und Perspektiven für die Innovationspolitik»

PD Dr. Martin Wörter, Leiter Innovationsökonomik, KOF, ETH Zürich «Ergebnisse der aktuellen Innovationsumfragen: Wie innovativ ist die Schweiz?»

ETH Zürich, Donnerstag 2. Februar 2017
16.15 – 17.15 Uhr

www.kof.ethz.ch/wirtschaftsforum →

KOF Research Seminar:

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

KOF-ETH-UZH International Economic Policy Seminar:

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

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TABLE KOF WINTER FORECAST 2016

SWITZERLAND

Real Gross Domestic Product by Type of Expenditure																
	2007- 2015	Percentage change against												previous year		
		previous quarter (annualised, trend cycle component)												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																
	2007- 2015	Percentage change against												previous year		
		previous quarter												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		
		previous quarter												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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