



Quarterly Bulletin
2/2018 June

SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK



Quarterly Bulletin
2/2018 June

Volume 36

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Monetary policy report

Report for the attention of the Governing Board of the Swiss National Bank for its quarterly assessment of June 2018.

The report describes economic and monetary developments in Switzerland and explains the inflation forecast. It shows how the SNB views the economic situation and the implications for monetary policy it draws from this assessment. The first section ('Monetary policy decision of 21 June 2018') is an excerpt from the press release published following the assessment.

This report is based on the data and information available as at 21 June 2018. Unless otherwise stated, all rates of change from the previous period are based on seasonally adjusted data and are annualised.

1 Monetary policy decision of 21 June 2018

Swiss National Bank leaves expansionary monetary policy unchanged

The Swiss National Bank (SNB) is maintaining its expansionary monetary policy, thereby stabilising price developments and supporting economic activity. Interest on sight deposits at the SNB remains at -0.75% and the target range for the three-month Libor is unchanged at between -1.25% and -0.25% . The SNB will remain active in the foreign exchange market as necessary, while taking the overall currency situation into consideration.

All in all, the value of the Swiss franc has barely changed since the monetary policy assessment of March 2018. The currency remains highly valued. Following the March assessment, the Swiss franc initially depreciated slightly against the US dollar and the euro. However, in light of political uncertainty in Italy, there has since been discernible countermovement, particularly against the euro. The situation on the foreign exchange market thus remains fragile, and the negative interest rate and the SNB's willingness to intervene in the foreign exchange market as necessary therefore remain essential. These measures keep the attractiveness of Swiss franc investments low and ease pressure on the currency.

The new conditional inflation forecast for the coming quarters is slightly higher than it was in March 2018 (cf. chart 1.1) due to a marked rise in the price of oil; this price rise ceases to affect annual inflation after the first quarter of 2019. From mid-2019, the new conditional forecast is lower than it was in March 2018, mainly due to the muted outlook in the euro area. At 0.9% , the inflation forecast for 2018 is 0.3 percentage points higher than projected at the March assessment. For 2019, the SNB continues to anticipate inflation of 0.9% , and for 2020 it expects to see inflation of 1.6% , compared with 1.9% forecast in the last quarter. The conditional inflation forecast is based on the assumption that the three-month Libor remains at -0.75% over the entire forecast horizon.

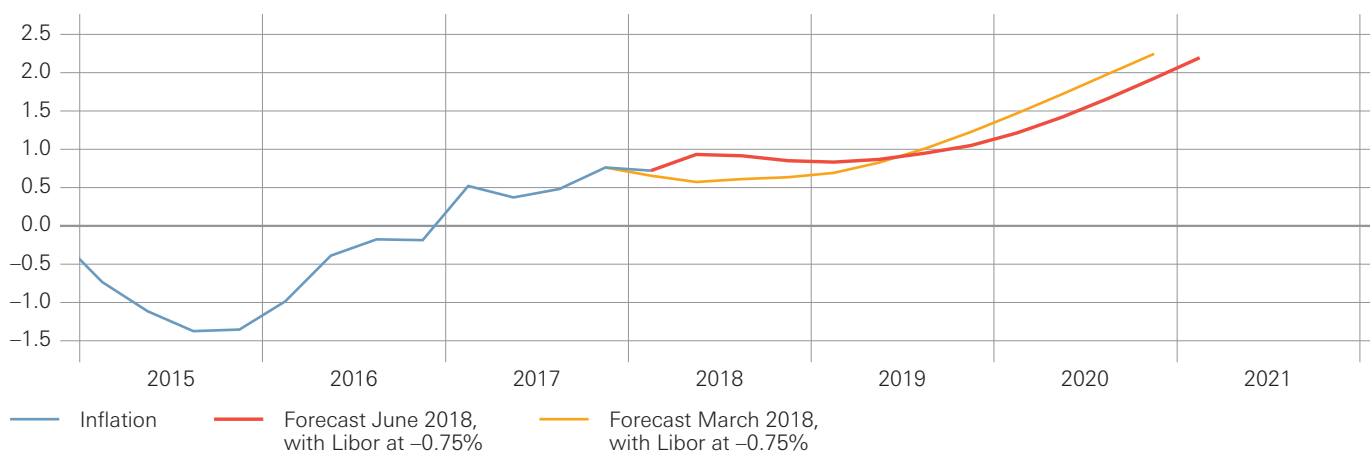
Overall, global economic growth was solid in the first quarter. Growth in the US and China was strong and broad-based. The pace of economic expansion slowed in the euro area, however, albeit partly due to temporary factors. The economic signals for the coming months remain favourable. The SNB's baseline scenario therefore assumes that the global economy will continue to grow above its potential.

The risks to the SNB's baseline scenario are more to the downside. Chief among them are political developments in certain countries as well as potential international tensions and protectionist tendencies.

Chart 1.1

CONDITIONAL INFLATION FORECAST OF JUNE 2018

Year-on-year change in Swiss consumer price index in percent



Sources: SFSO, SNB

Switzerland's economy continued to recover as expected, with GDP once again growing faster than estimated potential in the first quarter. Overall capacity utilisation improved further on the back of this positive development. The SNB still anticipates GDP growth of around 2% for the current year and expects to see unemployment falling further.

Imbalances on the mortgage and real estate markets persist. While growth in mortgage lending has been only moderate over the last few quarters, real estate prices have continued to rise. Particularly in the residential investment property segment, there is the risk of a correction due to the strong increase in prices in recent years. The SNB will continue to monitor developments on the mortgage and real estate markets closely, and will regularly reassess the need for an adjustment of the countercyclical capital buffer.

Monetary policy strategy at the SNB

The SNB has a statutory mandate to ensure price stability while taking due account of economic developments.

The SNB has specified the way in which it exercises this mandate in a three-part monetary policy strategy. First, it regards prices as stable when the Swiss consumer price index (CPI) rises by less than 2% per annum. This allows it to take account of the fact that the CPI slightly overstates actual inflation. At the

same time, it allows inflation to fluctuate somewhat with the economic cycle. Second, the SNB summarises its assessment of the situation and of the need for monetary policy action in a quarterly inflation forecast. This forecast, which is based on the assumption of a constant short-term interest rate, shows how the SNB expects the CPI to move over the next three years. Third, the SNB sets its operational goal in the form of a target range for the three-month Swiss franc Libor.

Table 1.1

OBSERVED INFLATION IN JUNE 2018

	2015				2016				2017				2018				2015	2016	2017
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Inflation	-0.7	-1.1	-1.4	-1.4	-1.0	-0.4	-0.2	-0.2	0.5	0.4	0.5	0.8	0.7				-1.1	-0.4	0.5

Source: SFSO

CONDITIONAL INFLATION FORECAST OF JUNE 2018

	2018				2019				2020				2021				2018	2019	2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Forecast March 2018, with Libor at -0.75%	0.7	0.6	0.6	0.6	0.7	0.8	1.0	1.2	1.5	1.7	2.0	2.2					0.6	0.9	1.9
Forecast June 2018, with Libor at -0.75%		0.9	0.9	0.9	0.8	0.9	0.9	1.0	1.2	1.4	1.7	1.9	2.2				0.9	0.9	1.6

Source: SNB

2 Global economic environment

The global economy expanded robustly overall in the first quarter. Growth in the US and China was strong and broad-based. The pace of economic expansion slowed in the euro area and Japan, albeit partly due to temporary factors. On the whole, international goods trade remained dynamic (cf. chart 2.1). Furthermore, employment in the advanced economies continued to improve.

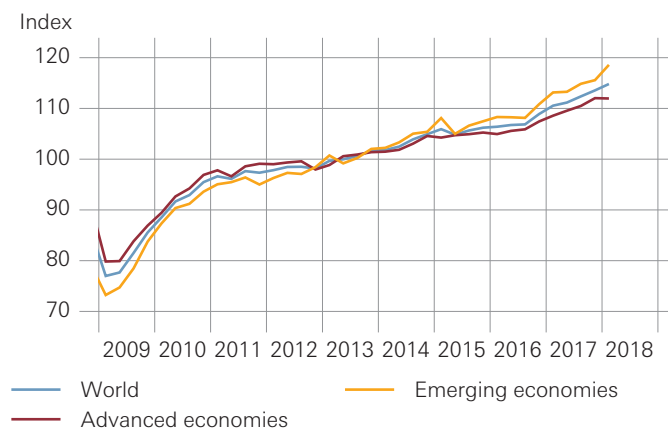
Economic signals for the coming months are favourable. Household and business survey results have weakened somewhat since the beginning of the year, but are still very positive overall and consistent with the SNB's baseline scenario, which assumes that global economic growth will remain above potential. The risks to this baseline scenario are more to the downside. These concern – first and foremost – political developments in certain countries, as well as potential international tensions and protectionist tendencies. The normalisation of monetary policy in the advanced economies will also pose additional challenges.

In the US, inflation has almost reached the target level set by the Federal Reserve. The latter therefore plans to continue its normalisation of monetary policy. In the euro area, by contrast, core inflation has continued to move sideways in recent months. The European Central Bank (ECB) therefore intends to pursue its asset purchase programme until December 2018, and to leave its key rates

Chart 2.1

GLOBAL EXPORTS OF GOODS

Average of depicted period = 100



Sources: CPB Netherlands Bureau for Economic Policy Analysis (CPB), Thomson Reuters Datastream

Table 2.1

BASELINE SCENARIO FOR GLOBAL ECONOMIC DEVELOPMENTS

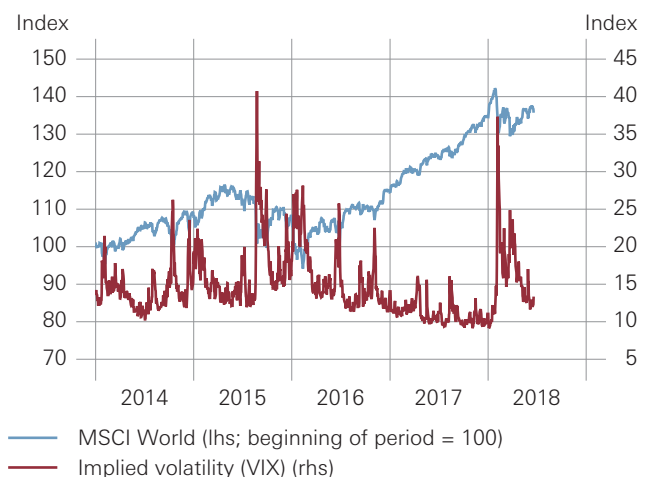
	2014	2015	2016	2017	Scenario	
					2018	2019
GDP, year-on-year change in percent						
Global ¹	3.6	3.5	3.3	3.9	4.0	3.9
US	2.6	2.9	1.5	2.3	2.8	2.3
Euro area	1.4	2.0	1.8	2.6	2.1	1.6
Japan	0.3	1.4	1.0	1.7	1.0	1.1
Oil price in USD per barrel						
	99.0	52.5	43.8	54.3	74.1	77.0

¹ PPP-weighted (US, euro area, UK, Japan, China, South Korea, India, Brazil and Russia).

Sources: SNB, Thomson Reuters Datastream

Chart 2.2

STOCK MARKETS



Source: Thomson Reuters Datastream

Chart 2.3

INTERNATIONAL LONG-TERM INTEREST RATES

10-year government instruments

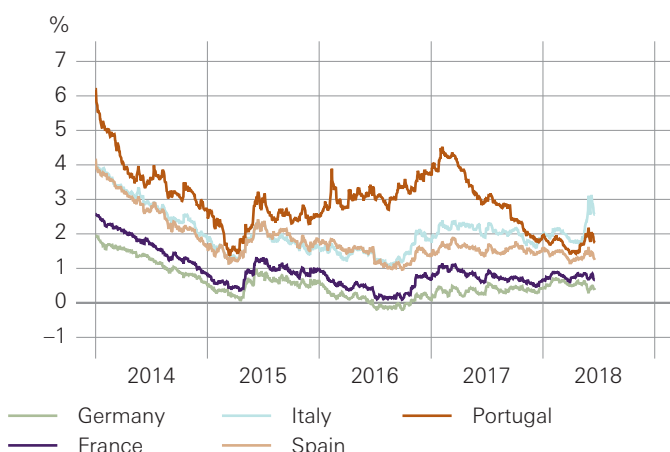


Source: Thomson Reuters Datastream

Chart 2.4

EUROPEAN LONG-TERM INTEREST RATES

10-year government instruments



Source: Thomson Reuters Datastream

at their present levels at least through the summer of 2019. Japan is also likely to maintain its highly expansionary monetary policy given the ongoing modest rate of inflation.

The SNB’s forecasts for the global economy are based on assumptions about oil prices and the EUR/USD exchange rate. The SNB is assuming a price for Brent crude of USD 77 per barrel, which is USD 8 higher than in March’s baseline scenario (cf. table 2.1), and an exchange rate of USD 1.19 to the euro, compared with USD 1.23 in March. Both correspond to the 20-day average when the current baseline scenario was drawn up.

INTERNATIONAL FINANCIAL AND COMMODITY MARKETS

Sentiment on the international financial markets has remained dominated by turbulence since the monetary policy assessment in mid-March 2018. Stock markets struggled at times with political uncertainties and protectionist tendencies, but recovered on the back of the continued favourable growth outlook for the global economy. In mid-June, the MSCI World Index was slightly above its mid-March level. The volatility of US stocks as measured by option prices (VIX) – which serves as a gauge of market uncertainty – declined, following abrupt spikes in the first quarter (cf. chart 2.2).

In the US, yields on ten-year government bonds rose temporarily to above 3.0% (cf. chart 2.3) as a result of monetary policy tightening and rising inflation. Yields in euro area member states presented a mixed picture (cf. chart 2.4). In Italy, they increased considerably owing to political uncertainty. They also rose in Europe’s peripheral economies, while in Germany, they declined. In Japan, yields on ten-year government bonds remained close to the Bank of Japan’s target of 0%.

The US dollar gained significantly in value on a trade-weighted basis, returning in mid-June to its year-back level. It appreciated markedly against the euro. The euro and the yen trended somewhat weaker on a trade-weighted basis (cf. chart 2.5).

Oil prices rose substantially against a backdrop of higher demand and tighter supply (cf. chart 2.6), and climbed temporarily to USD 80 per barrel in the wake of the US's announcement to withdraw from the nuclear deal with Iran and its threat of sanctions on importers of Iranian oil. The ongoing crisis in Venezuela also contributed to higher oil prices. Amid plans to increase the oil output in Russia and Saudi Arabia, oil prices dropped again somewhat recently. Cyclically sensitive prices of industrial metals continued to trend upwards.

UNITED STATES

In the US, economic growth remained robust and broad-based at 2.2% in the first quarter of 2018 (cf. chart 2.7). In addition, employment continued to increase in the past few months, and the unemployment rate dropped further to 3.8% by May (cf. chart 2.10).

The economic outlook for the US remains positive. The latest indicators suggest ongoing sound economic momentum – industrial output rose sharply in April. Turnover in the retail sector as well as new orders for capital goods also continued to develop favourably. Furthermore, the SNB expects that fiscal policy in the US will support the economy in the coming years. The GDP forecast remains almost unchanged, with the SNB anticipating growth of 2.8% for 2018 and 2.3% for 2019 (cf. table 2.1).

Annual consumer price inflation rose further between February and May to 2.8% (cf. chart 2.11), this increase being partly due to higher energy prices. Core inflation also climbed further, to 2.2% (cf. chart 2.12). The Federal Reserve's preferred price inflation measure, the personal consumption expenditure (PCE) deflator, reached the US central bank's target value of 2.0% in April; the core PCE deflator also approached the target value.

In light of the progress made with regard to inflation and on the labour market, the Federal Reserve increased the target range for its policy rate in March and in June, ultimately reaching 1.75–2.0% (cf. chart 2.13). Its plan is to continue with the normalisation of monetary policy.

Chart 2.5

EXCHANGE RATES

Trade-weighted, beginning of period = 100



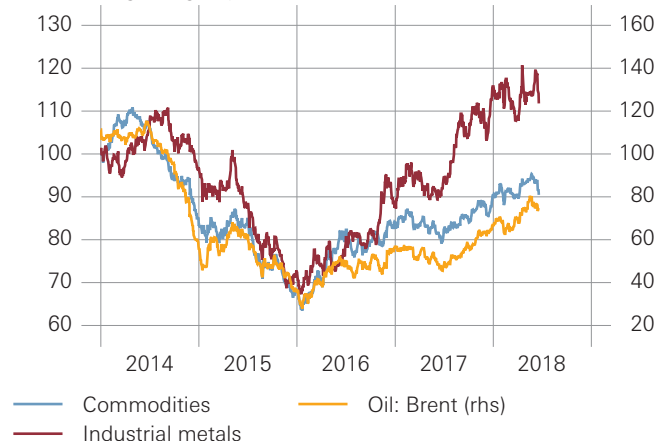
Source: Thomson Reuters Datastream

Chart 2.6

COMMODITY PRICES

Index, beginning of period = 100

USD/barrel

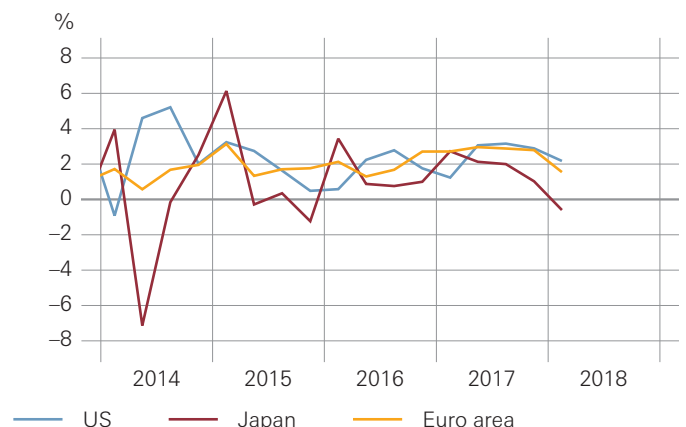


Source: Thomson Reuters Datastream

Chart 2.7

REAL GDP: ADVANCED ECONOMIES

Change from previous period

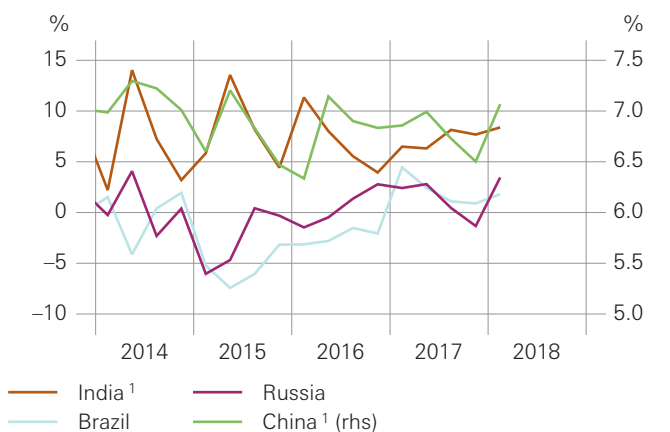


Source: Thomson Reuters Datastream

Chart 2.8

REAL GDP: EMERGING ECONOMIES

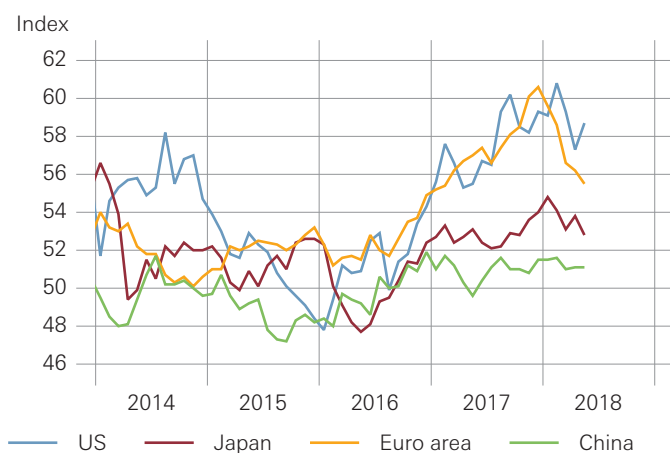
Change from previous period



1 Seasonal adjustment: SNB
Sources: CEIC, Thomson Reuters Datastream

Chart 2.9

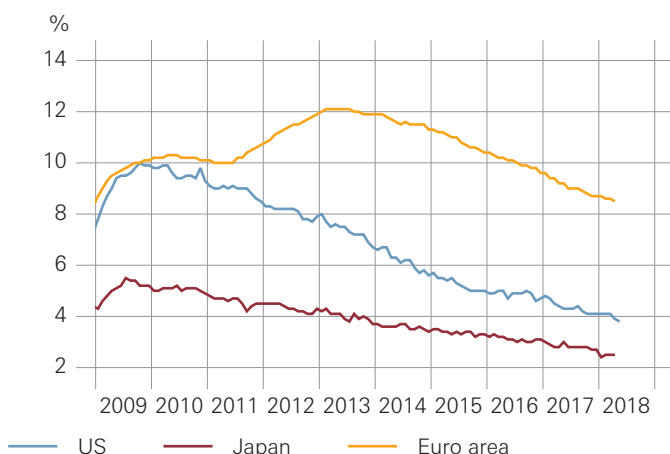
PURCHASING MANAGERS' INDICES (MANUFACTURING)



Source: Markit Economics Ltd 2009; all rights reserved

Chart 2.10

UNEMPLOYMENT RATES



Source: Thomson Reuters Datastream

EURO AREA

The economy in the euro area lost some momentum at the beginning of 2018, due in part to temporary factors such as strikes and the exceptionally cold weather. Following on from strong growth in previous quarters, GDP subsequently expanded in the first quarter by only 1.5% (cf. chart 2.7). Although private consumption picked up pace, exports and manufacturing receded for the first time in quite a while. In Germany and France, the slowdown was pronounced, whereas in Italy and Spain developments were stable. Meanwhile, the improvement in euro area employment continued, and the unemployment rate declined further (cf. chart 2.10).

Underpinned by favourable financing conditions and sound income growth, economic activity in the next few quarters is likely to expand once again at a more robust rate. The positive outlook nevertheless remains subject to various risks, including political imponderables in Italy as well as uncertainty over the protectionist tendencies outside the euro area and the shape of future relations between the EU and the UK. Overall, the SNB has left its growth forecasts for the euro area virtually unchanged. However, owing to the muted growth at the beginning of the year, the forecast for 2018 is slightly lower than three months ago at 2.1%. For 2019, by contrast, it is marginally higher at 1.6% (cf. table 2.1).

Consumer price inflation in the euro area trended upwards in recent months on the back of rising energy and food prices, reaching 1.9% in May (cf. chart 2.11). Core inflation, however, remained modest and continued to fluctuate around 1.0% (cf. chart 2.12), as it has done over the last few years. Medium-term inflation expectations derived from financial market indicators showed scarcely any change, remaining below the ECB's target level of just under 2%.

The ECB left its key rates unchanged in June. It plans to continue its asset purchases of EUR 30 billion a month until the end of September 2018, thereafter reducing this to EUR 15 billion and ending the programme at the end of the year. It also expects its key rates to remain at their present levels at least through the summer of 2019.

JAPAN

In the wake of a massive snow storm in Japan, which temporarily impaired domestic activity quite severely at the beginning of the year, GDP receded by 0.6% in the first quarter, having registered robust growth for eight consecutive quarters (cf. chart 2.7). Nonetheless, the upswing in exports continued in the first quarter. Employment also saw a further increase. In April, unemployment stood at 2.5%, well below the estimated natural rate of 3.5%.

The latest indicators suggest a rapid recovery of growth. Solid global manufacturing and investment in infrastructure and tourism in the run-up to the 2020 Olympic Games in Tokyo will keep the Japanese economy on track in the coming quarters. Furthermore, new tax incentives should encourage companies to significantly increase wages, which is likely to lend support to private consumption. The SNB expects GDP growth to slightly exceed potential, forecasting 1.0% for 2018 and 1.1% for 2019 (cf. table 2.1).

Despite favourable overall capacity utilisation, inflation momentum has been weak in recent months. Core inflation thus remained modest at 0.1% in April (cf. chart 2.12). The positive capacity utilisation coupled with the impact of higher oil prices are likely to cause inflation to rise further in the months to come. Meanwhile, the longer-term inflation expectations derived from company surveys trended sideways and remained significantly below the Japanese central bank's inflation target of 2%. Under these conditions, the Bank of Japan is maintaining its expansionary monetary policy.

CHINA

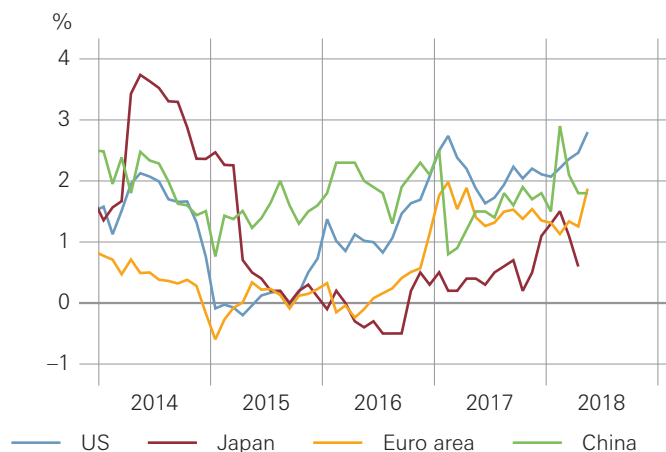
In China, GDP growth of 7.1% in the first quarter was stronger than in the previous quarter (cf. chart 2.8). Industrial activity, in particular, gained momentum, while the services sector saw slightly weaker growth. Strong export demand continued to support the economy.

The outlook for China essentially remains unchanged. The purchasing managers' indices still indicate sound business performance (cf. chart 2.9). The phased tightening of financial market regulations since the end of 2016 and the rise in capital market interest rates over the course of 2017 have led to a further slowdown in credit growth, and this is likely to curb activity in real estate and construction in particular. Overall, economic momentum can still be expected to wane somewhat over the course of the year. For 2018, the SNB anticipates GDP growth of 6.6%, which is in line with the Chinese government's target.

Chart 2.11

CONSUMER PRICES

Year-on-year change

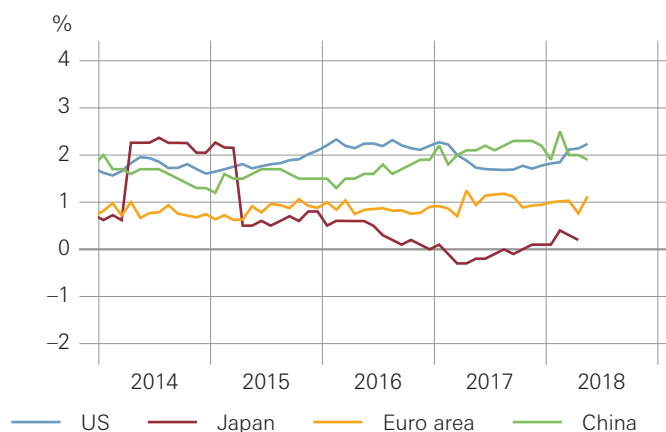


Source: Thomson Reuters Datastream

Chart 2.12

CORE INFLATION RATES ¹

Year-on-year change

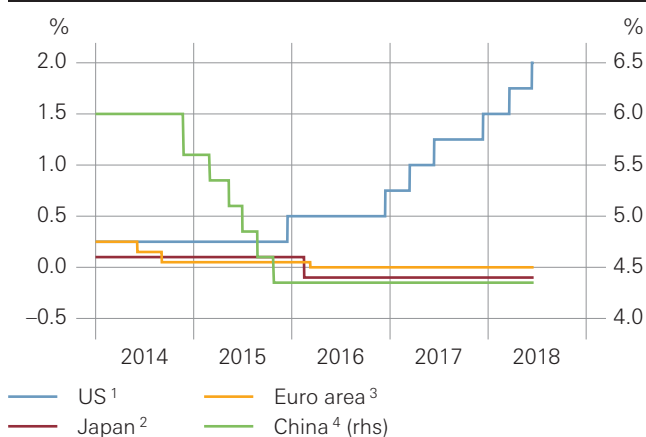


¹ Excluding food and energy.

Source: Thomson Reuters Datastream

Chart 2.13

OFFICIAL INTEREST RATES

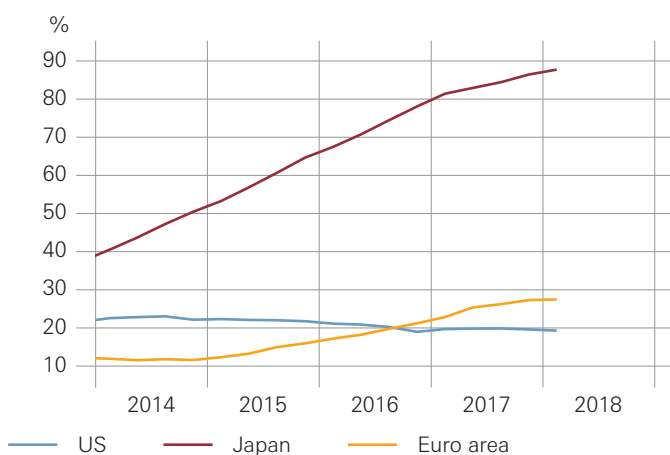


1 Federal funds rate (upper limit of target range). 3 Main refinancing rate.
 2 Call money target rate. 4 One-year lending rate.
 Source: Thomson Reuters Datastream

Chart 2.14

MONETARY BASE

Relative to GDP



Source: Thomson Reuters Datastream

There has been little change in inflation momentum. Core inflation has been at around 2% for over a year (cf. chart 2.12). The People’s Bank of China (PBC) left its reference rate unchanged, but lowered the reserve requirement ratio by 100 basis points in April. This move is particularly intended to encourage lending to small companies, which have had insufficient access to loans in the past. At the same time, the PBC announced that most of the freed-up liquidity would be removed from the market via its medium-term lending facility, so as to ensure that its monetary policy stance remains essentially unchanged.

BRAZIL, INDIA AND RUSSIA

The remaining emerging economies registered positive growth. In India, GDP strengthened further in the first quarter (8.4%). In Russia and Brazil, there were growing signs of recovery. In both countries, GDP grew above potential in the first quarter, having been weak in the previous quarter (cf. chart 2.8).

The economies of these countries are likely to firm up in the course of 2018. In India, economic policy is providing positive stimuli. In particular, weak, quasi-governmental credit institutions will be recapitalised and infrastructure improved. GDP growth in 2018 is expected to be considerably stronger year-on-year at around 7.5%. In Brazil, although the easing of monetary policy is acting as a growth driver, the recent currency depreciation does entail risks. In Russia, private consumption is likely to benefit from low unemployment and rising real incomes. Moreover, the higher oil prices will encourage investment activity in the energy industry.

3 Economic developments in Switzerland

The Swiss economy continued to recover as expected, GDP once again grew faster than estimated potential in the first quarter. On the output side, growth was driven primarily by services, which gained momentum compared with the previous quarters.

Overall capacity utilisation has improved further on the back of this favourable development, while unemployment has also dropped lower still in recent months.

Leading indicators suggest that the economic recovery will continue. The SNB expects GDP growth to remain at around 2% for 2018 and unemployment to decrease further.

OUTPUT AND DEMAND

The SNB takes a wide range of information into account when assessing the economic situation. According to this information, the favourable economic momentum continued in the first quarter.

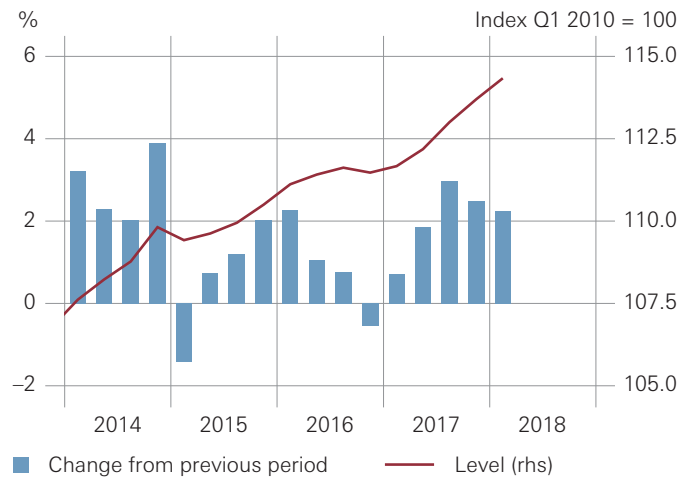
Robust GDP growth in the first quarter of 2018

According to a provisional estimate by the State Secretariat for Economic Affairs (SECO), GDP growth remained robust in the first quarter at 2.3% (cf. chart 3.1). On the output side, growth was driven primarily by services. Almost all key industries in the tertiary sector contributed to this expansion, including trade, business-related services, healthcare, and transportation and communications. In manufacturing, meanwhile, there was only a moderate rise in value added, this following strong growth in the previous quarters.

On the expenditure side, too, growth proved broad-based. With the exception of construction investment and government consumption, all final demand components showed increases. Equipment investment – the main growth driver – more than recouped the decrease recorded in the previous quarter.

Chart 3.1

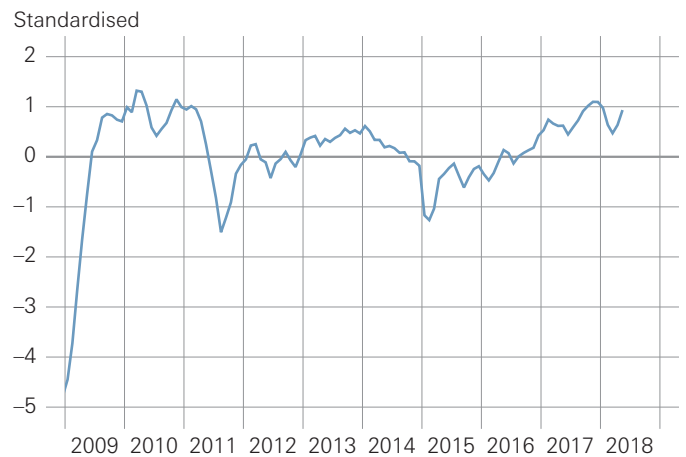
REAL GDP



Source: State Secretariat for Economic Affairs (SECO)

Chart 3.2

SNB BUSINESS CYCLE INDEX



Source: SNB

Chart 3.3

MANUFACTURING PMI AND KOF ECONOMIC BAROMETER



Sources: Credit Suisse, KOF Swiss Economic Institute

Positive economic indicators

In addition to GDP, other economic indicators are also pointing towards positive momentum. At the turn of the year, all composite economic indicators were at a very high level. Although they receded slightly in the months that followed, they nevertheless remained consistent with a robust pace of growth.

The Business Cycle Index, calculated by the SNB and offering a comprehensive overview of economic momentum, remained at an above-average level during the entire first quarter (cf. chart 3.2). The purchasing managers' index (PMI) also stayed at a high level, while the KOF Economic Barometer approached its long-term average (cf. chart 3.3).

Table 3.1

REAL GDP AND COMPONENTS

Growth rates on previous period in percent, annualised

	2014	2015	2016	2017	2016			2017				2018
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Private consumption	1.3	1.8	1.5	1.2	0.8	1.2	3.1	0.4	0.5	1.3	0.7	1.5
Government consumption	2.2	1.2	1.6	1.0	1.7	0.9	1.4	0.4	0.3	1.6	2.2	-1.3
Investment in fixed assets	3.0	2.2	3.1	3.1	1.5	4.2	-0.3	6.6	3.4	3.5	-1.6	8.4
Construction	3.2	1.6	0.9	2.0	-2.3	5.6	-2.2	3.9	3.3	0.2	4.3	-1.7
Equipment	2.9	2.6	4.5	3.8	3.9	3.3	0.9	8.3	3.5	5.5	-5.0	15.1
Domestic final demand	1.9	1.8	1.9	1.7	1.1	2.0	2.0	2.0	1.3	1.9	0.3	3.0
Change in inventories ¹	-0.5	-0.3	-1.9	-0.9	-3.9	5.6	-5.3	-6.5	7.7	-7.1	8.9	-0.1
Total exports ²	5.2	2.3	6.8	2.8	7.0	-10.3	14.4	1.0	0.2	13.3	-6.7	6.7
Goods ²	5.8	2.6	6.2	4.6	3.2	-15.0	-3.5	23.0	2.9	16.8	-4.9	8.3
Goods excluding merchanting ²	4.0	0.7	6.6	5.3	4.5	4.0	-7.3	15.4	8.8	4.6	7.1	3.2
Services	4.0	1.7	7.9	-0.5	15.1	-0.3	54.7	-28.9	-4.8	6.9	-10.2	3.7
Total imports ²	3.3	3.2	4.7	2.3	-0.7	2.8	10.8	-11.3	17.0	-2.8	7.0	9.2
Goods ²	1.7	0.0	4.4	3.7	2.8	1.1	-2.3	-4.1	24.5	-3.9	21.6	12.3
Services	6.8	9.6	5.4	-0.3	-6.8	6.1	38.8	-22.8	4.6	-0.8	-16.2	3.2
Net exports ³	1.3	-0.1	1.6	0.5	3.9	-6.6	3.0	5.4	-7.0	8.3	-6.7	-0.4
GDP	2.4	1.2	1.4	1.1	1.1	0.8	-0.5	0.7	1.9	3.0	2.5	2.3

1 Contribution to growth in percentage points (including statistical discrepancy).

2 Excluding valuables (non-monetary gold and other precious metals, precious stones and gems as well as works of art and antiques).

3 Contribution to growth in percentage points.

Source: SECO

LABOUR MARKET

The moderate recovery in the labour market continued.

Ongoing decline in unemployment

The number of people registered as unemployed at the regional employment offices continued to decrease. Excluding seasonal fluctuations, a total of 115,000 people were recorded as unemployed at the end of May, while the seasonally adjusted unemployment rate published by SECO stood at 2.6% (cf. chart 3.4). However, the decline in unemployment in recent months is being overstated by a statistical effect; this can partly be ascribed to technical adjustments in the recording of unemployment figures.

In addition, the Swiss Federal Statistical Office (SFSO) calculates unemployment figures in line with the International Labour Organization (ILO) definition, based on data provided by the Swiss Labour Force Survey (SLFS), a household survey conducted quarterly. It includes people who are unemployed (although looking for work) but not registered, or no longer registered, with the regional employment offices. The SFSO unemployment rate calculated in accordance with the ILO definition is therefore higher than the one published by SECO. In the first quarter of 2018, the seasonally adjusted unemployment rate amounted to 4.9%, which was below the peak reached at the end of 2015. Unlike the SECO unemployment rate, however, it did not post a further decline over the last few quarters.

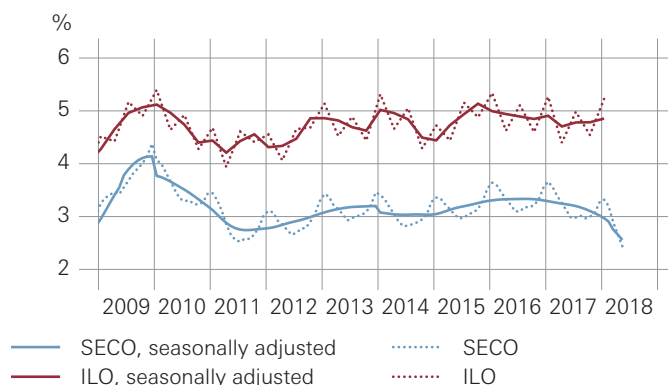
Higher growth in employment

The Employment Statistics (ES), which are also based on SLFS data, measure the number of employed persons on the household side. These statistics suggest that the number of gainfully employed persons continued to rise slightly in the first quarter (cf. chart 3.5).

The national job statistics, which are based on a survey of firms, measure employment on the company side. They thus complement the ES, especially with regard to developments at industry level. According to these statistics, the number of full-time equivalent positions registered noticeable, broad-based growth in the first quarter (cf. chart 3.6). An increasing number of jobs were created, both in services and in manufacturing. Construction also saw a rise in employment.

Chart 3.4

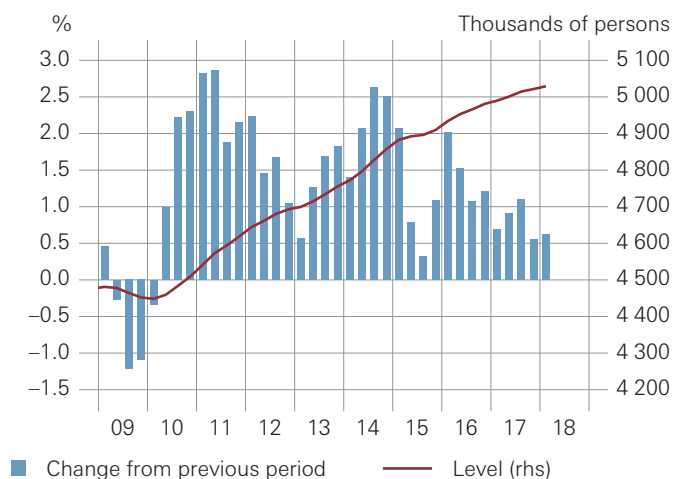
UNEMPLOYMENT RATE



SECO: Unemployed registered with the regional employment offices, as a percentage of the labour force according to the 2000 and 2010 censuses and the 2012 to 2014 structural surveys.
ILO: Unemployment rate based on International Labour Organization definition.
Sources: Swiss Federal Statistical Office (SFSO), SECO

Chart 3.5

EMPLOYED PERSONS

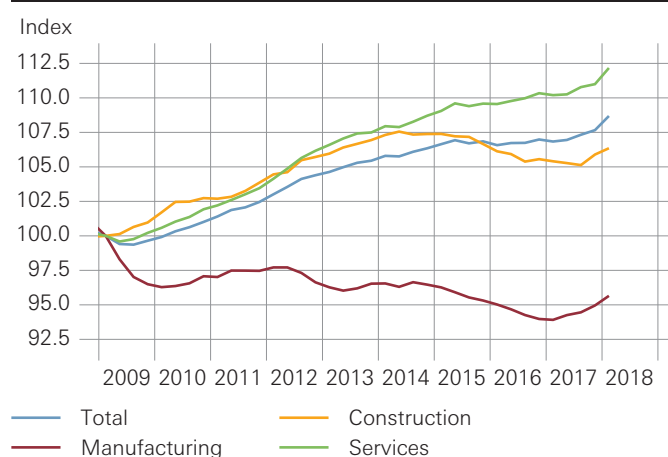


Source: SFSO; seasonal adjustment: SNB

Chart 3.6

FULL-TIME EQUIVALENT JOBS

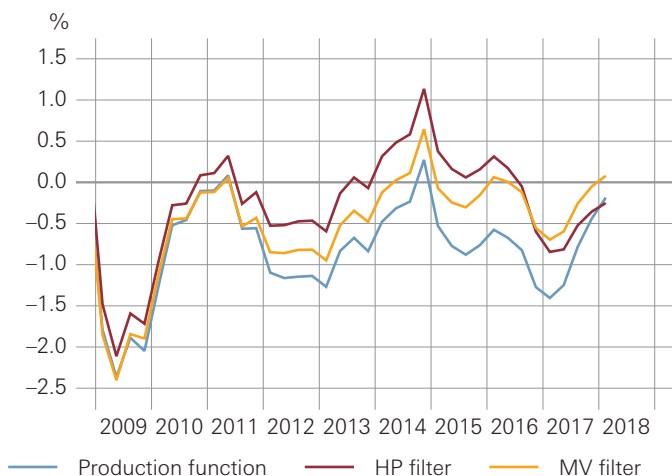
Beginning of period = 100



Source: SFSO; seasonal adjustment: SNB

Chart 3.7

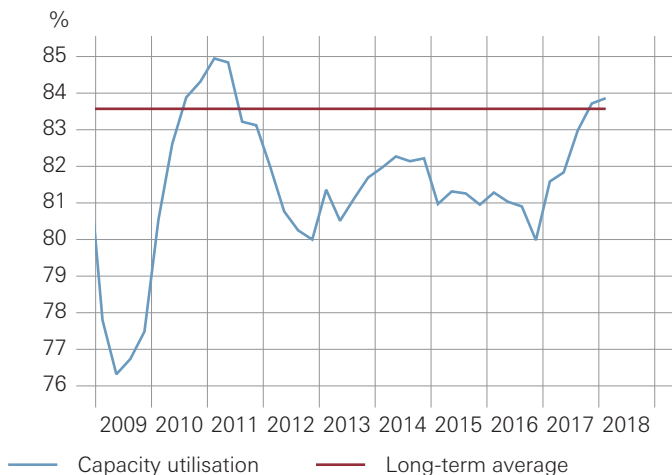
OUTPUT GAP



Source: SNB

Chart 3.8

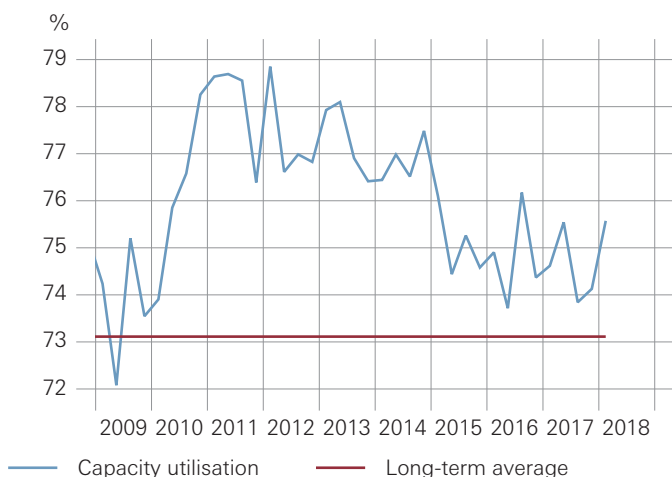
CAPACITY UTILISATION IN MANUFACTURING



Source: KOF Swiss Economic Institute

Chart 3.9

CAPACITY UTILISATION IN CONSTRUCTION



Source: KOF Swiss Economic Institute

CAPACITY UTILISATION

Output gap narrows further

The output gap, which is defined as the percentage deviation of actual GDP from estimated aggregate potential output, shows how well the production factors in an economy are being utilised. The negative output gap has narrowed further recently. Potential output as estimated by means of a production function showed an output gap of -0.2% for the first quarter, compared with -0.4% in the previous quarter. Estimates using other methods to establish potential output (Hodrick-Prescott filter and multivariate filter) confirm that the gap has narrowed considerably in recent quarters (cf. chart 3.7).

Surveys suggest normal utilisation

According to the KOF survey, utilisation of technical capacity in manufacturing increased to 83.9% in the first quarter. Owing to this increase, capacity utilisation in manufacturing slightly exceeded its long-term average (cf. chart 3.8). Machine utilisation in construction recorded a significant rise, thus remaining above its long-term average (cf. chart 3.9). As for the different services industries, the surveys point to an average level of utilisation. Overall, these indicators thus show a somewhat more positive picture than GDP-based measures of the output gap.

OUTLOOK

The outlook for Switzerland remains positive overall. While many leading indicators, such as the export-weighted PMI abroad (cf. chart 3.10), have receded somewhat since the beginning of the year, they still suggest a continuation of the positive economic momentum. The economic outlook thus remains optimistic (cf. chart 3.11). In the labour market, too, there are signs of further improvement (cf. chart 3.12).

The discussions conducted by the SNB delegates for regional economic relations between mid-April and the beginning of June likewise point to solid and sustained economic momentum in the second quarter. In addition, respondents are confident about the second half of the year (cf. 'Business cycle signals', pp. 28 et seq.).

The SNB expects positive and broad-based economic growth in Switzerland in the medium term, too. This favourable outlook is based on a number of factors. First, according to the baseline scenario (cf. chapter 2), global economic developments are expected continue to stimulate the Swiss economy. Second, the exchange rate situation has eased considerably year-on-year. Third, population growth is also likely boost demand. Fourth, low interest rates are supporting growth.

For 2018, the SNB continues to expect GDP growth of around 2%. Equipment investment and foreign trade, in particular, are likely to remain dynamic. As usual, this forecast is subject to uncertainties, mostly in connection with developments abroad (cf. chapter 2).

Chart 3.10

MANUFACTURING PMI ABROAD

Export-weighted, 27 countries



Sources: International Monetary Fund – Direction of Trade Statistics (IMF – DOTS), SNB, Thomson Reuters Datastream

Chart 3.11

ECONOMIC OUTLOOK

Next 6 months



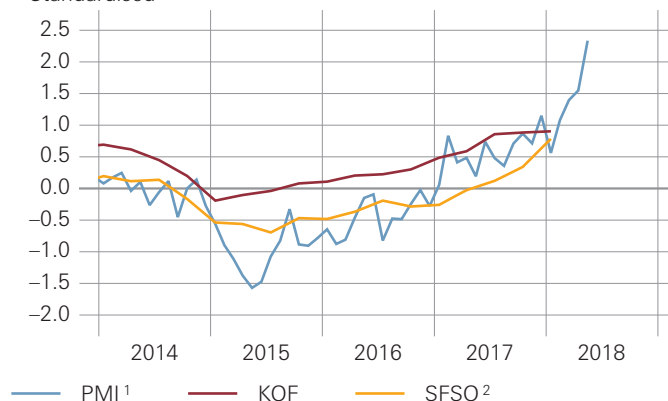
— Financial market survey, CS-CFA
— KOF, business situation in industry (rhs)

Sources: CFA Society Switzerland, Credit Suisse, KOF Swiss Economic Institute

Chart 3.12

EMPLOYMENT LEADING INDICATORS

Standardised



1 Monthly figures.

2 Seasonal adjustment: SNB.

Sources: Credit Suisse, KOF Swiss Economic Institute, SFSO

4

Prices and inflation expectations

Influenced by higher oil product prices, annual consumer price inflation rose further in the past few months. Core inflation rates remained largely unchanged, however, and are below the unadjusted annual rate.

Inflation expectations remain in the low positive range and are thus consistent with the objective of price stability, which the SNB equates to a rise in consumer prices of less than 2% per year.

CONSUMER PRICES

Rise in annual inflation rate to 1%

The annual inflation rate as measured by the Swiss consumer price index (CPI) climbed in May 2018 to 1.0%, the highest level since March 2011 (cf. table 1.1). The driving force behind the rise were prices for oil products. Despite accounting for only a small share in the CPI basket of goods, their contribution to the annual inflation rate is currently 0.5 percentage points (cf. chart 4.1).

High price inflation for oil products

In April and May 2018, oil product prices rose month-on-month by 3.0% and 4.7% respectively. Their annual inflation thus climbed to 15.2%. Prices for other imported goods and services increased year-on-year on a par with the CPI.

Unchanged inflation for domestic goods and services

Annual inflation for domestic goods and services remained very stable. In May 2018, it stood at 0.4%, the same level as in the two previous months. Although prices of goods saw a stronger increase than prices of services compared with last year, the contributions made by both components to inflation for domestic goods and services were almost the same, owing to the lower weighting of goods (cf. chart 4.2).

Table 4.1

SWISS CONSUMER PRICE INDEX AND COMPONENTS

Year-on-year change in percent

	2017	2017			2018	2018		
		Q2	Q3	Q4	Q1	March	April	May
Overall CPI	0.5	0.4	0.5	0.8	0.7	0.8	0.8	1.0
Domestic goods and services	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.4
Goods	-0.2	-0.3	-0.3	-0.1	0.3	0.5	0.6	0.8
Services	0.5	0.4	0.6	0.5	0.3	0.4	0.3	0.3
Private services excluding housing rents	0.3	0.4	0.3	0.4	0.6	0.8	0.5	0.6
Housing rents	1.1	1.1	1.3	0.9	0.6	0.6	0.6	0.3
Public services	-0.1	-0.4	0.1	0.1	-0.9	-0.9	-0.8	-0.8
Imported goods and services	1.2	0.6	0.8	2.0	1.9	2.0	2.1	2.7
Excluding oil products	0.2	-0.1	0.2	1.3	1.5	1.5	1.3	1.0
Oil products	8.8	6.1	5.5	6.8	4.9	5.2	8.4	15.2

Sources: SFSO, SNB

Stable rents

The data on housing rents are collected on a quarterly basis in February, May, August and November. Although rents rose marginally quarter-on-quarter in May 2018, annual rent inflation fell to 0.3% owing to a base effect (cf. chart 4.3). In May, the rent index stood at the same level as three quarters ago. This stability is consistent with the reference interest rate used for rent adjustments based on mortgage rate fluctuations; the reference rate has been unchanged at 1.5% since June 2017.

Stable core inflation

Core inflation rates have hardly changed since autumn 2017. The trimmed mean calculated by the SNB (TM15) stood at 0.5% in May 2018, while the SFSO's core inflation rate 1 (SFSO1) amounted to 0.4% (cf. chart 4.4).

Core inflation rates are thus well below the annual CPI inflation rate. The growing difference can be attributed to the fact that the sharp rise in oil product prices had little or no effect on core inflation.

Core inflation rates are based on the prices of a reduced basket of goods. When calculating SFSO1, energy and fuel as well as fresh and seasonal products are excluded. TM15 excludes the products with the most extreme price changes every month (15% at either end of the distribution curve of annual rates of change in product prices).

PRODUCER AND IMPORT PRICES

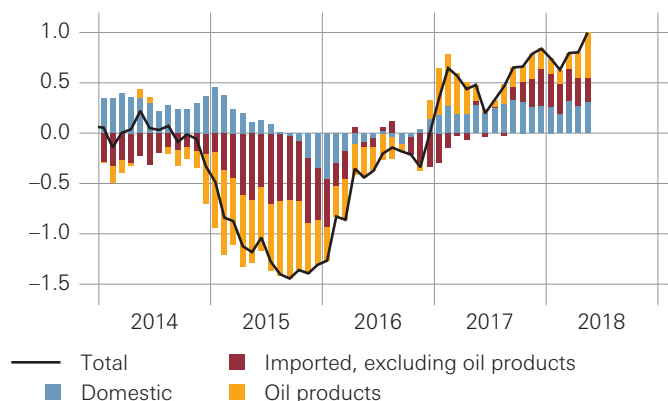
Rise in producer and import price inflation

Annual inflation for producer and import prices rose further over the past few months, registering 3.2% in May 2018. A major contributor to this growth were energy prices. The difference between import price inflation and producer price inflation continued to increase (cf. chart 4.5).

Chart 4.1

CPI: DOMESTIC AND IMPORTED GOODS AND SERVICES

Year-on-year change in CPI in percent. Contribution of individual components, in percentage points.

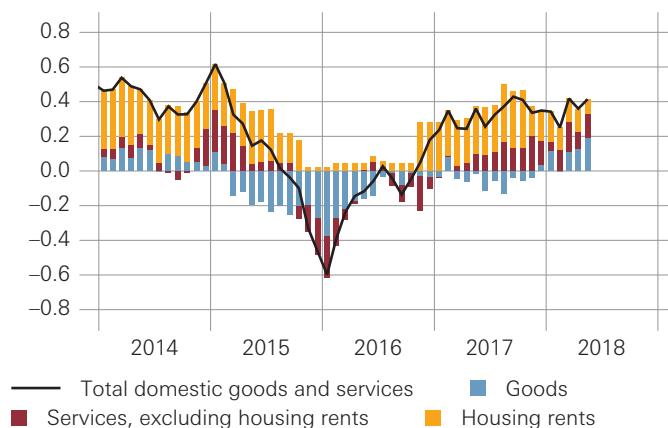


Sources: SFSO, SNB

Chart 4.2

CPI: DOMESTIC GOODS AND SERVICES

Year-on-year change in domestic CPI in percent. Contribution of individual components, in percentage points.

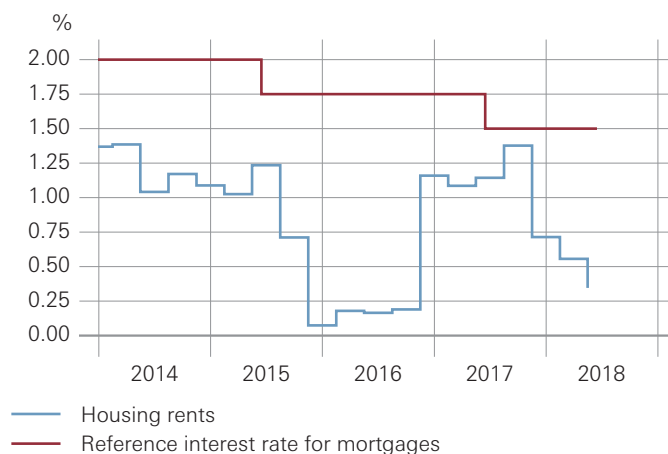


Sources: SFSO, SNB

Chart 4.3

HOUSING RENTS

Year-on-year change

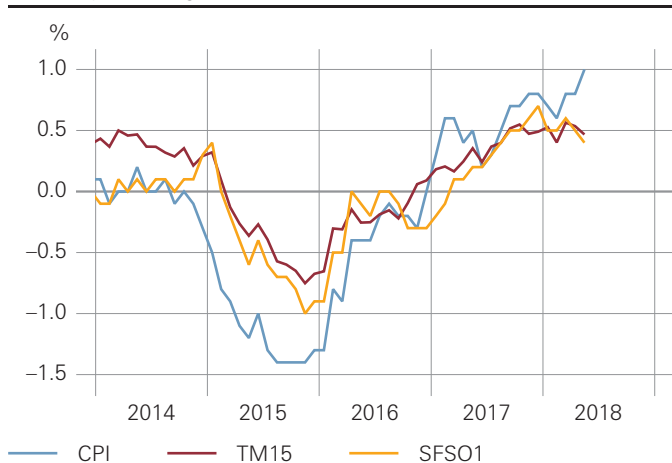


Sources: Federal Office for Housing (FOH), SFSO

Chart 4.4

CORE INFLATION RATES

Year-on-year change

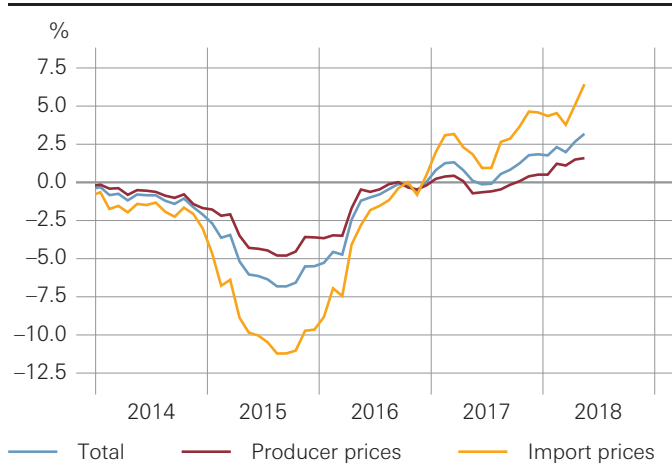


Sources: SFSO, SNB

Chart 4.5

PRODUCER AND IMPORT PRICES

Year-on-year change

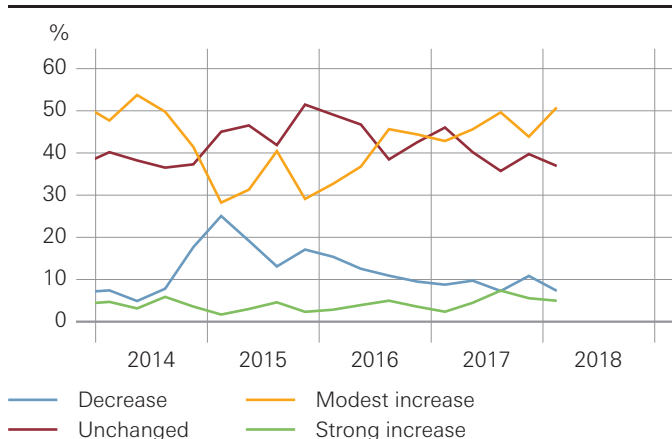


Source: SFSO

Chart 4.6

PRICE EXPECTATIONS

Survey of households on expected movements in prices for coming 12 months



Sources: SECO, SNB

INFLATION EXPECTATIONS

Inflation expectations consistent with price stability

Surveys show that inflation expectations remain consistent with the objective of price stability, which the SNB equates to a rise in the CPI of less than 2% per year.

Survey figures largely unchanged

The quarterly survey of households conducted by SECO shows that, in April 2018, 56% of respondents anticipated a rise in prices over the next twelve months (cf. chart 4.6), 37% expected prices to remain the same, while 7% expected them to go down. These proportions have changed only marginally since the previous quarter.

Somewhat more than half of the analysts questioned in May 2018 for the joint monthly financial market survey by CFA Society Switzerland and Credit Suisse expected inflation rates to rise in the next six months. All other analysts anticipated unchanged inflation rates, i.e. none of the respondents expected inflation rates to go down. Analysts' expectations have remained largely unchanged since the beginning of the year.

The talks conducted in the second quarter by the SNB's delegates for regional economic relations with companies from all sectors provide an indication of the expected level of inflation. As in the previous quarter, company representatives anticipated an annual inflation rate of 0.7% on average in the next six to twelve months.

Longer-term expectations slightly above short-term expectations

Longer-term inflation expectations were again slightly higher than short-term inflation expectations. In the second quarter – as in the previous quarter – company representatives interviewed by the SNB's delegates put the rate of inflation in three to five years at 1.1%.

5

Monetary developments

At its monetary policy assessment of mid-March 2018, the SNB left its expansionary monetary policy unchanged. This means that, over the last three months, monetary policy has continued to be based on the negative interest rate on sight deposits held at the SNB and on the SNB's willingness to intervene in the foreign exchange market as necessary.

Money market interest rates remained at the level of the SNB's negative interest rate, while confederation bond yields temporarily declined significantly. Share prices also fell, influenced by the dispute between the US and its trading partners, as well as uncertainty about the euro in connection with the formation of a new government in Italy.

The Swiss franc appreciated slightly against the euro, but weakened against the US dollar. Despite fluctuations, by mid-June the trade-weighted external value of the franc was back at practically the same level as at the time of the monetary policy assessment in March.

Overall, the Swiss franc is still highly valued. Developments on the foreign exchange markets show that the situation remains fragile and that the franc continues to be perceived as a safe haven in times of heightened uncertainty.

As in the previous quarter, the M3 monetary aggregate and bank loans have grown at a moderate pace.

SUMMARY OF MONETARY POLICY SINCE THE LAST ASSESSMENT

Expansionary monetary policy remains unchanged

The SNB confirmed its expansionary monetary policy stance at its assessment on 15 March 2018. It decided to leave the target range for the three-month Libor unchanged at between -1.25% and -0.25% . It also left unchanged, at -0.75% , the interest rate on sight deposits held by banks and other financial market participants at the SNB which exceed a given threshold. Furthermore, the SNB reaffirmed that it will remain active in the foreign exchange market as necessary, while taking the overall currency situation into consideration.

The negative interest rate and the SNB's willingness to intervene in the foreign exchange market serve to ease upward pressure on the Swiss franc. The SNB's monetary policy thus helps to stabilise price developments and support economic activity.

Sight deposits at the SNB virtually unchanged

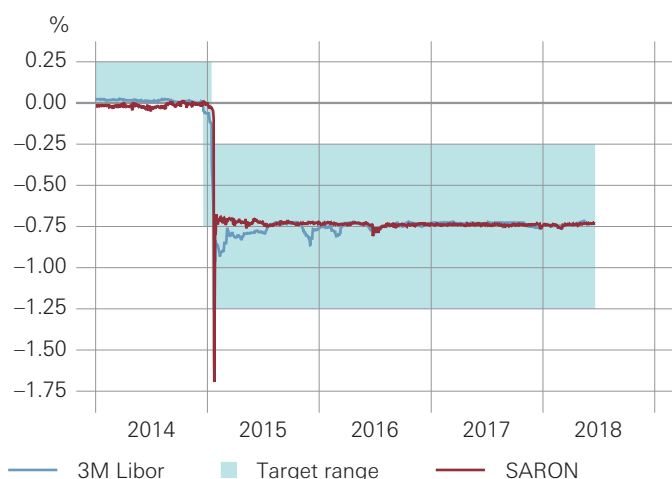
Since the monetary policy assessment of March 2018, total sight deposits held at the SNB have remained virtually unchanged. In the week ending 15 June 2018 (last calendar week before the mid-June assessment), they amounted to CHF 576.5 billion, only marginally higher than in the last calendar week preceding the mid-March 2018 assessment (CHF 575.9 billion). Between the assessments in mid-March and mid-June 2018, sight deposits at the SNB averaged CHF 575.9 billion. Of this amount, CHF 468.7 billion was accounted for by the sight deposits of domestic banks and the remaining CHF 107.2 billion by other sight deposits.

High level of banks' surplus reserves

Statutory minimum reserves averaged CHF 16.4 billion between 20 February and 19 May 2018. Overall, banks exceeded the minimum reserve requirement by CHF 453.9 billion (previous period: CHF 458.4 billion). Banks' surplus reserves have thus barely changed.

Chart 5.1

MONEY MARKET RATES

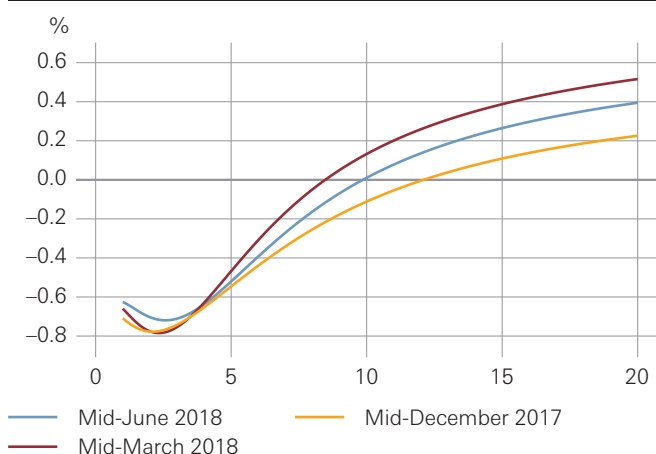


Sources: Bloomberg, SIX Swiss Exchange Ltd, SNB

Chart 5.2

TERM STRUCTURE OF CONFEDERATION BONDS

Years to maturity (hor. axis); Nelson-Siegel-Svensson method

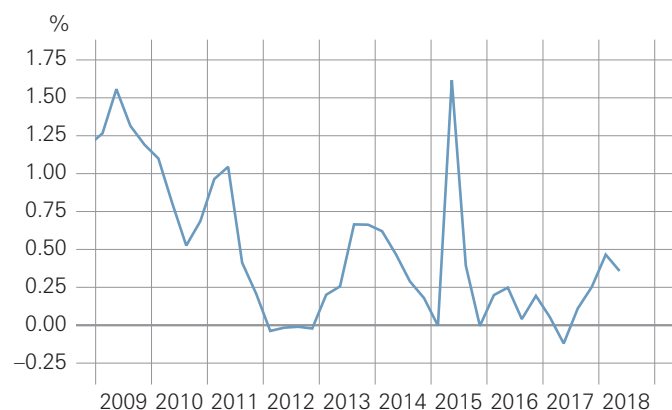


Source: SNB

Chart 5.3

ESTIMATED REAL INTEREST RATE

10-year Confederation bonds
Inflation expectations estimated with VAR model



Source: SNB

MONEY AND CAPITAL MARKET INTEREST RATES

Money market rates stable

Since the monetary policy assessment in March 2018, money market rates have consistently tracked close to the interest rate on sight deposits held at the SNB, which has been set at -0.75% since January 2015. The same goes for both secured (SARON) and unsecured (three-month Libor) money market transactions (cf. chart 5.1).

Volatile long-term interest rates

Capital market interest rates were subject to far greater fluctuations than money market rates. At the end of May, the political uncertainty in Italy and the trade dispute between the US and its major trading partners pushed up prices for Confederation bonds, causing their yields to drop accordingly, in line with yields of foreign government bonds. Subsequently, for the first time since January 2018, yields on ten-year Confederation bonds slipped occasionally back into negative territory.

Flatter yield curve

The yield curve for Confederation bonds has flattened out slightly since the monetary policy assessment in March (cf. chart 5.2). In mid-June, yields on Confederation bonds with maturities of less than ten years were trading in negative territory.

Long-term real interest rates low

The estimated long-term real interest rate was at a low, positive level in mid-June 2018. Compared to March, it remained largely unchanged (cf. chart 5.3).

The real interest rate estimate is based on the development of the ten-year yield on Confederation bonds and inflation expectations for the same time horizon, estimated with a vector autoregressive (VAR) model.

EXCHANGE RATES

Swiss franc stronger against euro and weaker against US dollar

After the monetary policy assessment in March 2018, the Swiss franc initially depreciated further against the euro, thus continuing the downward trend that had commenced in the second half of 2017. In mid-April, one euro cost more than CHF 1.20, the highest value since the minimum exchange rate was discontinued in January 2015. From mid-May, however, the Swiss franc strengthened again considerably against the euro. This appreciation reflected the general weakness of the euro, which was being driven by the political uncertainty in Italy. In mid-June, one euro cost CHF 1.15, i.e. approximately 2 centimes less than at the time of the monetary policy assessment in mid-March.

The US dollar has gained significantly in value against most currencies since mid-March. In mid-June, it was trading at CHF 1.00 to the dollar, thus costing roughly 5 centimes more.

Fluctuations in Swiss franc's nominal trade-weighted external value

On a nominal trade-weighted basis, the Swiss franc has fluctuated back and forth in recent months (cf. chart 5.5). In mid-June it was back at roughly the same level as at the time of the monetary policy assessments in December 2017 and March 2018.

Real external value of Swiss franc still at high level

In May 2018, the real trade-weighted exchange rate index calculated by the SNB dropped to its lowest level since July 2010 (cf. chart 5.6). The equivalent indices calculated by the Bank for International Settlements (BIS) and the International Monetary Fund (IMF) paint a similar picture. The franc is thus still highly valued.

Chart 5.4

EXCHANGE RATES



Source: SNB

Chart 5.5

NOMINAL EXTERNAL VALUE OF SWISS FRANC

December 2000 = 100

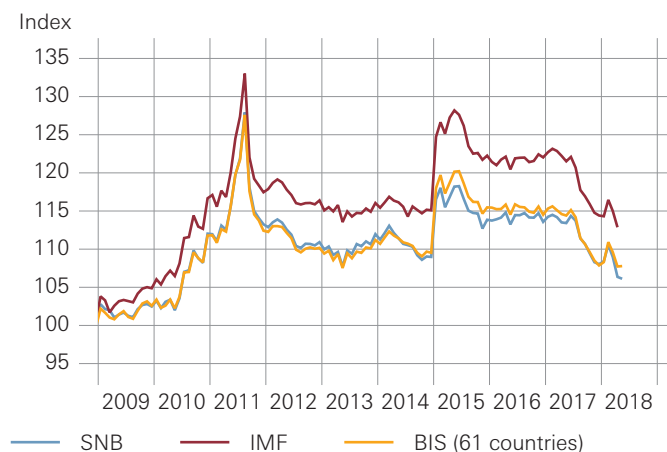


Source: SNB

Chart 5.6

REAL EXTERNAL VALUE OF SWISS FRANC

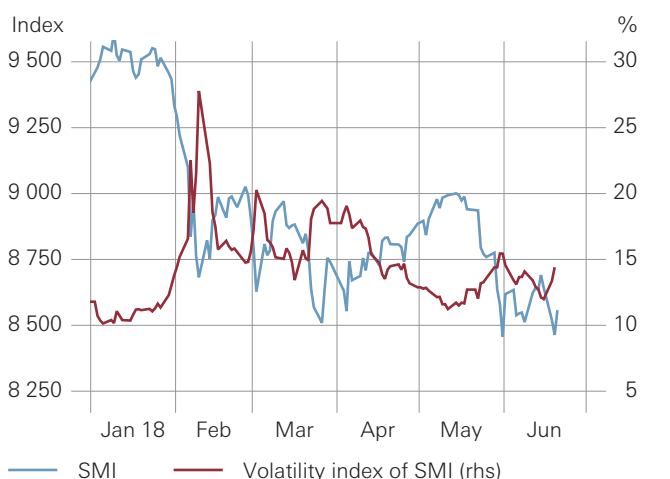
December 2000 = 100



Sources: Bank for International Settlements (BIS), IMF, SNB

Chart 5.7

SHARE PRICES AND VOLATILITY

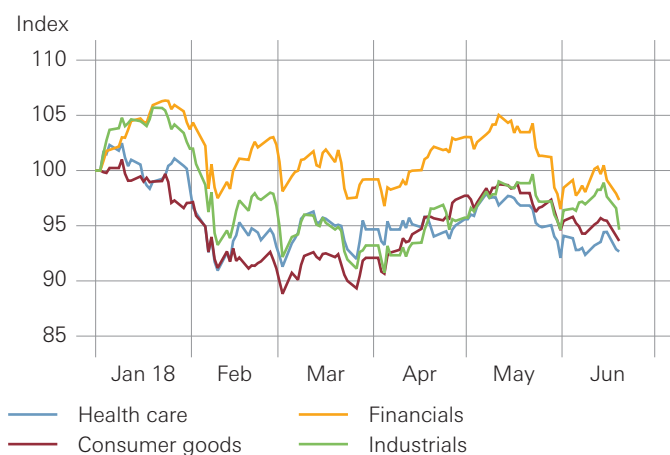


Sources: Bloomberg, Thomson Reuters Datastream

Chart 5.8

SELECTED SPI SECTORS

1 January 2018 = 100

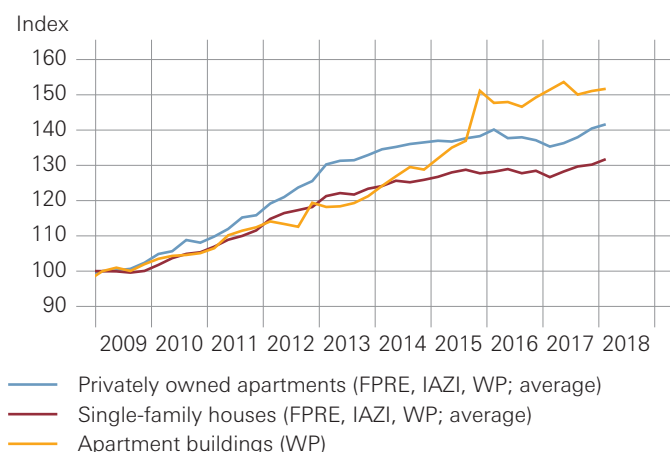


Source: Thomson Reuters Datastream

Chart 5.9

HOUSING TRANSACTION PRICES

Nominal (hedonic), beginning of period = 100



Sources: Fahländer Partner Raumentwicklung (FPRE), IAZI, Wüest Partner (WP)

SHARE AND REAL ESTATE PRICES

Falling share prices

Having reached an all-time high in January 2018, the Swiss Market Index (SMI) lost considerable value between the end of January and the end of March (cf. chart 5.7). This drop was in line with developments in the major share indices abroad and was driven primarily by geopolitical risks as well as the trade dispute between the US and its key trading partners. Although share prices initially recovered again somewhat, they saw a renewed decline in the second half of May. In mid-June, the SMI was around 10% lower than at the start of the year.

Market uncertainty temporarily rises significantly

The volatility index derived from options on SMI futures contracts is used to gauge uncertainty on the stock market. After rising substantially in the first quarter, by mid-May the index had dropped back down practically to its level at the beginning of the year. It then edged up again towards the end of May, inversely to the drop in share prices (cf. chart 5.7).

Movements in sectoral indices

Overall, the main sub-indices of the broader-based Swiss Performance Index (SPI) developed on parallel paths during the first half of 2018. Shares in financials and industrials have since performed somewhat better than the healthcare and consumer goods sub-indices, which are dominated by SPI heavyweights (cf. chart 5.8).

Slight rise in residential real estate prices

The available price indices for residential real estate rose slightly in the first quarter of 2018, with prices for single-family houses and privately owned apartments increasing more strongly than those for apartment buildings. The transaction prices for all three segments are at a historically high level (cf. chart 5.9).

MONETARY AND CREDIT AGGREGATES

Monetary base largely unchanged

The monetary base, which consists of banknotes in circulation and sight deposits of domestic banks held at the SNB, has remained largely stable since mid-2017, averaging CHF 549.1 billion in May 2018 (cf. chart 5.10).

Sight deposits of domestic banks – similar to other sight deposits held at the SNB – fluctuated slightly in this period. Total sight deposits at the SNB nevertheless remained practically unchanged.

Slower growth in broad monetary aggregates

Growth in the M1, M2 and M3 monetary aggregates has slowed slightly since the beginning of 2018. In May 2018, M1 (cash in circulation, sight deposits and transaction accounts) was 5.9% above its year-back level, while M2 (M1 plus savings deposits) was up by 3.2% and M3 (M2 plus time deposits) rose by 2.9% in the same period (cf. table 5.1).

In the last decade, almost all components of the M3 monetary aggregate have grown significantly (cf. chart 5.11). Time deposits are the only exception; they have decreased and, owing to the low interest rate differential with sight deposits, now make up only a small part of M3.

Lending growth picks up slightly in first quarter

Growth in bank lending picked up slightly in the first quarter of 2018. Bank loans grew 2.9% year-on-year, compared to a 2.6% increase in the fourth quarter of 2017. Both mortgage lending and other lending contributed to the slight rise in the growth rate (cf. table 5.1).

Banks' mortgage claims, which make up roughly 85% of all bank lending to domestic customers, were 2.8% above their year-back level in the first quarter of 2018. Having decreased by half between 2012 and 2015, the rate of growth has since remained more or less stable (cf. chart 5.12).

Demand for mortgages continues to be supported by the low mortgage interest rates. Although these rates have edged up slightly in recent times, they still remain close to their all-time low. The ten-year mortgage rate stood at 1.8% in April 2018.

Chart 5.10

MONETARY BASE

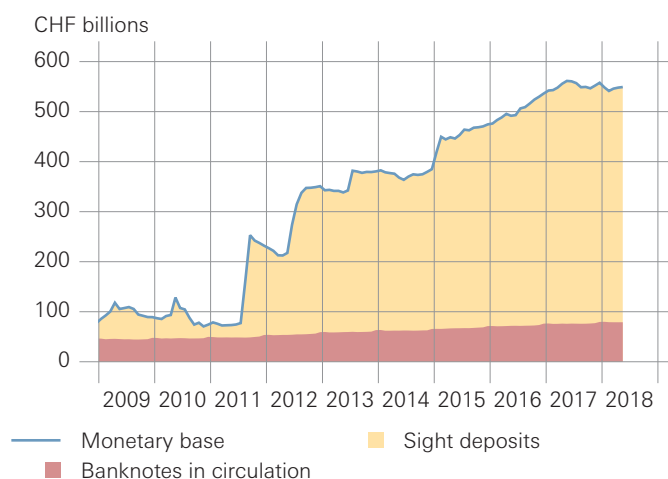


Chart 5.11

MONETARY AGGREGATES

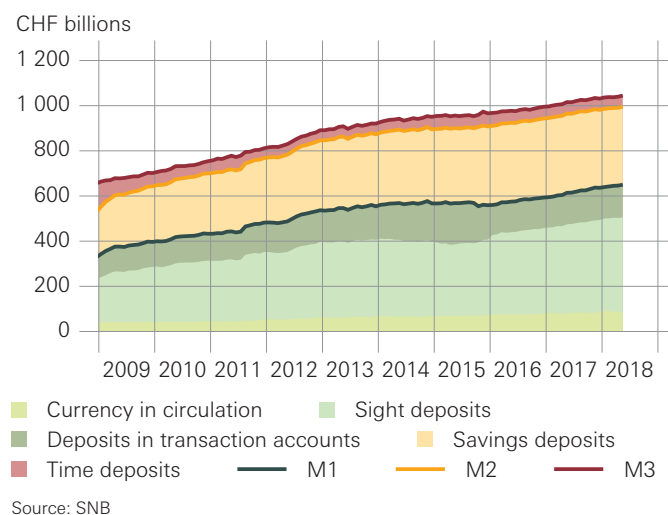


Chart 5.12

MORTGAGE CLAIMS AND INTEREST RATES

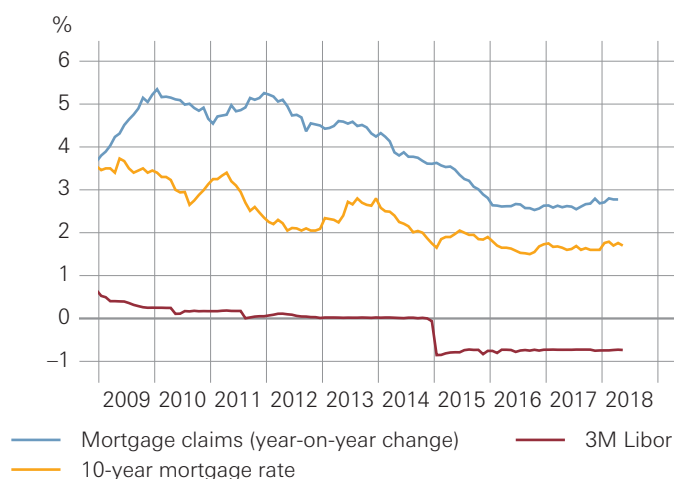
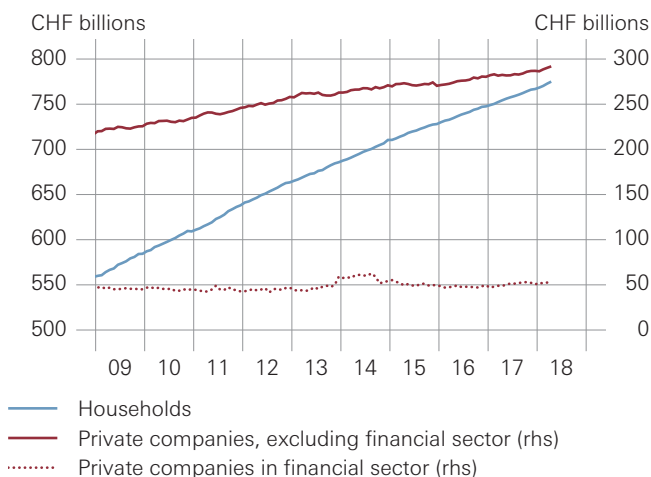


Chart 5.13

LOANS TO HOUSEHOLDS AND COMPANIES

Source: SNB

In the first quarter of 2018, the volume of other loans was 3.4% above its year-back level. Amid considerable fluctuations at times, the trend line for other loans has remained flat since the onset of the financial and economic crisis in 2008.

Lending growth by sector

Both households and non-financial companies have benefited from the favourable financing conditions in the last decade, as reflected by a steady rise in bank loans extended to these two important customer groups (cf. chart 5.13).

At the end of March 2018, loans to households recorded a year-on-year increase of CHF 20.3 billion (2.7%) and loans to non-financial companies a rise of CHF 8.6 billion (3.1%). Loans to financial companies, which exhibit greater volatility at a significantly lower volume, advanced by CHF 3.6 billion (7.3%) compared to the previous year.

Table 5.1

MONETARY AGGREGATES AND BANK LOANS

Year-on-year change in percent

	2017	2017			2018	2018		
		Q2	Q3	Q4	Q1	March	April	May
M1	6.6	6.4	6.6	7.5	7.4	7.1	6.9	5.9
M2	4.2	4.1	4.4	4.4	4.1	3.9	3.7	3.2
M3	3.7	3.7	4.2	4.0	3.7	3.3	3.3	2.9
Bank loans, total ^{1,3}	2.6	2.5	2.6	2.6	2.9	3.2	3.4	
Mortgage claims ^{1,3}	2.6	2.6	2.6	2.7	2.8	2.8	2.8	
Households ^{2,3}	2.6	2.6	2.5	2.6	2.5	2.5	2.6	
Private companies ^{2,3}	3.4	3.2	3.5	3.7	3.4	3.4	3.2	
Other loans ^{1,3}	2.4	2.2	2.3	2.1	3.4	5.4	6.9	
Secured ^{1,3}	4.9	5.0	4.6	2.1	3.1	5.0	9.6	
Unsecured ^{1,3}	0.6	0.2	0.7	2.1	3.6	5.7	4.9	

1 Monthly balance sheets (domestic bank offices, domestic positions, all currencies).

2 Credit volume statistics (domestic bank offices, domestic positions, all currencies).

3 Growth rates for the bank loans item and its components include information provided by banks on changes in their classification practices. Consequently, they may deviate from growth rates published on the SNB's data portal, data.snb.ch.

Source: SNB

Business cycle signals

Results of the SNB company talks

Second quarter of 2018

Report submitted to the Governing Board of the Swiss National Bank for its quarterly assessment.

The appraisals presented here are based on discussions between the SNB's delegates for regional economic relations and company managers. A total of 244 company talks were conducted between mid-April and the beginning of June.

Regions

Central Switzerland
Eastern Switzerland
Fribourg/Vaud/Valais
Geneva/Jura/Neuchâtel
Italian-speaking Switzerland
Mittelland
Northwestern Switzerland
Zurich

Delegates

Walter Näf
Urs Schönholzer
Aline Chabloz
Jean-Marc Falter
Fabio Bossi
Roland Scheurer
Daniel Hanimann
Rita Kobel

Key points

- In the second quarter, growth in the Swiss economy continued to be robust and broad-based.
- Technical capacity utilisation increased further. In many industries, utilisation is at a normal level. In parts of manufacturing, bottlenecks have become an issue.
- In the previous quarter, profit margins reattained a level regarded by company representatives as normal. In the quarter under review, higher purchase prices, in particular, appear to be exerting slightly greater pressure on margins.
- Company representatives are confident about the second half of the year. They expect the positive dynamic in real turnover to continue unabated in the next two quarters, due in large part to the favourable economic environment internationally.
- Companies are planning to hire more staff. Meanwhile, there is a growing shortage of specialised personnel.

CURRENT SITUATION

Ongoing turnover growth

In the second quarter, too, momentum has remained distinctly high in many companies and across all three sectors of the economy, namely services, manufacturing and construction. Company representatives report considerably stronger quarter-on-quarter growth in real turnover, i.e. turnover adjusted for changes in sales prices (cf. chart 1; for guidance on interpreting the charts, refer to the relevant section at the end of this report). A comparison with the corresponding year-back quarter also points to vigorous growth. Momentum has, however, not strengthened further.

Export-oriented companies are still looking at a favourable and geographically very broad-based demand situation. Company representatives attribute this development to trade with Europe, North America and Asia. In Brazil, meanwhile, there are signs of improvement. Companies supplying capital goods as well as goods for the automotive and medical technology industries recorded particularly dynamic results.

Utilisation of capacity normal

All in all, utilisation of technical capacity is at a normal level. The upward trend in capacity utilisation, which has been underway for roughly two years now, continued (cf. chart 2). This notwithstanding, the situation still varies considerably depending on the industry.

Around 40% of the companies rate their technical capacity utilisation as normal. However, one-third of the companies are reporting slight or substantial overutilisation. Some firms have added more shifts to meet increased demand and avoid delivery backlogs. With supply shortages more frequently considered a problem, companies are taking precautionary measures and increasing some of their stocks, particularly of raw materials as well as technical and

electronic components. Around one-third of the companies still report underutilisation.

Staff and specialised personnel in short supply

According to company representatives in all three sectors, current staff numbers are still slightly too low. One-third of the companies describe their staffing as slightly too low or much too low.

In addition, recruitment problems have become significantly more pronounced in the quarter under review and have reached the highest level since this time series began. A total of 42% of the companies find that it has become harder to source staff. On the one hand, this reflects the improved situation in the domestic labour market. On the other, the increasingly difficult recruitment of staff abroad, particularly in Germany, is frequently cited as a possible cause. This effect is a reflection of the improved economic situation in the target countries. The recruitment of engineers, professionals and – in all industries – IT specialists continues to be difficult. Companies are also reporting that they are still finding it increasingly challenging to source enough apprentices.

Higher purchase prices push down margins in places

In the previous quarter, profit margins had attained a level that company representatives regarded as normal. Higher turnover, a weaker franc year-on-year, and potential for price increases in some areas had contributed to this normalisation. In the quarter under review, pressure on margins appears to have increased once again. One of the reasons cited are the more expensive purchases of raw materials and intermediate inputs, which cannot (yet) be passed on entirely to the customer. Another factor contributing to the narrowing margins is that some companies have reached their capacity limit and are having to react with measures such as adding more shifts, working weekends and recruiting more temporary staff.

Chart 1

TURNOVER COMPARED TO PREVIOUS QUARTER



Developments in real turnover compared to the previous quarter. Positive (negative) index values signal an increase (decrease).
Source: SNB

Chart 2

CAPACITY UTILISATION



Current utilisation of technical capacity or infrastructure compared to a normal level. A positive (negative) index value signals a higher (lower) utilisation than normal.
Source: SNB

DEVELOPMENTS IN INDIVIDUAL INDUSTRIES

In the retail business, structural changes – particularly the accelerating shift to online shopping – remains a recurring topic; the importance of stationary trade continues to wane. Real turnover is significantly higher quarter-on-quarter, both in the wholesale and retail trade, and company representatives rank consumer confidence as generally favourable. There are individual reports that cross-border shopping is tapering off. However, margins in both trades are considerably tighter than usual. Frequently cited in this connection is more expensive procurement abroad, which until now has only been partially passed on to customers.

The finance sector made a positive showing, albeit less robust than in the previous quarter. Banks' margins, meanwhile, are falling short of the levels considered to be normal. Capacity remains underutilised, which company representatives linked in part to the still overly extensive network of bank branches.

In the hotel industry, real turnover was above that of the previous quarter. The majority of foreign guests hail from China, the US, the UK and, to an increasing extent again, Germany. Given that price increases are often possible, the margin situation is improving. In addition, an increased demand by companies for seminar locations has been noted. The situation in catering is less favourable, however, with turnover at the same level as the previous quarter and margins lower than normal.

Transportation and logistics companies, law firms, fiduciary companies, engineering and consultancy offices, as well as facility management services report continued favourable results.

Turnover in the information and communications technology industry has risen further, however margin pressure remains high amid strong competition, increasing personnel expenses and investment in infrastructure.

In manufacturing, most industries have recorded higher turnover than in the previous quarter. Utilisation has risen again and is now at its highest level in five years. The chemical and pharmaceutical industries report particularly strong performance, with high utilisation. The picture is similar in mechanical engineering and metal processing. In addition, margins here are slightly higher than usual. In the watchmaking industry, companies and their suppliers have regained a foothold, with turnover mostly higher than the previous quarter and the previous year. However, their margins remain slightly under pressure. Companies in printing and packaging as well as in the furniture trade report tighter-than-usual margins.

Momentum in construction remains relatively high, with moderate to marked overutilisation of production capacity, both in the building industry and in ancillary trades. Turnover growth is high in the finishing trade and civil engineering in particular. Margin pressure persists, however. There are few signs that construction activity may be noticeably slowing in the short term. Several company representatives talked about the growing number of vacant housing units and a barely sustainable price situation. Major construction projects by institutional investors are tending to enlarge these imbalances.

Chart 3

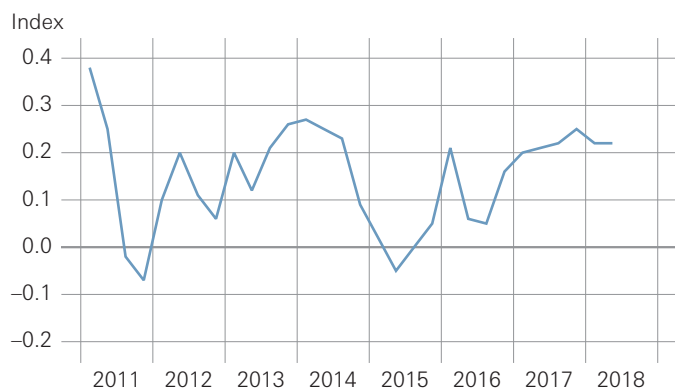
EXPECTED TURNOVER



Expected developments in real turnover over the coming two quarters. Positive (negative) index values indicate higher (lower) turnover expectations. Source: SNB

Chart 4

EXPECTED CAPACITY UTILISATION



Expected developments in utilisation of technical capacity or infrastructure over the coming two quarters. Positive (negative) index values indicate higher (lower) utilisation expectations. Source: SNB

Chart 5

EXPECTED EMPLOYMENT



Expected developments in staff numbers over the coming two quarters. Positive (negative) index values indicate higher (lower) expectations. Source: SNB

OUTLOOK

Confidence about second half of year

Company representatives remain highly optimistic about their business prospects for the next two quarters. Overall, real turnover is expected to rise (cf. chart 3); this applies to all three sectors. The main factor contributing to this optimism is the favourable international economic situation, but also current exchange rate conditions and, to some extent, the possibility of pushing through price increases. Many representatives see a major opportunity in the favourable positioning of their companies in terms of size, product range, sales markets and social trends. The order situation of many companies is extremely positive through to the end of the year.

The confidence of the business community is also reflected in higher expected utilisation of technical capacity and in infrastructure in the next two quarters (cf. chart 4). Almost one-third of the companies investing in equipment are also expanding capacity. Higher investment is forecast particularly in the mechanical and electrical engineering industries.

Slight price rises

Company representatives anticipate that both purchase and sales prices will rise in the next two quarters. However, for purchase prices, the increase is not expected to be as pronounced as in the previous quarter.

In the discussions, higher purchase prices were linked to demand-induced increases in raw material prices and to a weakening of the Swiss franc relative to last year. Such price increases are normally passed on to the customer. Since there can be a certain delay before these feed through, however, profit margins are temporarily affected.

Further staff increases planned

Personnel shortages and the prospect of higher capacity utilisation are affecting companies' recruitment plans. Managers from all three sectors are planning to increase staff numbers relatively significantly in the second half of the year (cf. chart 5), provided suitable candidates can be found. Many firms are placing a greater focus on in-house training and apprenticeships in an effort to attract and retain personnel. A number of the banks visited are planning to reduce staff numbers.

Rising wages

Based on information obtained in the talks, salary increases already granted or planned for 2018 average 1.2%, and many companies are intending to pay general bonuses. Wages are rising in the vast majority of industries. Above-average wage increases are being offered in the IT industry, in financial consulting and at engineering firms.

ENVIRONMENT AND RISKS

Companies rate uncertainty in their operating environment as relatively low. Internationally, potential hazards mentioned include geopolitical risks and protectionist tendencies, or even a trade dispute. With respect to Europe, a number of company representatives addressed unresolved structural problems. A renewed appreciation of the Swiss franc is also cited as a risk. The vast majority of managers describe the weakening of the franc against the euro since the summer of 2017 as ‘helpful’, while importers in particular allude to the increased procurement costs.

However, in the current, generally favourable economic environment, the companies indicate that opportunities more frequently outweigh risks. In this regard, intense competition over resources has resulted in a growing shortage of specialist staff as well as supply shortages of raw materials. Owing to the fact that the economy is performing so well almost everywhere, some managers feel that, realistically speaking, an economic weakening must be expected.

Many company representatives continue to find the complex domestic regulatory environment burdensome. Digitalisation is still being actively debated and explored in many industries; opinion among representatives as to whether it is an opportunity or a risk is divided, however. The pending corporate tax reform is also a frequently raised point in the discussions. In addition, managers expressed unease about the impact of low interest rates on the real estate market.

About this report

Approach

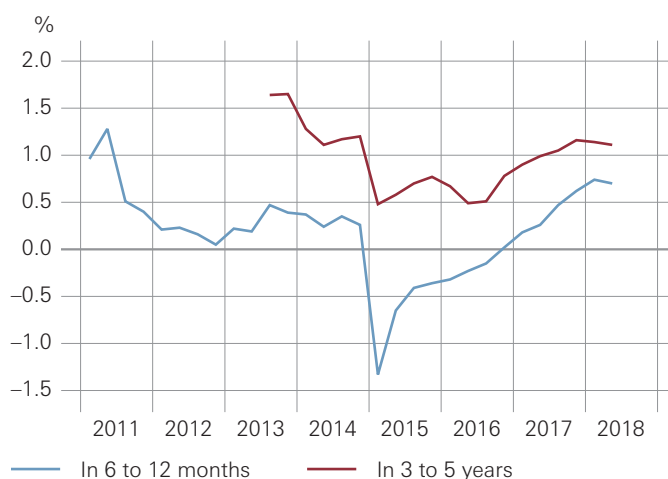
Each quarter, the SNB’s delegates for regional economic relations hold talks with managers of companies throughout Switzerland. The main results of these discussions are summarised in the ‘Business cycle signals’ report.

Approximately 240 companies are visited every quarter. The selection of companies reflects the industrial structure of the Swiss economy based on GDP and employment. Industries subject to stronger cyclical fluctuations are somewhat over-represented, while the public sector and agriculture are not taken into consideration. Different companies are visited from one quarter to the next.

In the talks, the SNB’s delegates capture primarily qualitative information. The discussions are nevertheless structured in such a way as to allow the delegates to grade part of the qualitative information received according to a numeric scale. This enables the results to be aggregated and represented graphically.

Chart 6

EXPECTED INFLATION



Source: SNB

INFLATION EXPECTATIONS

As part of the exchange of views, the delegates also regularly ask company representatives about their short and long-term inflation expectations as consumers, as measured by the consumer price index.

Inflation expectations have stabilised, both in the short and the medium term. Expectations for the next six to twelve months average 0.7%, just as in the previous quarter (blue line in chart 6). Medium-term inflation expectations – with a time horizon of three to five years – also remain unchanged from the previous quarter at 1.1% on average (red line in chart).

The five-tier scale ranges from ‘substantially higher’ or ‘much too high’ (+2), ‘slightly higher’ or ‘somewhat high’ (+1), ‘the same’ or ‘normal’ (0), ‘slightly lower’ or ‘somewhat low’ (-1), to ‘substantially lower’ or ‘much too low’ (-2).

Interpreting the charts

The charts are to be regarded as a numeric summary of the qualitative information received. The index value shown represents the average of the findings from all companies visited. When interpreting the curves, particular relevance should be attached to their overall development, rather than to their numeric level or individual changes.

Additional information

Further information on the ‘Business cycle signals’ report is available at www.snb.ch, *The SNB*, *SNB regional network*.



The Swiss National Bank goes to school – with Iconomix

Manuel Wälti¹

In 2007, the Swiss National Bank (SNB) launched its educational programme – Iconomix – to promote basic knowledge of economics in Switzerland. The decisions of a central bank ultimately have far-reaching consequences for the population. Therefore, as many people as possible should be able to understand the considerations underlying these decisions. In Switzerland, where citizens regularly vote on economic issues at all levels of government, a good understanding of economic matters is particularly important.

With its experiential learning approach, Iconomix is a supportive educational tool for economics classes in Swiss upper secondary schools. The feedback is positive – more than ten years after its launch, a considerable share of teachers use Iconomix on a regular basis. This favourable development has encouraged the SNB to maintain its commitment to education and to continue to provide schools with attractive resources for economic education in the future. The SNB is taking the ten-year anniversary of Iconomix as an opportunity to present its educational portal to a wider public and to answer the following questions:

- What are teachers' and students' experiences with Iconomix in the classroom, and what is the concept behind it? (Section I)
- How successful is Iconomix, and how is it positioned for the future? (Section II)

¹ The author would like to thank Carlos Lenz, Bertrand Rime, Enzo Rossi, Marcel Savioz, Andrea Siviero and Marcel Zimmermann for their valuable comments.

Action-oriented and focused on real-life situations, the Iconomix resources make economics classes much more stimulating and fun – and thus ensure long-term learning benefits.

Today, the students of class W3f at Kantonsschule Enge in Zurich, a high school with a focus on economics, are trading coffee. Their textbooks remain tucked away in their school bags. The desks have been arranged in the shape of a horseshoe around the virtual trading floor, and the prices of the concluded trades are continuously being projected onto the wall. In other words, their classroom has turned into a well-organised market, a miniature commodities exchange. And for once, the 21 students of this class are testing their skills as commodity traders. A card instructs them to buy or sell and indicates the price limit set by their virtual customers. It's not for real – it's 'Pitgame' from the Iconomix module 'Market and price formation'. The aim is to buy coffee at the lowest possible price or sell it at the highest possible price. Whenever the students have exploited all trading options, the roles are reassigned. After two more rounds, Frank Hayden, their economics and law teacher, brings the lively trading activity to a close and initiates a new phase in the learning process.

EDUCATIONAL GAMES AS MOTIVATORS

Pitgame is more than just fun. "I immerse myself much more in the topic than when I just sit there and absorb



The instruction on the Pitgame card reads: "Purchase 100 pounds of coffee for a maximum of \$46!"

information," describes Sara. Her classmate Jannik adds that learning only from books gets boring quite quickly. Frank Hayden is well aware of the educational effects of Pitgame. "The games provided by Iconomix are door-openers. They motivate the students to engage with a topic, which then triggers the reflection and learning process," he explains.

For Iconomix, the SNB's web-based educational platform, this didactic approach is part of the guiding concept



Pitgame turns the classroom into a trading floor. As commodity traders, the students learn through play how an equilibrium price is established in the market. (Photos: Stefan Huser)

(cf. Iconomix – economic topics in an educational format, p. 37). “A specific, challenging problem – such as a purchase order in Pitgame – can spark students’ interest and thus initiate and structure the learning process. Moreover, the learning benefits are often more sustainable when abstract theory is linked to a real-life scenario,” emphasises Prof. Dieter Euler, director of the Institute of Business Education and Educational Management at the University of St. Gallen (IWP-HSG) until the end of 2017. He is one of the scientific partners with whom Iconomix cooperates for quality assurance.²

CONVEYING THEORY THROUGH REAL-LIFE SCENARIOS

Engaging with the material, discussing and reflecting, practising and applying – these are the phases of an ideal learning cycle. So what does this mean in concrete terms for the students of class W3f, who are now back at their desks, poring over the tasks of the unit? Based on their experiences as commodity traders in the game, they are now transferring what they have learnt about the commodities exchange to other markets, focusing on advanced questions of topical interest: What conditions must be met for a housing market to function smoothly? Why is there often a grey market for concert tickets, which are sold at inflated prices?

² Besides Dieter Euler (IWP-HSG), the academic partners include Daniel Schmuki from the Swiss Federal Institute of Vocational Education and Training (SFIVET) and Carmela Aprea, previously at SFIVET, currently at the University of Mannheim, Germany. As part of a support evaluation, these educational experts develop innovative solutions for new teaching material in cooperation with Iconomix and help assess the quality of existing units.

In order to be able to transfer their knowledge to these areas, the students must have mastered the economic concepts of market and price formation, trading profit and market efficiency. Iconomix accompanies the entire learning cycle with diverse educational materials, providing teachers such as Frank Haydon with various sets of tasks to choose from.³ In addition, the Iconomix modules contain diverse educational formats, ranging from strategy games such as Pitgame to browser-supported simulations and an online challenge,⁴ from specialist texts to case studies. These resources are complemented by background information and didactic recommendations for teachers.

TOPICAL AND DIVERSE

“Iconomix also tackles highly topical issues – such as online shopping – that I haven’t yet encountered in any textbook,” says Chantal Donzé, a teacher of economics and law at Gymnase d’Yverdon. In fact, the Iconomix modules are continuously being revised and updated. “Producing all these materials in the same quality would be a mammoth task for me as a teacher – or not feasible at all in the case of games like Pitgame,” stresses Claudia Joller, specialist teacher at the vocational training centre for economics, IT and technology (Berufsbildungszentrum für Wirtschaft, Informatik und Technik) in Willisau. Iconomix provides teaching materials in German, French and Italian⁵ and in line with the academic requirements of each language region. “It is wonderful to get into a topic

³ A worksheet contains several tasks with different functions (i.e. learning, practising, transferring knowledge) at a pre-defined academic level.

⁴ Iconomix’s interactive ‘Online Challenge’ motivates students by conveying financial knowledge in an entertaining way. It also assists teachers in steering the entire learning process by providing them with suitable analytical tools.

⁵ Some teaching units are also available in English.



After the students have reflected on their approach in Pitgame, Frank Haydon summarises the key findings. (Photo: Stefan Huser)

with all the materials already available in Italian and, on top of that, with content relevant to Switzerland,” enthuses Giorgio Sailer, a high school teacher from Ticino. And Iconomix is not only aimed at high school students such as those in class W3f, but at the entire upper secondary education level⁶ with its wide range of school and subject types.

LESS ROUTINE AND FRONTAL TEACHING

Teachers agree that Iconomix not only reduces preparatory time but also leads to a new, improved quality of teaching. “Iconomix breaks routines. I’ve cut down on frontal teaching, and as a result, the students are more alert and active,” says Chantal Donzé. Christelle Ambrosini, teacher at the Ecole professionnelle artisanale et commerciale in Bulle strikes a similar chord: “The units enable me to let my lessons ‘breathe’ and, most of all, to give the students more space.” All teachers agree that the students interact more and learn through shared experiences. The teachers’ role in the classroom changes accordingly, as Sara Marti, teacher at Kantonschule

⁶ Upper secondary schools (secondary level II) comprise all schools that adolescents and young adults attend after compulsory schooling. Included are general education institutions such as grammar schools (Gymnasium) leading to a university entrance level, specialised high schools as well as advanced vocational schools and vocational high schools. The latter teach economics and humanities as part of the general education curriculum.

Iconomix – economic topics in an educational format

With Iconomix, its educational portal, the SNB aims to increase the competence of young adults in economic matters. It is directed at the teachers of economics and humanities in upper secondary schools, slightly over 4,000 teachers in total. Iconomix conveys basic economic principles which many economic situations are based on, e.g. the principle of market, competition and price formation, or the principle of externalities. These topics are professionally prepared and presented in more than 100 teaching units (counting the different language versions). They take didactic concepts of learning by problem-solving into account – when confronted with a particular problem, the students have to work independently with suitable methods to acquire knowledge and skills.

Iconomix is designed as a complementary resource for teachers, which they can employ to suit their own needs and those of their students. Accordingly, the range of topics, academic level, teaching formats and methods is diverse. In addition to teaching units, Iconomix provides a regularly updated list of reliable internet resources on economic issues. With its further education events and seminars, the programme also increases expertise and promotes know-how sharing among teachers.



In the letter game BOB, students experience the transition from barter economy to money economy.



Iconomix uses a newspaper format to highlight topics such as wage differentials, the role and mandate of the SNB, and the future of work from various perspectives.



The browser-supported simulation ‘Urbanias’ enables students to explore issues of urban economics in an analytical yet simple way.

Zürcher Oberland in Wetzikon observes. “When using Iconomix, I am more of a coach and moderator than a transmitter of knowledge,” she notes.

Teachers also need the courage and willingness to familiarise themselves with strategy games such as Pitgame and the related materials, as well as to incorporate them in their own lesson plans – “A little extra effort but definitely worth it,” believes Jan Denier, a teacher for general education subjects at a design school (Schule für Gestaltung Bern und Biel). Moreover, Iconomix offers practical support to teachers, such as workshops where they can familiarise themselves with the contents of the modules and specific implementation options and learn how to deal with any hurdles or obstacles that might present themselves.

BASIC PRINCIPLES AND SKILLS

So what skills have the students in class W3f acquired after completing the module on market and price formation? They have learned that in well-organised and transparent markets, any exchange usually generates a gain, and that sooner or later an equilibrium price is established. And that is not all – the students are also able to explain how the trading profit and equilibrium price come about. They have demonstrated that they can take on

the role of traders and are able to discuss the functioning of markets with each other at a level of detail appropriate to the required academic level. In brief, they have acquired skills extending far beyond purely factual knowledge. “Especially in view of digitalisation, it is becoming ever more important not only to acquire solid expertise, but also to develop skills that cannot be replaced by a machine, i.e. social skills and self-competence,” says business lecturer Dieter Euler. He adds that students have to be able and willing to continuously acquire new knowledge and, by applying it, solve specific problems.

Frank Haydon believes that this is exactly what good economics education can achieve. “I want to prepare my students for life, not just for the final exams,” the dedicated teacher says. “They must be able to put economic issues into context in order to have a basis for making sound decisions.” And what about the students from class W3f? They have developed an appetite after the lively economics class, and some have relocated to the school canteen, where the discussion continues. “Why is the Thai curry so much cheaper here than at the train station?” Jannik wonders. “C’mon, that’s obvious – no market prices,” replies Sara, “our canteen is subsidised!”



In workshops, teachers learn how to use Iconomix in the classroom and share their know-how. (Photos: Matthias Auer)

2

Digitalisation poses new challenges for Iconomix

As the digital classroom takes hold, traditional forms of teaching and learning need to be re-evaluated. Rather than taking radical steps, Iconomix is focusing on well thought-out solutions.

More than ten years after its launch, Iconomix has gained a reputation among teachers of economics or humanities in Switzerland. Almost 40 percent of teachers of these subjects at upper secondary schools actively use the website.⁷ The spread and usage are similarly good in all three major language regions. In particular, the wide range of topics and methods, technically sound content focusing on real-life situations and the modern didactic concept have convinced users, as is confirmed by their feedback.

Does this mean that the development of the educational portal is now completed? The answer is both yes and no. On the one hand, there is no need to revamp the Iconomix concept; this can be deduced from broad-based acceptance among the target group. On the other, Iconomix operates in a dynamic environment and, therefore, regularly needs to reorient itself. Teaching and learning concepts, and also teachers' needs, evolve over time and in the course of social and technological change in general. It is thus pivotal for Iconomix to continually evaluate its

⁷ Active users are defined as persons having used their account at least once within the past twelve months.

Facts on Iconomix

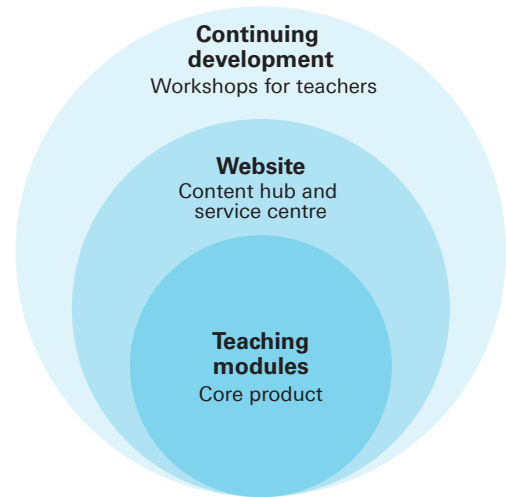
Anyone making a long-term commitment also wants to see results. But how best to measure the spread, usage and impact of a programme that ranges from individual worksheets and educational games to entire teaching sequences and workshops? Iconomix uses a diverse variety of indicators that are regularly reviewed, further developed and supplemented.

The data collected and published for 2017 includes the following:⁹

- 102 teaching units in three of Switzerland's official languages and in English

⁹ For more information please see www.iconomix.ch.

¹⁰ A unique visit is counted as every IP address accessing within a given period.



An overview of Iconomix resources.

educational resources and to measure their success (cf. Facts on Iconomix, below).

DIGITAL MEDIA FACILITATE INDIVIDUALISED LEARNING

The next few years will see digitalisation, in particular, leading to major changes in schools. Digital media enable students to organise learning according to their own specific prerequisites.⁸ This will bring about fundamental changes in the classroom, including the teacher and student roles. Individualised forms of learning will supplement, if not replace, standard methods of transmitting knowledge. In order to continue its mission successfully, Iconomix needs to move with this change and seize the opportunities arising from it.

⁸ Such as prior knowledge, motivation, cognitive abilities or attention.

- 131 blog posts in German and French
- 110,000 unique visits to the website¹⁰
- 63,000 downloads of teaching material
- 778 class sets ordered including teacher resources
- 22 teacher events held in Switzerland's three major language regions with around 425 participants overall

With the launch of the redesigned website in summer 2017, Iconomix hopes to collect even more and better data on the usage activity, interaction and collaboration of teachers and students in the medium term. This includes the number of teams set up, the number of worksheets completed online by students and the number of views for videos.



The well-structured and responsive website www.iconomix.ch provides teachers with easy access to a wide range of teaching material.

The website relaunch in summer 2017 was a crucial step in preparing Ionomix for the digital future. The initial focus of the technical redesign was on personalisation: The new website adapts to the usage habits and needs of registered users. A personalised start page (My Ionomix) and new functions for digitally generating and managing teaching teams (My teams) and classrooms (My classrooms) provide for efficient and flexible working. However, much remains to be done until teachers can exploit the opportunities of a virtual classroom (cf. Teaching in the digital classroom). In particular, the currently prevailing static elements such as PDF documents must be replaced with flexible, interactive online formats that can be enhanced with multimedia functions.

MULTIMEDIA CONTENT DELIVERY

At the same time, Ionomix needs to revise the tasks contained in the teaching units from a didactic perspective. The goal is to adjust them even better to the specific types of school and learning objectives so they will form the core of the programme in the future. During this process, collaboration with academics from the field of education will play a significant role (cf. footnote 2). The changeover to interactive online formats will also involve a critical assessment of the structure of the teaching and learning formats provided. Nowadays, young adults obtain information more from videos than texts. In the education sector, explanatory and learning videos are thus becoming increasingly important, also for practising and applying

Teaching in the digital classroom

In the future, teachers will open digital classrooms on the Ionomix platform, where they will be able to prepare and distribute worksheets to their students. This will be made possible through access to a central worksheet database, which will bundle all Ionomix worksheets in a digital format. The students can then tackle the tasks as they wish and at their own pace, either during classtime or as homework. Teachers can check progress and results, and also provide feedback, whenever and wherever they like. Compared to the traditional teaching environment, the digital classroom offers more didactic freedom. Of course, teachers will be free to continue using conventional methods, i.e. pen and paper, in their lessons. In future, it will be possible to read and work on documents online or hand them out as printouts. In technical jargon, this is called multi-channel publishing.



In the blog (available in German and French), the Ionomix team and guest authors provide suggestions and food for thought on current issues that can be explored in class, ranging from relevant third-party services and resources to background articles.

the knowledge gained. In this area, Ionomix should explore innovative multimedia learning formats.

DEVELOPING IN LINE WITH USER NEEDS

Quality teaching needs to stay abreast of current developments, and this continually presents challenges to an education platform such as Ionomix. As it stands, the current strategic direction is determined by digitalisation. Ionomix aims to facilitate this progress with modern tools. This does not require any radical changes, but simple solutions accepted by teachers and implemented in schools. Ionomix will not be able to realise all of the innovations envisaged on its own, the expansion of video resources being one example. It will therefore be entering into even more co-productions and partnerships than it has done previously. The favourable development experienced so far encourages the SNB to maintain its commitment to education. It will strive to continue to provide schools with attractive resources for economic education in the future, with teachers' needs remaining the top priority when it comes to any changes. Their trust has had to be earned with sound and practical solutions over the course of many years. Ionomix aims to maintain this trust and seek a sensible balance between change and continuity in the future as well.

References

- Information on Ionomix resources: Ionomix catalogue (2018/2019). www.ionomix.ch, *Service, Katalog* (available in German, French and Italian).
- Lernen mit Ionomix – Bildungsinhalte und didaktisches Leitkonzept/Apprendre avec Ionomix – Contenus pédagogiques et concept didactique (2018), www.ionomix.ch, *Über uns, Didaktisches Konzept, Hintergrunddokumente, Lernen mit Ionomix* (available in German and French).
- Euler, D. and P. Kühner (2017), Problem-Based Assignments as a Trigger for Developing Ethical and Reflective Competencies, *Interdisciplinary Journal of Problem-Based Learning*, 11(2).
- Lenz, C. and M. Wälti (2017), Die Nationalbank investiert in die Bildung/La Banque nationale investit dans la formation, *Die Volkswirtschaft/La Vie économique*, 8–9/2017 (available in German and French).

Chronicle of monetary events

The chronicle summarises the most recent monetary events. For events dating further back, please refer to SNB press releases and the *Annual Report* at www.snb.ch.

At its quarterly assessment of 21 June, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. In the SNB's view, the Swiss franc is still highly valued, and the situation on the foreign exchange market continues to be fragile. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market as necessary are intended to keep the attractiveness of Swiss franc investments low and ease pressure on the currency. The expansionary monetary policy aims to stabilise price developments and support economic activity.

June 2018

At its quarterly assessment of 15 March, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. In the SNB's view, the Swiss franc is still highly valued, and the situation on the foreign exchange market continues to be fragile. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market as necessary are intended to keep the attractiveness of Swiss franc investments low and ease pressure on the currency. The expansionary monetary policy aims to stabilise price developments and support economic activity.

March 2018

At its quarterly assessment of 14 December, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. The depreciation of the Swiss franc reflects the fact that safe havens are currently less sought after. The situation on the foreign exchange market continues to be fragile. In the SNB's view, the Swiss franc remains highly valued. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market as necessary remain essential. The expansionary monetary policy aims to stabilise price developments and support economic activity.

December 2017

At its quarterly assessment of 14 September, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. In the SNB's view, the Swiss franc is still highly valued, and the situation on the foreign exchange market is still fragile. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market are intended to make Swiss franc investments less attractive, thereby easing upward pressure on the currency. The expansionary monetary policy aims to stabilise price developments and support economic activity.

September 2017

At its quarterly assessment of 15 June, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. In the SNB's view, the Swiss franc is still significantly overvalued. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market are intended to make Swiss franc investments less attractive, thereby easing upward pressure on the currency. The expansionary monetary policy aims to stabilise price developments and support economic activity.

June 2017

At its quarterly assessment of 16 March, the SNB leaves the interest rate on sight deposits with the SNB at -0.75% and its target range for the three-month Libor at between -1.25% and -0.25% . The SNB reaffirms that it will remain active in the foreign exchange market, as necessary. In the SNB's view, the Swiss franc is still significantly overvalued. The negative interest rate and the SNB's willingness to intervene in the foreign exchange market are intended to make Swiss franc investments less attractive, thereby easing upward pressure on the currency. The expansionary monetary policy aims to stabilise price developments and support economic activity.

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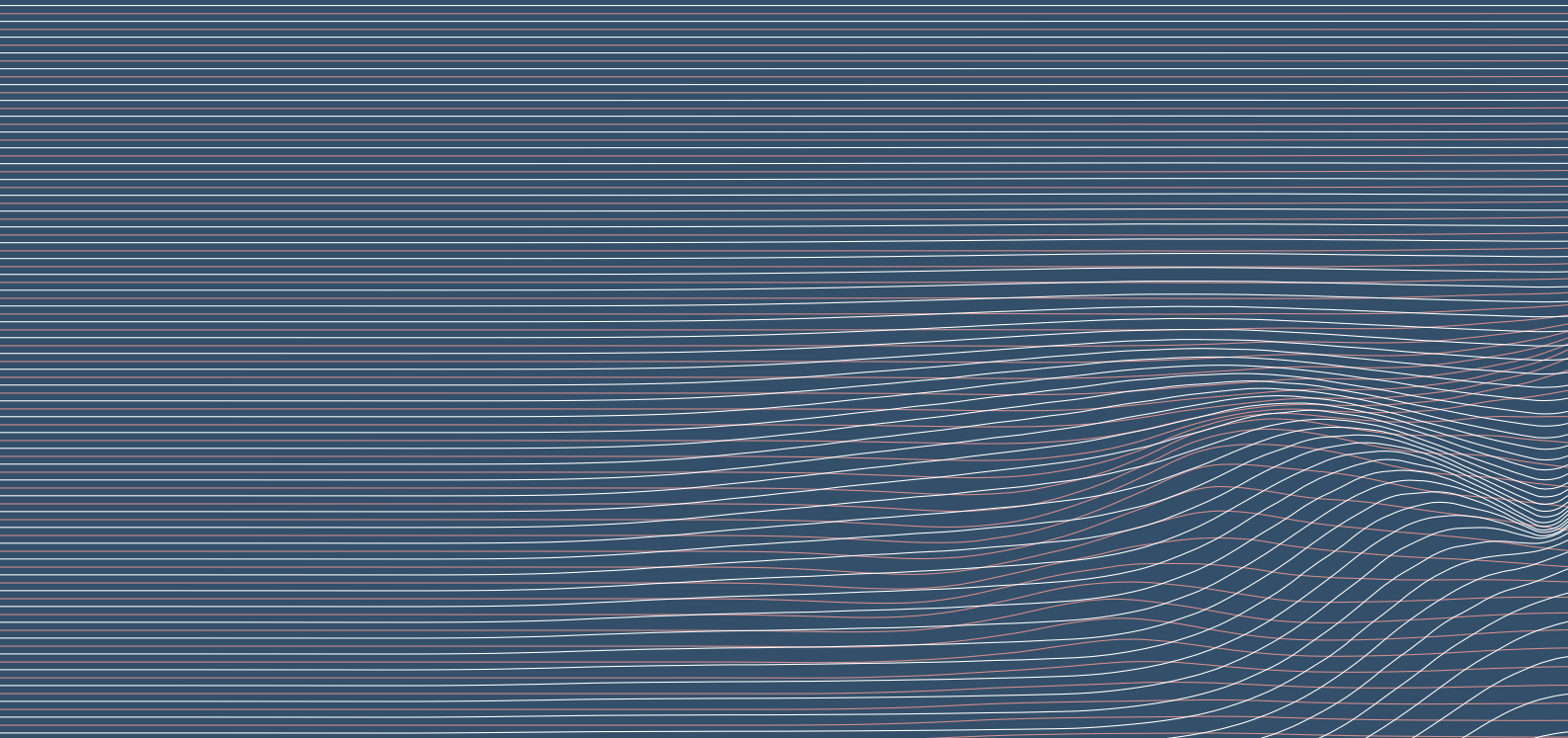
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