

Monthly Report

What Does the Turkish Referendum Result Mean for the Economy?

Aggregating Import Tariff Rates: a Review of Methodological Approaches

Trade Effects of Non-Tariff Measures: the ‘Chlorinated Chicken’ Case

EU Trade Regulations and the WTO Dispute Settlement on Hygienic Poultry



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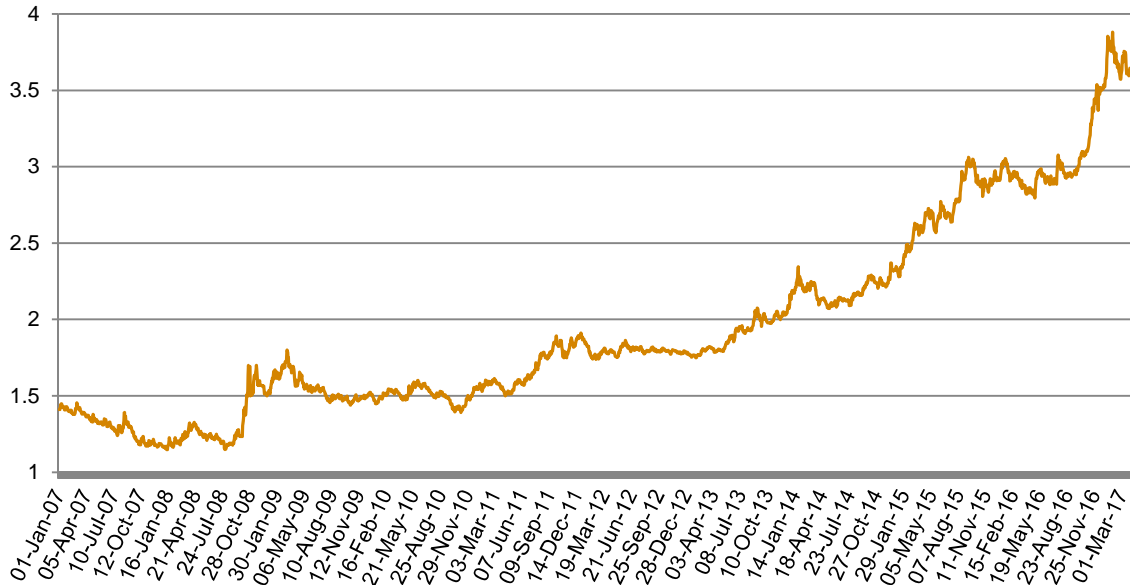
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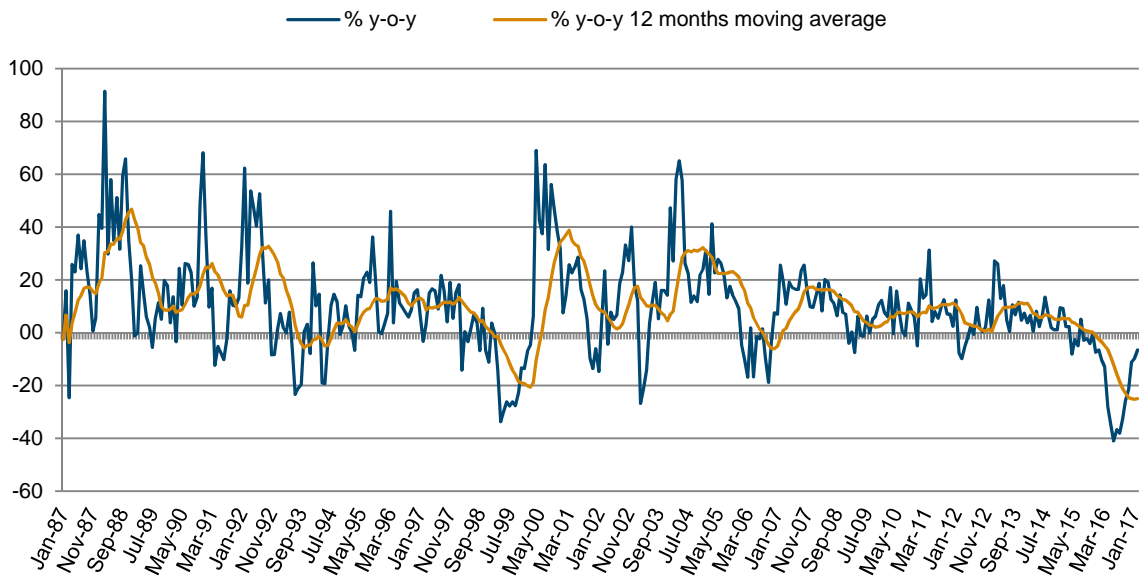
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Exchange rate of Turkish lira vs. US dollar, 2007-2017



Foreign tourist arrivals in Turkey in 1987-2017, % change year-on-year



Source: Turkish Central Bank.

Opinion Corner: What does the Turkish referendum result mean for the economy?

ANSWERED BY RICHARD GRIEVESON

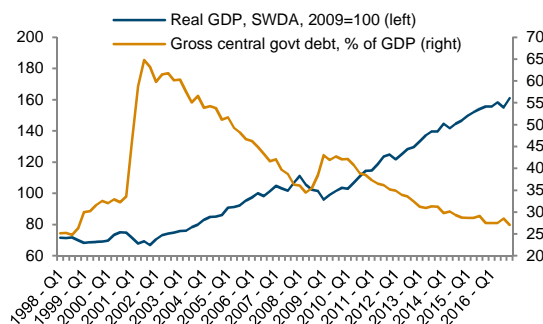
According to preliminary results, 51.4% of Turks voted to change the constitution in a referendum on 16 April 2017. The package that was voted on included 18 amendments to the constitution, the most noteworthy of which was a move from a parliamentary to a presidential system. Parliamentary and presidential elections will now be held in November 2019. The current president, Recep Tayyip Erdoğan, will stand for president and probably win. He will then be able to rule until 2029.

The election has clear and important political implications. First, there is a notable divide in Turkish society. Big cities, Western coastal areas, and the majority Kurdish South-East all voted 'no'. More rural, central areas of the country voted 'yes'. Second, the result was very close, and there have been widespread allegations of unfair competition and irregularities by domestic and international observers. The main opposition Republican People's Party (CHP) has vowed to challenge the results. Many will not accept the results as legitimate. Third, the constitutional changes will cement a more authoritarian system of government, with fewer checks and balances.

ECONOMY HAS DONE (QUITE) WELL UNDER AKP

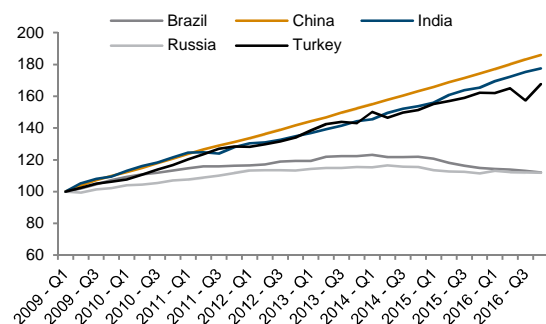
The economic implications are also significant. Broadly, Turkey has had a good run since Mr Erdoğan's Justice and Development Party (AKP) came to power in 2002. Much of this reflects the benign global conditions in the pre-crisis years, but the Turkish economy has grown much more than many other global peers, such as Russia and Brazil. Living standards have risen. Importantly for foreign investors, fiscal discipline has been maintained through several election cycles (see Figure 1). The performance since the global financial crisis has in particular been impressive (see Figure 2).

Figure 1 / AKP economic record



Note: SWDA stands for 'seasonally and working days adjusted'.
Source: Turkish Central Bank and Turkish Statistical Institute.

Figure 2 / Real GDP, Q1 2009=100



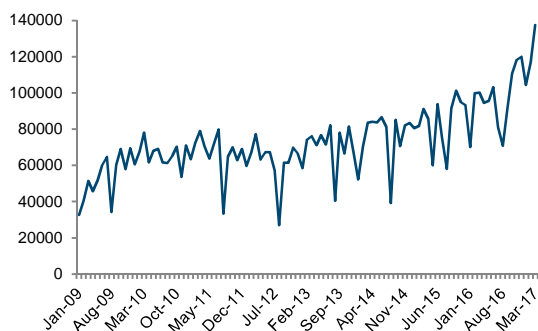
Source: National Statistics Offices.

However, in recent quarters, the economy has stuttered. Partly, this is because of the July 2016 failed coup attempt and subsequent domestic crackdown, which affected both consumer and business sentiment. In addition, security risk has played an important role, with tourism numbers falling quite dramatically in 2016 (see Graph of the Month on p. 1).

ECONOMY WILL NOT COLLAPSE

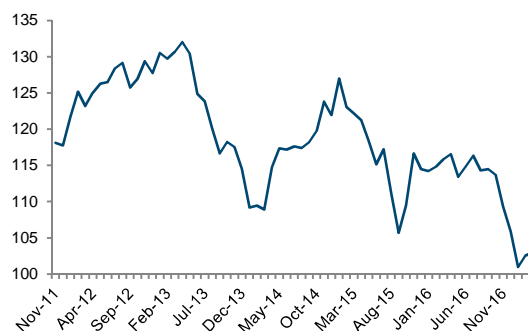
The government has several levers to support the economy, most notably fiscal policy. The fiscal discipline of the last 15 years means that there is now space to temporarily increase public spending and investment to offset weaker growth elsewhere. Central government debt stood at just 29% of GDP in 2016. In addition, the real effective exchange rate (REER) has depreciated significantly since mid-2016. This will be partly unwound due to high domestic inflation (see below). However, it will still provide important support to the export sector. Motor vehicles exports are a notable positive story for the economy in recent years, rising by 15% in 2016 (in terms of units) and over 20% in the first quarter of 2017 (see Figure 3). Turkey’s banking sector remains a source of strength. Meanwhile the population is growing fast which will support growth. Finally the oil price will likely stay low, which will be positive for the current account deficit.

Figure 3 / Motor vehicles exports, units



Source: Turkish Automotive Manufacturers Association.

Figure 4 / Real effective exchange rate, CPI-deflated



Source: Turkish Central Bank.

BUT PATH FROM HERE WILL BE ROCKY

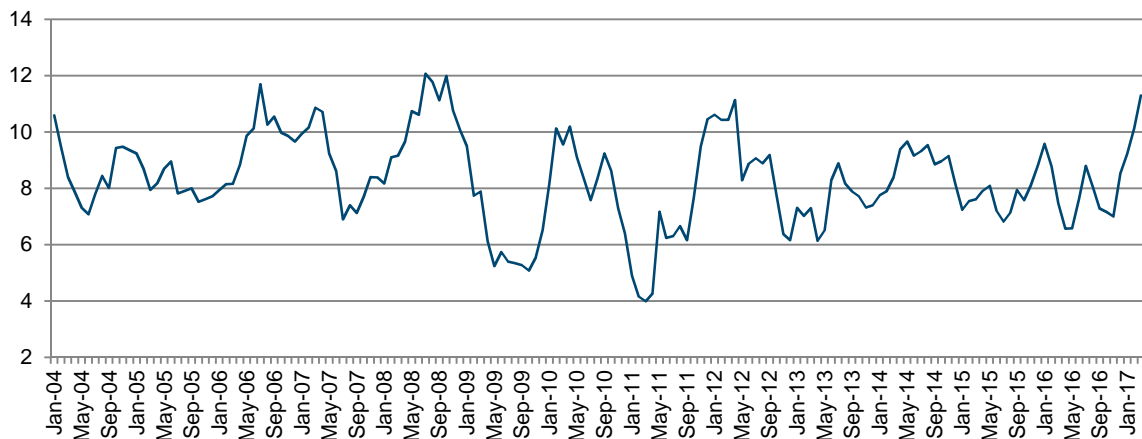
Despite these shock absorbers, the economic outlook in the context of the referendum result is challenging. Confidence has suffered, and at least in certain areas of the economy does not look set for a strong bounce back. Sentiment in some sectors is improving, notably construction (thanks to higher government spending) and export-oriented manufacturing (reflecting the real exchange rate adjustment). However, retail and consumer sentiment remains weak, which is an issue given that private consumption accounts for over 60% of GDP. Household spending was strong in Q4, but that may just reflect a combination of pent-up demand after a weak Q3, and a desire to lock in existing prices before the sharp depreciation of the lira feeds through to domestic inflation.

Some have argued that the narrow margin of victory and the ‘no’ vote in the major population centres will make Mr Erdoğan tread carefully, and that it may well prompt a series of structural reforms to boost the

economy's growth potential that would be welcomed by domestic and foreign investors. However, in the context of a disputed referendum result and Mr Erdoğan's need to win the 2019 election, this is unlikely. Political risk will remain high, and businesses hoping for a return to normal are likely to be disappointed. Consumer and business confidence will remain under pressure.

In addition to this, inflation has surged higher, reaching 11.3% year on year in March, the highest level since 2008 (see Figure 5). Consumer prices have been pushed up by the weakness of the lira, which has increased import costs. This will eat into real incomes, pushing down consumption growth. Meanwhile, financing the large external deficit in the context of higher political risk and rising US interest rates could become more challenging. Businesses forced to roll over maturing debt at higher interest rates are likely to cut back on investment and hiring. The tourism sector will also probably continue to struggle. Russian tourists are returning after the recent rapprochement between the two countries, which is a major positive for the sector. However, overall security risk and tensions with the EU will likely keep tourists from other key sources (such as Germany, the Netherlands, the UK and France) away.

Figure 5 / Consumer price inflation, % change, year on year



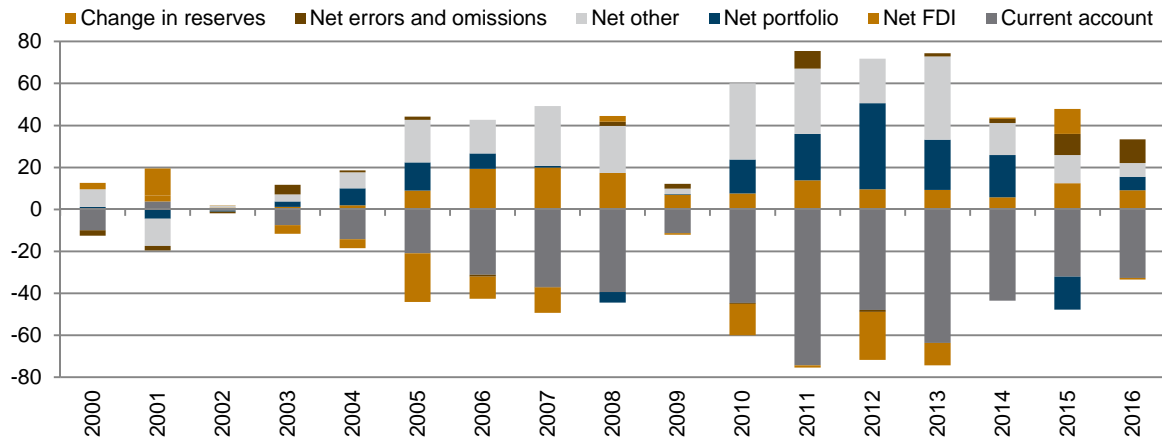
Source: Turkish Central Bank.

SAME OLD PROBLEMS

Monetary tightening in the United States and stronger domestic impediments to growth will make dealing with longer-term problems more difficult. The reason that Turkey has such a big external deficit in the first place is that domestic savings are so low. Under the AKP, this problem has been temporarily solved by private sector external borrowing to finance consumption and investment. As the economist Dani Rodrik has shown¹, Turkey's growth rate has been positively correlated with the size of the current account deficit. Growth has therefore been quite unbalanced. Moreover, FDI has typically made up a small share of the financing of Turkey's external deficit (see Figure 6), with large portfolio and other investment inflows driving an increase in external private debt.

¹ http://rodrik.typepad.com/dani_rodriks_weblog/2015/04/turkish-economic-myths.html

Figure 6 / Balance of payments, USD bn



Source: Turkish Central Bank.

The need to increase domestic savings, and to build up a larger competitive tradeable sector, is quite pressing in order to reduce Turkey's external imbalances. Domestic savings could be increased by the public sector, although fiscal loosening to boost support ahead of the 2019 elections is more likely. Meanwhile, higher FDI could help to build a more competitive manufacturing sector. A better business environment would help to attract more FDI, although the policy trajectory at present appears to be in the opposite direction.

List of acronyms for the following three articles

Acronym	Definition
ADPs	Antidumping measures
AMTs	Antimicrobial treatments
AVE	Ad valorem equivalent
CETA	Comprehensive Economic and Trade Agreement
CVDs	Countervailing duties
DSB	Dispute Settlement Body
EU	European Union
GMOs	Genetically modified organisms
HS	Harmonised System
NMS	New Member States
NTMs	Non-tariff measures
PRTs	Pathogen reduction treatments
QRs	Quantitative restrictions
SPS	Sanitary and phytosanitary (measures)
SGs	Safeguards
SSGs	Special safeguards
STCs	Specific trade concerns
TBTs	Technical barriers to trade
TTIP	Transatlantic Trade and Investment Partnership
TWA	Trade-weighted average
USA	United States of America
WTO	World Trade Organisation

Aggregating import tariff rates: a review of methodological approaches

BY OLIVER REITER

INTRODUCTION

Much has been written about the importance of free trade. N. Gregory Mankiw (2015) hypothesised two years ago that free trade might be one of the few topics that economists of different backgrounds actually agree on. However, recently we see signs of a turnaround – see, among many others, Autor et al. (2016). They point to the fact that the increased exposure to imports from China had negative employment effects on some US manufacturing industries and their local communities. This became one of the main issues of Donald Trump's election campaign.

The number of regional trade agreements has been growing all over the world over the last decades and, in consequence, import tariff rates have been reduced or in many cases even abolished. However, many countries still impose tariffs on imported products. Thus tariffs and their impact remain an interesting and important topic both for trade policy and academic research.

TARIFF RATES AGGREGATION PROCEDURES

A common problem of a researcher in the area of international trade is this: Tariff rates are defined on a single product or a narrow class of products. Most research is, however, due to data or computational constraints, applied on more aggregated product or industry categories. Trade policy too is usually focused on whole industry sectors rather than single products.

So, a common question of a researcher or a trade policy executive is: 'What is the *average tariff* that country Y imposes on products of industry I?' This initially simple question gets complicated quite quickly. Assume you have three products that are traded between two countries X and Y:

Table 1 / Tariffs and imports of a country Y

Product	Import tariff	Value of trade flow
A	4%	EUR 1000
B	8%	EUR 800
C	60%	EUR 10

One could go ahead simply to average the tariffs: $(4 + 8 + 60) / 3 = 24\%$. This – rather high – result is entirely driven by the large tariff applied on product C. The larger part of the trade flows face much lower tariffs. That is, giving equal weights to all tariff lines is probably not the best idea.

The next natural idea would be to use the values of the trade flows as weights in the aggregation process (i.e. a weighted average). This is done quite often, but has a serious drawback: The tariff that is imposed on a certain product certainly influences the traded quantity (and thus also the value of the trade flow). In our contrived example above, the restrictive tariff rate on product C is probably (part of) the reason why that product is hardly traded. So using the value of the trade flow as weight might severely underestimate the importance of the tariff rate for that trade flow.

Let us imagine an extreme case: A tariff rate so high that it actually inhibits all trade. With a trade flow of 0, this very restrictive tariff rate will not even enter the computation of the weighted average tariff. Or the other extreme: There is no tariff at all. Then, no matter how high the actual trade flow, it will not influence the calculation either. So, the weighted average method would underestimate the 'true' tariff rate in the first extreme case, but overestimate it in the second extreme case. Another, though minor, problem might be that a weighted average tariff might change (because of a change in trade flows, e.g. due to a change in consumer preferences), even if the underlying tariff rates do not change.

The solution to this problem is proposed by Bouët et al. (2004): They recommend not using the value of the trade flow from country X to country Y as weight but instead to create 'reference groups' for all importing countries (i.e., countries that are similar along some economic dimensions). Then, to weight and aggregate the bilateral tariff rates by the value of the trade flow of exporter X to the reference group country Y belongs to. One expects that the value of the trade to the reference group is 'nearer' to the value of the trade flow (or simply less endogenous) than we would observe if there were free trade between the two countries.

COMPARISON OF THE AGGREGATION PROCEDURES: THE CASE OF THE EU

To show the differences in the tariff rates aggregation procedures, I use export data from the UN Comtrade database¹ using a sample of 21 economies (the EU and the 20 extra-EU economies that are of particular interest). I collect all EU countries under one name, since the EU has a common trade regime with third countries. The disaggregated tariff rates are obtained from the WTO TRAINS and the WTO IDB databases² and the reference groups are based on the income groups as defined by the World Bank³. The three measures of average tariff rate⁴ are calculated as described above.

I first show the tariffs that are applied when exports from the EU cross the border of the importing country. Thus, I aggregated not only over all products of an industry, but also over all industries of a country.

From Figure 1 we can see that there has been a general downward tendency in import tariffs applied to EU products in nearly all countries in question. Only some tariff rates have been constant: Norway and Brazil held their tariffs over the whole period more or less unchanged. Especially marked has been the decline in Albania, China, India, Mexico and Russia. US tariffs are already low and slowly decreasing over time.

¹ See <https://comtrade.un.org/>

² Both databases can be acquired through <http://wits.worldbank.org/>

³ See <http://siteresources.worldbank.org/DATASTATISTICS/Resources/CLASS.XLS>

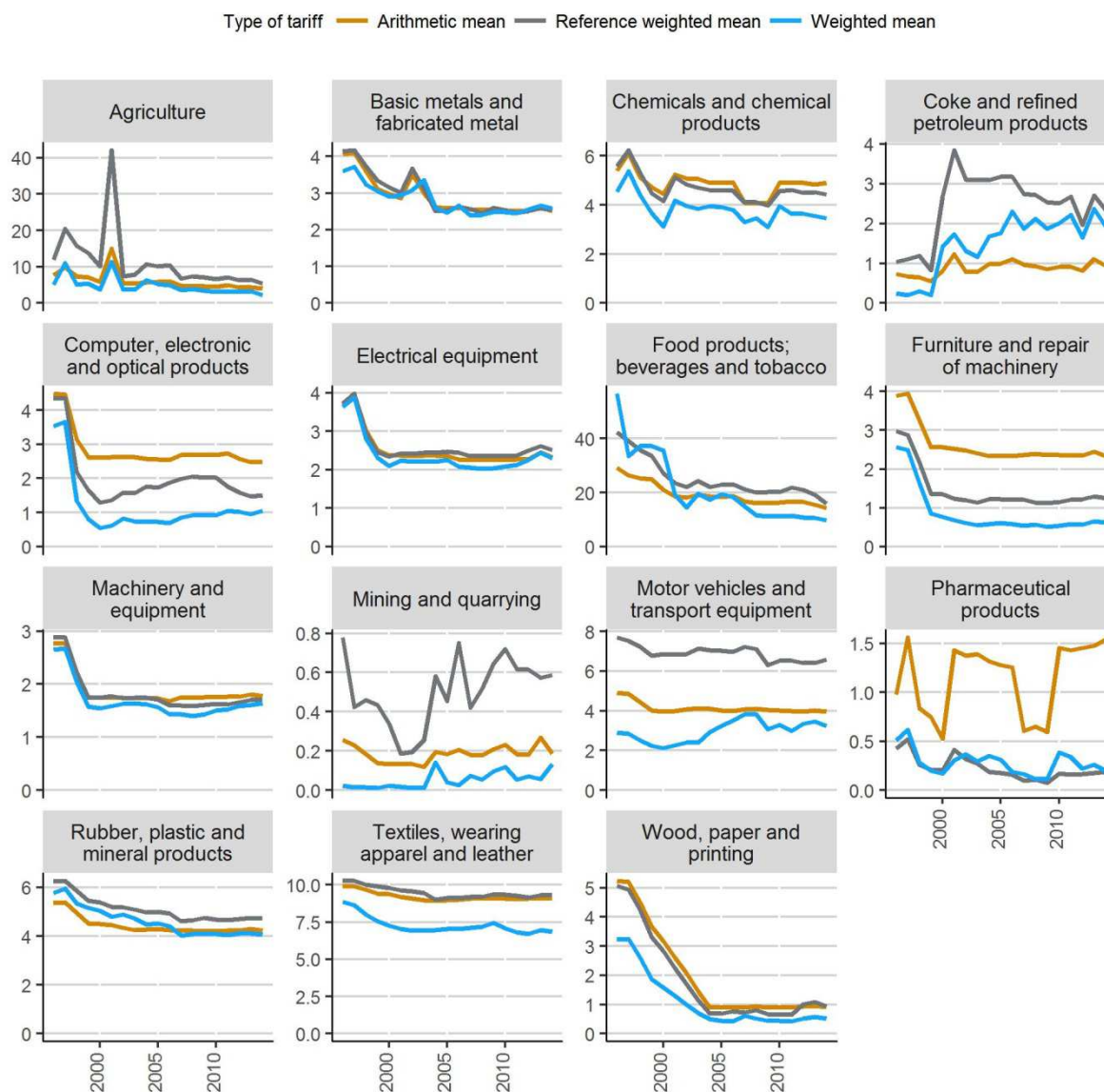
⁴ I refer to them as simple (arithmetic) average, weighted average and reference weighted average method, respectively.

Figure 1 / Tariffs that EU exports face in selected countries, in %



Source: Own calculations based on UN Comtrade and WTO TRAINS and IDB databases.

Also, we can observe that import tariffs faced by EU products in other countries have followed a similar path over time irrespective of the aggregation method applied. In 79% of cases, the simple average method yields the largest value: In Brazil, for instance, the simple average tariff is about 5 percentage points higher than the two weighted measures. A similarly big difference can only be observed in China. In all other countries, the differences between the three measures are visible, but usually less than 2 percentage points. Comparing the two weighted measures, we can see that the weighted average is most of the time (in 64% of the cases) larger than the reference weighted mean. The average difference is about 0.58 percentage points.

Figure 2 / Tariffs on US goods entering the EU, in %

Source: Own calculations based on UN Comtrade and WTO TRAINS and IDB databases.

When looking at the reverse case, at the bilateral tariffs that the EU imposes on imports, we would observe a very similar picture as that in Figure 1 (concerning development over time and the relative position of the three tariff aggregation procedures). Thus, for brevity, I will continue with tariffs on the industry level.

Figure 2 shows the evolution of tariffs that are imposed on US goods entering the EU single market. Please bear in mind that in Figure 2 all panels have a different scale on the y-axis (due to the initially high tariffs on food products, all lines in the other panels would essentially be flat if scales were the same).

As above, we see a general tendency of tariff rates in all industry categories to decrease over time. Especially strong has been the decline in the processed food sector, where the tariff rates decreased

from 40% to 15% (according to the reference weighted tariff measure). In the other sectors, the tariff rates were already quite low (especially when compared to other countries' tariff rates), but decreased further in the period from 1996 to 2014.

The initially very high tariff rates for food products require further explanation: Back in 1996, the EU imposed very high tariffs (50% and more) on several tobacco products, which were nevertheless heavily imported. This explains why both weighted aggregation methods yield higher value than the simple average method. An interesting observation concerns the relative position of weighted and reference weighted average methods: Contrary to the bilateral tariff rates in Figure 1, we see in Figure 2 that the reference weighted average tariff shows higher rates than the weighted average. This can only come from a substantial difference between the product composition of US exports to the EU and to the reference group. Take the panel of transport equipment: The difference between the two weighted methods is due to the fact that there are products in this industry category which are exported by the US relatively more to the reference group (high-income countries including e.g. Canada) than to the EU. That is why these products have a higher weight in the reference weighted method than in the weighted method. This observation has an interesting implication: There are considerable differences between the pattern of US exports to the reference group and to the EU. The source of this discrepancy could be due to European tariffs, differences in consumer preferences or a restrictive non-tariff measure that is imposed by the EU.

CONCLUSION

With the starting of the Brexit negotiations and the protectionist agenda of the new US administration, import tariffs will again become an active topic. Then it will be of particular importance to have an up-to-date knowledge of the tariffs that are in place. I have shown three methods of how tariffs imposed on individual products can be aggregated. While each procedure has its pros and cons, the comparison of the different methods can yield some insights and provide a summarised, yet accurate overview of the tariffs that are in place.

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Trade effects of non-tariff measures: the 'chlorinated chicken' case

BY JULIA GRÜBLER

Non-tariff measures (NTMs) imposed on trade flows between the United States and the European Union – in particular those related to food safety – have featured prominently in the media, at least since the start of negotiations of the Transatlantic Trade and Investment Partnership (TTIP). Top stories re-emerging in regular intervals included genetically modified organisms (GMOs), hormone-treated beef, and the popular 'chlorinated chicken', despite the EU's efforts to convince the European public that these issues were not on the negotiation table.¹

Since January 2017 – when US President Donald Trump took office – TTIP negotiations have come to a halt and a conclusion in the near future has become unlikely. If there is some unambiguously positive effect related to the stop of TTIP, it is that the fear of the public in the EU has decreased that food treated with chemicals and hormones or involving genetic engineering may enter the EU market (unrecognisably) and possibly push domestic goods produced differently out of the market.

For Britain, which is about to leave the EU, the tide has turned. When TTIP was still 'alive', the United Kingdom was one of the parties most strongly pushing for a successful conclusion of negotiations. In the run-up to the Brexit vote, the flexibility that the UK would gain in concluding trade agreements was strongly promoted as a benefit of leaving the EU. Today, however, the fear of the 'chlorinated chicken' has departed from continental Europe and has crossed the English Channel.² It was transmitted by an interview with the chief economist at the American Farm Bureau Federation, Bob Young, who argued that any trade deal with the United States would be contingent on allowing all US foods to the UK market³, including those not permitted by the EU as of today. Clearly, the Brexit vote comes along with a trade-off between flexibility and bargaining power.

WHAT IS THE 'CHLORINATED CHICKEN'?

In the United States, chlorinated water is used to wash butchered chicken to reduce disease-causing germs. By contrast, in the EU it has been forbidden since 1997 to use chlorine dioxide after butchering and also to import meat which is treated that way. In Austria, poultry is washed with hot water only and cooled down to 4°C thereafter. The low temperature does not kill germs, but it is cold enough to stop

¹ See e.g. the EC factsheet on food safety and animal and plant health in TTIP, <http://trade.ec.europa.eu/doclib/html/153004.htm>.

² See e.g. *Independent*, 'Brexit: Chlorine-soaked chickens will be on sale in UK if US gets its own way in trade deal, Nick Clegg warns', 16 January 2017, <http://www.independent.co.uk/news/uk/politics/a7529706.html>.

³ See e.g. *The Guardian*, 'Is chlorinated chicken about to hit our shelves after new US trade deal?', 29 January 2017, <https://www.theguardian.com/environment/2017/jan/29/britain-us-trade-deal-gm-food-eu-rules>.

them from spreading further. What ultimately kills potentially dangerous germs is when the meat is finally cooked.

Many of us associate chlorinated water with swimming pools, but we shudder at the thought of 'chlorinated chicken'. However, there is no evidence of any negative effects on health related to this method of processing meat (e.g. Anton et al., 2005). The primary concern lies in what economists call a 'moral hazard': if farmers and butchers take it for granted that all germs will be eliminated ex-post by antimicrobial solutions, hygienic practices – which should keep the risk of contamination of meat with dangerous germs such as salmonellae low in the first place – might degrade.⁴

THE DEVELOPMENT OF TRADE IN POULTRY

In Table 1 the top 10 importers and exporters of poultry are listed based on trade data of the year 2015. Saudi Arabia leads in the ranking of the top importers with a share of 9.2% of total imports globally, followed by the United Kingdom, Germany, Japan and Hong Kong. On the right-hand side of Table 1, it can be seen that Brazil is undisputedly the biggest exporter of poultry worldwide, followed by the United States and five EU member countries.

Table 1 / Top 10 importing and exporting countries of poultry in 2015

Top 10 Importers				Top 10 Exporters			
Reporter	Value	Rank	Share	Reporter	Value	Rank	Share
Saudi Arabia	1,921	1	9.2%	Brazil	6,379	1	26.2%
United Kingdom	1,635	2	7.8%	United States	3,473	2	14.2%
Germany	1,587	3	7.6%	Netherlands	2,510	3	10.3%
Japan	1,377	4	6.6%	Poland	1,797	4	7.4%
Hong Kong	1,314	5	6.3%	France	1,143	5	4.7%
France	1,127	6	5.4%	Germany	1,071	6	4.4%
Mexico	1,108	7	5.3%	Belgium	851	7	3.5%
China	930	8	4.4%	Hong Kong	789	8	3.2%
Netherlands	847	9	4.0%	China	608	9	2.5%
Canada	478	10	2.3%	Hungary	548	10	2.2%
Rest of the world	8,608	0	41.1%	Rest of the world	5,210		21.4%
Total	20,933	55	100.0%	Total	24,378		100.0%

Note: Import and export values in million USD.

Source: UN Comtrade, wiiw calculations.

Global figures, however, do not reflect the structure of poultry imports and exports of the European Union. Figure 1 presents the evolution of imports to the EU-15 and the EU-CEE-13 (to be understood as Central and Eastern European countries acceding to the EU in 2004 and thereafter). The EU is one of the biggest producers of poultry meat, with an excess production of about 3% in the year 2014⁵, with leading producing countries being Poland, France, Great Britain, Germany and Spain, each accounting for more than 10% of poultry production within the EU.

Both panels of Figure 1 show that EU members mainly consume poultry stemming from within the EU. The share of intra-EU poultry imports for the EU-CEE-13 amounts to overall 79% and to surprisingly

⁴ For a lucid summary on the situation in Austria (in German) see *Kurier*, 'Was ist ein Chlorhuhn?', 25 June 2014, <https://kurier.at/genuss/freihandelsabkommen-ttip-was-ist-ein-chlorhuhn/71.249.733>.

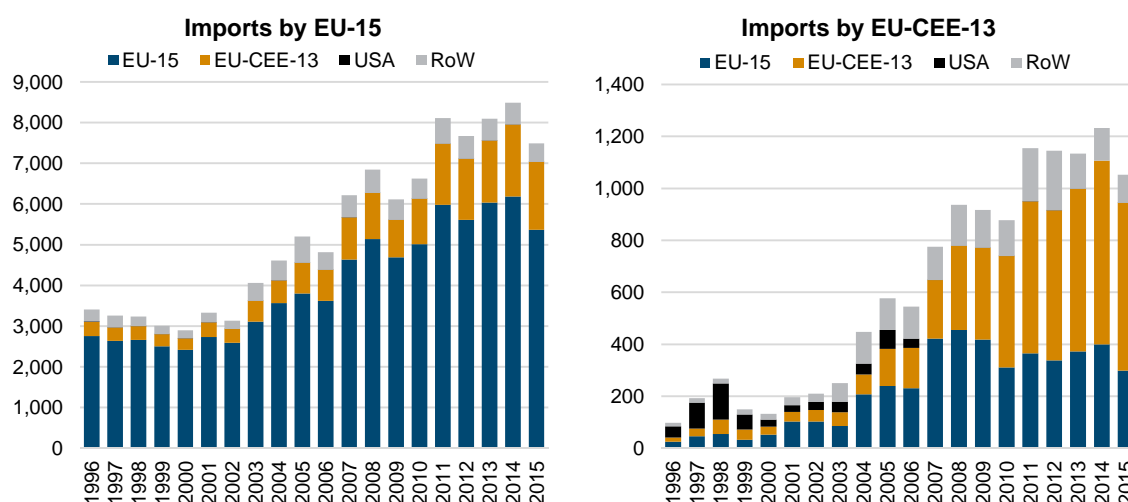
⁵ See European Commission, http://ec.europa.eu/agriculture/poultry_en.

high 92% for the EU-15. However, it is easily visible that EU-15 countries mainly import from other EU-15 members (more than 70% throughout the period 1996-2015), while for the EU-CEE-13 the share of poultry imports from EU-15 countries has been decreasing. From the year 2010 onwards, the share of intra-EU-CEE-13 imports exceeded the share of imports from the EU-15 by more than 10 and up to 33 percentage points.

In the context of the 'chlorinated chicken' discussion, we need to also pay attention to the black bars of Figure 1. Though merely visible, EU-15 poultry imports from the United States still accounted for USD 15.5 million in 1996. These have dropped to USD 4.7 million in 1997, when the washing of butchered chicken with chlorinated water was legally forbidden. Since then poultry imports from the US have never come even close to USD 2 million again, suggesting that the vast majority of US poultry exporters have adopted this production technology.

How important this legislation was is evident when comparing figures for the EU-15 with figures for the EU-CEE-13 on the right panel of Figure 1. The share of poultry imports to the EU-CEE-13 from the United States dropped from more than 50% in the mid-1990s to around 15% prior to the EU enlargement in 2004, further down to less than 10% prior to the EU enlargement in 2007, and finally dropped to zero from 2007 onwards.

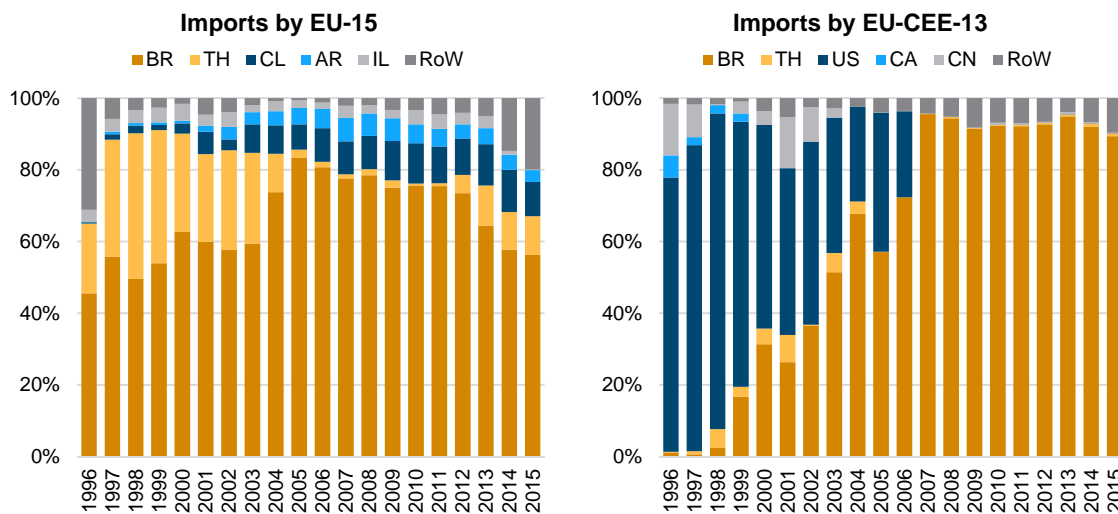
Figure 1 / Evolution of poultry imports to the EU-15 and the EU-CEE-13



Note: Import values in million USD. RoW refers to 'rest of the world'.

Source: UN Comtrade, wiiw calculations.

To gain a better understanding of the potential compositional effects of trade policy measures, Figure 2 additionally plots poultry imports to the EU-15 and EU-CEE-13, respectively, distinguishing between the top 5 source countries per importing region. It shows how Brazil as an exporting country today dominates poultry imports from outside the EU and how it was substituting imports from Thailand to the EU-15 and imports from North America and China to the EU-CEE-13 in the early 2000s. Yet, while Brazil's share in extra-EU imports is relatively stable at around 90% for imports of the EU-CEE-13, its share has been decreasing for the EU-15, with Argentina and Chile appearing as new important players on the market.

Figure 2 / Composition of top 5 extra-EU source countries of poultry imports to the EU

RoW refers to 'rest of the world'.

Source: UN Comtrade, wiiw calculations.

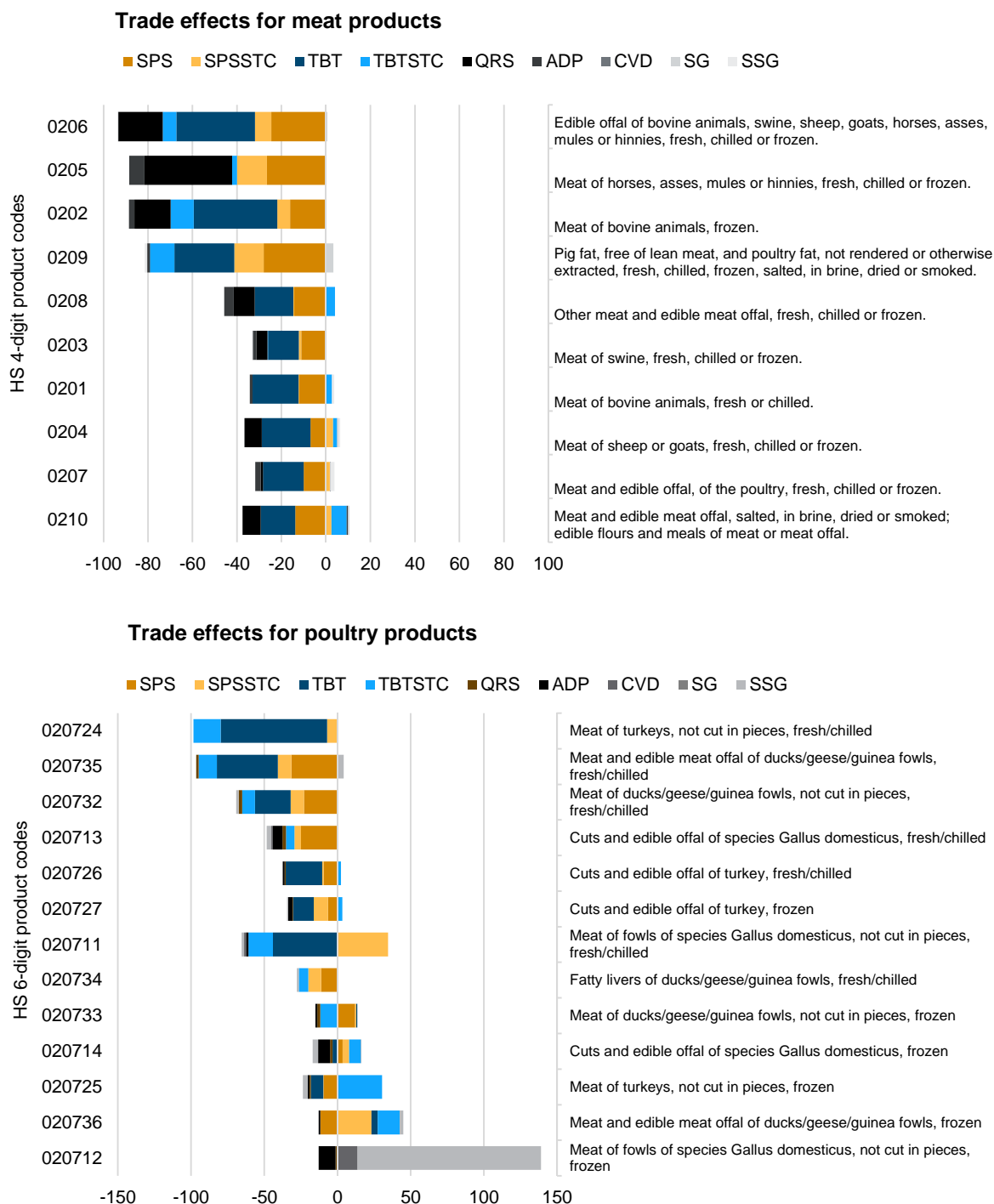
POULTRY IMPORTS FACING MULTIPLE TYPES OF NTMS

Observing that South American poultry exporters successfully enter the EU while US poultry by and large disappeared from the EU market, there is no need to search for potential effects of tariffs. Rather, it is non-tariff measures – such as the regulation on 'chlorinated chicken' – driving these developments. A forthcoming wiiw study (Ghodsi et al., forthcoming) shows that trade effects of NTMs vary greatly across different products.

Trade effects of NTMs, based on notifications to the WTO, were estimated for more than 100 importing countries and over 5,000 products over the period 1995-2014. Results for meat products are depicted in the first panel of Figure 3. Meat products in turn consist of ten 4-digit products as classified by the Harmonised System (HS). One of them is poultry (HS 0207), which is presented in greater detail in the second panel of Figure 3. It shows the results across 13 HS 6-digit products out of 19 poultry products in total listed in the Harmonised System. HS 6-digit products do not only differentiate by type of animal (e.g. chicken, duck, turkey) but also whether it is cut in pieces, and whether it is fresh, chilled or frozen.

The estimates show how import quantities are expected to increase or decrease (in %) on average due to an additional NTM. Negative values in Figure 3 indicate that NTMs on average decrease trade, while positive values point towards trade-enhancing effects of NTMs. The first graph shows that it is mainly sanitary and phytosanitary measures (SPS), set up to protect human, animal and plant life, as well as technical barriers to trade (TBTs) such as packaging and labelling requirements not related to health concerns, which impede trade in poultry globally. The second graph further breaks down the trade effects for poultry for different sub-product categories. It shows, for example, that the greatest trade-impeding effects of TBTs are associated with meat of turkeys (HS 020724), ducks, geese or guinea fowls (HS 020735, HS 020711). SPS measures hit most prominently imports of ducks, geese or guinea fowls (HS 020732, 020735, 020713).

Figure 3 / Trade effects (in %) of NTMs for meat and poultry products



Notes: Simple average over all trade effects significantly different from zero at the 10% level. Meat products refer to the HS 2 digit group 02 'meat and edible meat offal' and show trade effects for underlying HS 4-digit products. Poultry refers to the HS 4-digit group 0207 'meat and edible offal of poultry; of the poultry of heading no. 0105 (i.e. fowls of the species Gallus domesticus), fresh, chilled or frozen' and shows trade effects for underlying HS 6-digit products.

As one would expect, quantitative restrictions (QRS) display throughout negative effects on imports. In the case of poultry, this also holds true for most of the examined counteracting measures such as

antidumping (ADP), countervailing duties (CVDs), safeguards (SGs) and special safeguards (SSGs)⁶, which aim at reducing harm to the domestic industry by combating unfair trade practices.

However, we need to mention that there are also some positive trade effects, of TBTs and SPS measures in particular. They do bear the potential of providing additional information to the consumers, increasing trust in the quality of the products and thereby boosting trade. Also on the positive side, we find some effects of specific trade concerns (STCs) raised at the WTO with respect to TBTs and SPS measures.

WHICH CONCLUSIONS CAN BE DRAWN FROM THE 'CHLORINATED CHICKEN' CASE?

Although tariffs still play a role in international trade – particularly for agricultural products – their importance is decreasing over time. By contrast, non-tariff measures gain in importance, even for trade between industrialised countries. The 'chlorinated chicken' case is an interesting example in several respects: Emotional debates in the public and media during active TTIP negotiations, and recurring with the Brexit vote, show the stark difference in preferences regarding production processes between the EU and the United States. It also highlights how legislation can lead to severe distributional consequences, with US poultry meat disappearing from the EU market, despite being the second largest poultry exporter worldwide, while Latin American countries enter the EU market. Simple descriptive statistics also show bluntly the differences in preferences regarding source countries of meat within the EU. Lastly, in the case of poultry, the majority of non-tariff measures are on average associated with negative effects on imports. However, SPS measures and TBTs do also bear the potential of increasing trade by means of consumer information.

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⁶ Antidumping targets price dumping. Countervailing duties are imposed against subsidised exports. Safeguards are temporary measures when the importer is facing a large import influx harming its domestic industry. Special safeguard measures are duties imposed on agricultural products after a surge in imports or a fall in import prices.

<http://www.independent.co.uk/news/uk/politics/brexit-latest-news-chemical-chicken-hlorine-soaked-uk-us-trade-deal-nick-clegg-lib-dem-warns-donald-a7529706.html>.

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EU trade regulations and the WTO dispute settlement on hygienic poultry

BY MAHDI GHODSI

INTRODUCTION

Qualitative regulations, standards, and security and safeguard measures are now inseparable and essential parts of the international trade policies that are embodied within the non-tariff measures (NTMs) to improve safety, human and animal health, environmental quality, and market efficiencies. As long as these measures improve the quality of the products, thus benefiting consumer health or environmental quality, etc., the imposition of these trade policy tools might be accepted by trade partners. In order to facilitate trade without removing these standard-like regulations, new trade agreements have evolved in their complexities. However, these modern agreements take after the classical trade agreements within the World Trade Organisation (WTO) allowing the use of quality NTMs but leaving their legitimacy judgment fairly opaque and complex.

The arguments pro and con can go beyond a single country for standards and regulations. In general, when an exporting country produces with similar production standards as the country imposing the regulations does, the implications of the NTM are not necessarily trade restrictive. However, there might be a certain trade reduction (or, alternatively, quality improvement) in the producing countries which are not enjoying the same level of standards. With respect to the recent trade negotiations, it is important to find out how the two economic partners meet each other's standards. In fact, the existing framework of standards between the two partners can identify the contractual terms of the agreements under which standard-like trade barriers and NTMs should take shape.

A problem emerges when the domestic legal systems of countries diverge substantially. More specifically, the regulations within the EU could differ in essence from those of other countries such as the United States, mainly because the legal systems are different. For instance, in the EU, producers are responsible for initially proving that their products do not harm the consumers; only then are they permitted to produce. In contrast, according to international regulations within the WTO agreements, which are closer to the legal framework in the US, production shall be halted not until evidence is provided that the consumer is harmed by the product. These systematic differences determining the trade regulations have resulted in several trade disputes.

Due to their delicate health-related issues, food and agricultural products are considered as the most important subjects for the concerns of consumers who can shape the policies of the governments and ultimately trade agreements. However, where scientific evidence for such concerns is not available or remains disputed, standards and NTMs might lead to economic losses by trade disputes due to differences in the legal systems of the two sides of conflict. Such disputes could be avoided by mutual recognition of standards in the legal systems.

The poultry market in the EU has recently been highlighted in the media in junction with the negotiations on the mega trade deals between the EU and Canada (CETA) and the United States (TTIP). Moreover, an ongoing dispute settlement case within the WTO on the regulations imposed by the EU on its imports of poultry motivated a wiiw study (Ghodsi and Stehrer, forthcoming), whose findings are briefly discussed in this article.

DISPUTE SETTLEMENTS

EU legislations concerning sanitary and phytosanitary (SPS) measures against genetically modified organisms (GMOs) and hormones in meats restrict the imports of biotech agricultural and food products. They caused dispute settlement cases within the WTO. In 1996, Canada and the United States requested the Dispute Settlement Body (DSB) of the WTO for consultation on hormones measures imposed by the EU on meat products. This became a very long lasting dispute and in 1999, Canada requested remedies of CAD 75 million in suspension of concessions to the EU while the US requested USD 2 billion. In 2009 and 2011, mutually accepted solutions on the implementation of remedies were notified to the WTO by the United States and Canada, respectively.¹

In May 2003, the United States, Canada and Argentina requested WTO dispute consultations on measures affecting the approval and marketing of biotech products. The dispute took a few years and the European Commission failed to provide sufficient scientific evidence against the biotech products. Although there was a mutually agreed solution between the EU and Canada and Argentina, in January 2008, the request for retaliation by the US was approved by the DSB of the WTO.

Despite the legitimate intention of the EU to protect its society and its final consumers by imposing the standards, no scientific evidence for the harms of the imported GMOs and biotech products which would justify these NTMs has been provided so far. The resulting costs of remedies and retaliations of these disputes on the overarching standards and regulations could be potential burdens on all the EU taxpayers.

Similar debates are still ongoing with other regulations in force, such as those applying to 'chlorinated chicken'. This is a ban on the imports to the EU of poultry washed with certain pathogen reduction treatments (PRTs). The ban exists since 1997 with several amendments. In October 2006, the United States raised a specific trade concern (STC) on SPS measures imposed by the EU to the WTO claiming that 'although the European Commission had proposed legislation permitting the use of PRTs in January 2006 the ban on imported poultry had not been removed'. The EU legislation suggests that the use of antimicrobial treatments (AMTs) might be abused to compensate for low hygienic quality of production. If the quality standards for poultry in an exporting country such as the United States were high enough, these countries could increase their exports to the EU by eliminating the use of AMTs and PRTs. Finally, in January 2009, the United States requested the DSB for consultations with the EU regarding these regulations. Australia, China, Guatemala, the Republic of Korea, New Zealand, Norway and Chinese Taipei subsequently reserved their third-party rights, indicating their 'substantial trade interest' in the matter, while the Panel body has not yet been set up for the case.

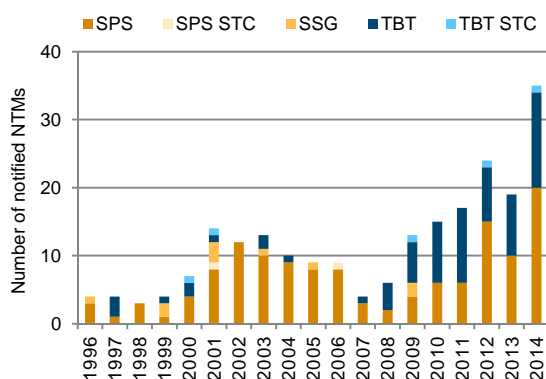
¹ The final decisions of arbitrators determined CAD 11.3 million and USD 116.8 million as the level of nullification suffered by Canada and the USA, respectively.

TASTE FOR DOMESTIC PRODUCTION OR PROTECTIONISM?

With the excess export of about 3% of production in 2014, the EU is self-sufficient in supplying its own poultry market. Intra-EU trade has gained in importance, especially after the EU accession of the new Member States (NMS) such as Poland, which accounts for about 13% of total EU poultry production. After the Netherlands, with 26% of intra-EU poultry exports in 2014, Poland ranks second with 15% of intra-EU trade. The EU's heavy reliance on domestically produced poultry might be the result of consumers' preferences or domestic policy support.

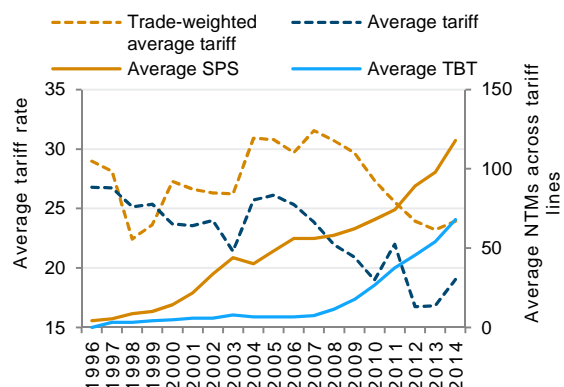
Among extra-EU exporters, Brazil is the major supplier of poultry; its share reached as much as 84.5% of extra-EU imports in 2005. Until 2002, Thailand had been the second major exporter of poultry to the EU with 28% of extra-EU imports. However, after 2003 it was replaced by Chile with over 10% of extra-EU imports. Argentina is another South American large supplier of poultry to the EU with an average share of 4.3% since the turn of the new millennium. In 2014, Ukraine became another major exporter of poultry to the EU, covering around 9% of extra-EU imports after the EU had granted unilateral trade preferences to Ukraine following the 'Maidan revolution'. The United States and Canada have accounted for less than 1% of extra-EU poultry imports since 1997.

Figure 1 / NTMs on poultry maintained by the EU



Source: Ghodsi et al. (forthcoming).

Figure 2 / EU effective trade policy on poultry imports



Source: Ghodsi et al. (forthcoming).

The decreasing share of extra-EU imports of poultry coincides with the increasing number of qualitative NTMs. Figure 1 shows that the number of EU regulations within SPS measures and technical barriers to trade (TBTs) with respect to poultry notified to the WTO has increased since 1996. The majority of these SPS measures and all TBTs are imposed against all countries in the world. Regulations imposed by the EU range from emergency SPS measures for the protection of human health against avian influenza in Chile to regular unilateral SPS measures regarding salmonella in fresh poultry meat, and to labelling and consumer information measures within TBTs. There are few Specific Trade Concerns (STCs) raised against the imposition of other SPS measures and TBTs that are not directly notified to the WTO; these are shown in lighter colour. There are also few special safeguard (SSG) measures implemented during this period that were mainly aimed at controlling import surges due to price falls.

The EU trade policy with respect to poultry and its effective coverage by the NTMs are depicted in Figure 2. Again, it can be observed that the average number of NTMs affecting bilateral 6-digit tariff lines

has increased over time. Since SPS measures are typically regulations on food safety standards and human health, the coverage of SPS measures on poultry imports is more effective than that of TBTs. At the same time, the average import tariff in the poultry sector had a peak of 26% in 2005 and gradually decreased to its lowest level of 17% in 2013. Considering the trade-weighted average (TWA), tariffs show a slightly different picture. In fact, the highest TWA imposed effectively by the EU was above 31% in 2007, coinciding with the financial crisis. This shows that products with higher trade values were subject to higher tariff rates. Moreover, the overall picture presented in Figure 2 shows that, while EU import tariffs on poultry have been reduced over the past twenty years by WTO concession commitments and by the EU customs union, effective imposed NTMs have been on the rise. Taking into account the decreasing share of extra-EU imports during the same period, it can be argued that NTM proliferation was more effective than tariff reduction as a restrictive trade policy measure in the poultry sector.

HETEROGENEOUS IMPACT OF NTMS

In a gravity framework, poultry imports (at 6-digit level of the Harmonised System, HS) to the 28 EU members during the period 1996-2014 were analysed. In general, a statistically significant negative impact of tariffs and technical barriers to trade (TBTs) on the imports of poultry was found. However, in two specifications controlling for multilateral resistances and zero trade flows, the results indicated that sanitary and phytosanitary (SPS) measures imposed by the EU *increase* the trade values and quantities significantly. This is an interesting result, indicating a positive externality of SPS regulations (on human health, environment, animal and plant life) on the higher consumption of safe products. Moreover, specific trade concerns (STCs) raised by the trade partners on TBTs and SPS measures implemented by the EU were found to increase the unit values of imports. While the trade volume is not affected by STCs, these could be interpreted as cost-inducing regulations on imports, rather than quality upgrading.

Exporting countries are heterogeneous in many aspects, including the level of production standards. A country that produces poultry with a quality much lower than the EU standards might be affected negatively by EU regulations. In contrast, a country that is producing with a similar standard as the EU can benefit from the regulative trade policy measures imposed by the EU. Using a two-stage methodology, the research calculated the bilateral ad valorem equivalent (AVE) for five types of NTMs imposed by the EU. The diverse impact of NTMs on different exporters resulted in various AVEs. Some AVEs indicate trade promotion such as negative AVEs for SPS measures in the case of the United States and China.^{2,3} Moreover, our findings suggest that SPS measures maintained by the EU were in favour of major exporters of poultry to the EU, while other measures were in general restrictive.

The last part of the analysis was dedicated to the quality impact of NTMs on poultry imports to the EU. The bilateral trade quality database estimated by Feenstra and Romalis (2014) was used to find out whether the NTMs imposed by the EU are quality improving such as standard-like regulations or mainly cost-inducing such as barriers to trade. The diverse impacts of EU regulations on the quality of poultry

² AVEs are constructed in a way to indicate tariff equivalence for NTMs. Thus, a positive AVE refers to a tax-like regulation and a negative AVE could indicate trade promotion like a negative tax.

³ Imports of poultry from the US to the EU substantially dropped in 1997. However, due to the estimation procedure, the AVEs have been estimated only starting from 1997 (over the period 1997-2014). Therefore, despite no considerable changes in poultry imports from the US during the period, the trade-weighted average (TWA) AVE of SPS measures imposed by the EU on imports from the US has been found to equal to -1%, while for TBTs equal to 2.23%.

imports from different countries again suggest that the production standards in exporting countries are very different. The results suggest that SPS measures have helped upgrade the quality of poultry imported from many countries, while degrading the quality and reducing the prices of imports from some major exporters. EU regulations prohibiting the use of AMTs suggested that these chemicals were to maintain the low hygienic quality of poultry as allegedly indicated in the EU legislations. This means that not using these substances would lead to lower quality of the imported products, which can also be concluded from the econometrics results.

CONCLUSIONS

Mega trade deals and negotiations between the EU, on the one hand, and Canada and the United States, on the other, have prompted debates concerning consumer protection. The European Union has legislated numerous qualitative standards concerning food safety and consumer health and safety. These EU directives are mostly negotiated and demanded by the consumer safety unions in order to maintain a high quality of products available to all types of consumers, both rich and poor. However, these regulations have become obstacles to trade and some countries have conveyed their concerns to the WTO meetings. There have also been requests for consultations within the dispute settlement mechanism of the WTO, claiming that these regulations by the EU violate some of the WTO agreements.

Dispute settlement cases in the WTO are usually costly for all parties involved in the dispute. Trade prohibition by trade policy tools during the long-lasting disputes could be a huge burden on exporters. Legal assessments and consultation procedures represent another cost that is not completely affordable for all countries, especially for developing countries, which usually do not initiate a costly case but can only reserve their third-party rights within the dispute. Finally, when the violation of an agreement is concluded by the DSB, remedies and penalties are costs paid by the taxpayers of the responding country imposing the trade measure. Prohibitive standards and regulations embodied within the non-tariff measures (NTMs), which usually need to be based on scientifically legitimate evidence, feature prominently among the costly disputes.

The wiiw study (Ghodsi and Stehrer, forthcoming) pays specific attention to the imports of poultry products to the EU and the implications of trade policy tools imposed by the EU. The impact of different types of NTMs on the values, quantities, price, and quality of poultry imports to the EU from various exporting countries shows heterogeneous patterns. The overall impact of EU SPS measures is found to be trade enhancing and that of TBTs trade restrictive. Distinguishing between the quality and trade impacts of the NTMs might assist the WTO in dispute settlement consultations.

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The editors recommend for further reading*

Miscellaneous

Populism is the result of global economic failure:

<https://www.theguardian.com/business/2017/mar/26/populism-is-the-result-of-global-economic-failure>

On the productivity paradox:

https://medium.com/@ryanavent_93844/the-productivity-paradox-aaf05e5e4aad#.7azwfpylf

Is the EU's single market leading to convergence or divergence?

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Manufacturing

The spread of modern manufacturing to the poor periphery:

<http://voxeu.org/article/spread-modern-manufacturing-poor-periphery>

Lawrence on manufacturing versus services: <https://piie.com/blogs/realtime-economic-issues-watch/does-manufacturing-have-largest-employment-multiplier-domestic>

China hurting innovation in US manufacturing:

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Inequality

Piketty, Saez and Zucman on US inequality:

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Branko Milanovic on wealth and education equality:

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Russia/Ukraine

On Russia's 'meddling':

<https://www.bloomberg.com/view/articles/2017-03-21/why-the-comey-hearing-was-frightening-to-a-russian>

Ukraine's GDP may be much bigger than officially reported:

<https://voxukraine.org/2017/03/13/schrodinger-s-gdp-en/>

* Recommendation is not necessarily endorsement. The editors are grateful to Vladimir Gligorov, Richard Grieveson, Peter Havlik and Mario Holzner for valuable contributions to this section.

Monthly and quarterly statistics for Central, East and Southeast Europe

The monthly and quarterly statistics cover **20 countries** of the CESEE region. The graphical form of presenting statistical data is intended to facilitate the **analysis of short-term macroeconomic developments**. The set of indicators captures tendencies in the real sector, pictures the situation in the labour market and inflation, reflects fiscal and monetary policy changes, and depicts external sector development.

Baseline data and a variety of other monthly and quarterly statistics, **country-specific** definitions of indicators and **methodological information** on particular time series are **available in the wiiw Monthly Database** under: <https://data.wiiw.ac.at/monthly-database.html>. Users regularly interested in a certain set of indicators may create a personalised query which can then be quickly downloaded for updates each month.

Conventional signs and abbreviations used

%	per cent
GDP	Gross Domestic Product
LFS	Labour Force Survey
HICP	Harmonized Index of Consumer Prices (for new EU Member States)
PPI	Producer Price Index
M1	Currency outside banks + demand deposits / narrow money (ECB definition)
M2	M1 + quasi-money / intermediate money (ECB definition)
p.a.	per annum
mn	million (10 ⁶)
bn	billion (10 ⁹)

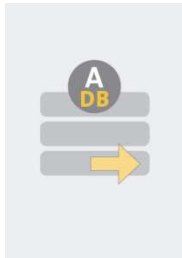
The following national currencies are used:

ALL	Albanian lek	HUF	Hungarian forint	RSD	Serbian dinar
BAM	Bosnian convertible mark	KZT	Kazakh tenge	RUB	Russian rouble
BGN	Bulgarian lev	MKD	Macedonian denar	TRY	Turkish lira
CZK	Czech koruna	PLN	Polish zloty	UAH	Ukrainian hryvnia
HRK	Croatian kuna	RON	Romanian leu		

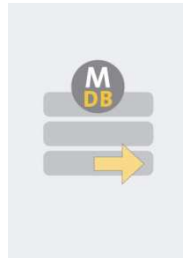
EUR euro – national currency for Montenegro and for the euro-area countries Estonia (from January 2011, euro-fixed before), Latvia (from January 2014, euro-fixed before), Lithuania (from January 2015, euro-fixed before), Slovakia (from January 2009, euro-fixed before) and Slovenia (from January 2007, euro-fixed before).

Sources of statistical data: Eurostat, National Statistical Offices, Central Banks and Public Employment Services; wiiw estimates.

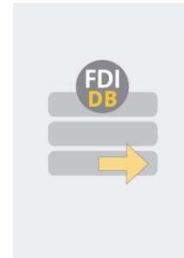
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wiiw Annual Database



wiiw Monthly Database



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The wiiw databases are accessible via a simple web interface, with only one password needed to access all databases (and all wiiw publications).

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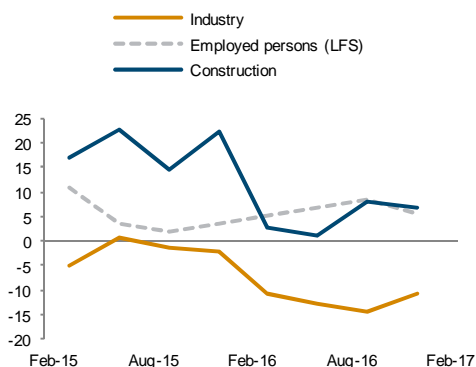
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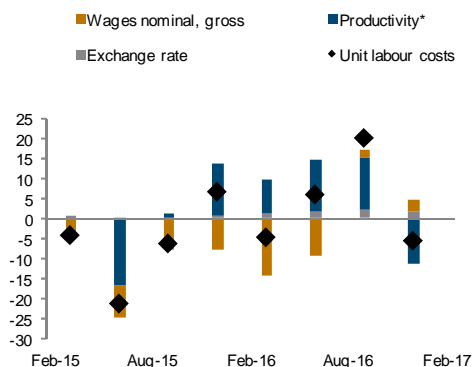
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Albania

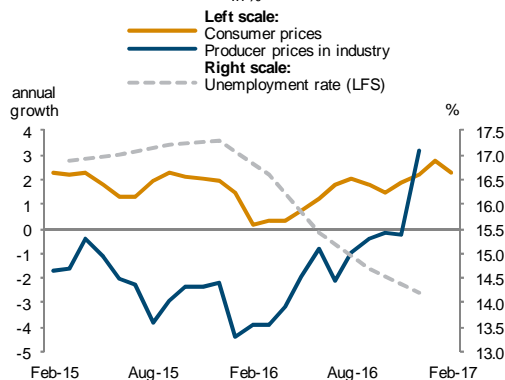
Real sector development
annual growth rate in %



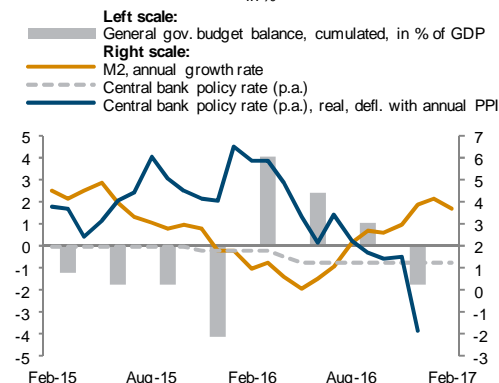
Unit labour costs in industry
annual growth rate in %



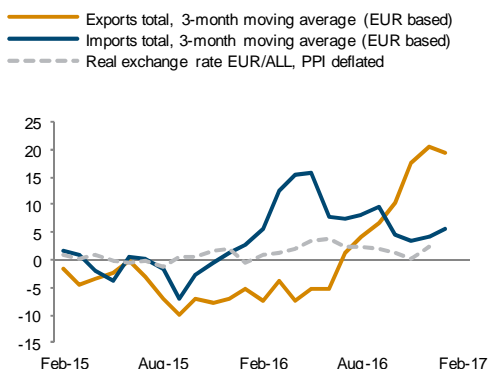
Inflation and unemployment
in %



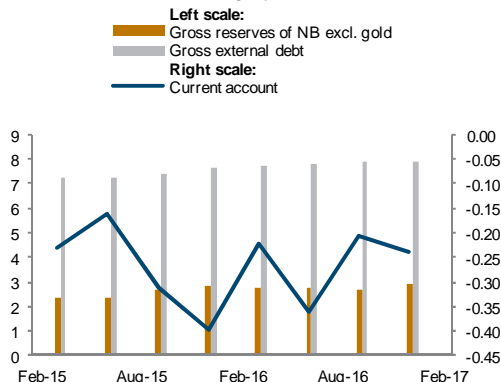
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

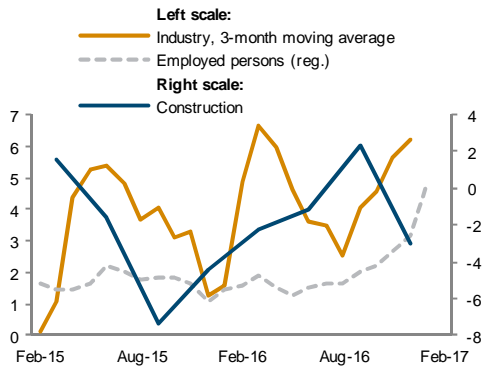
Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

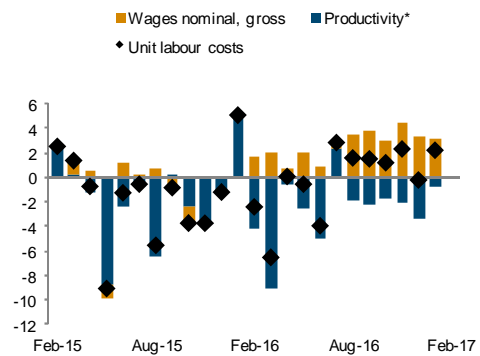
<https://data.wiiw.ac.at/monthly-database.html>

Bosnia and Herzegovina

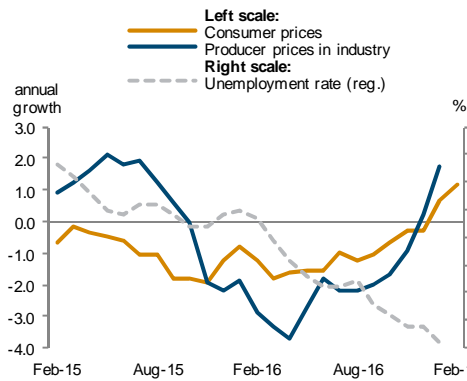
Real sector development
annual growth rate in %



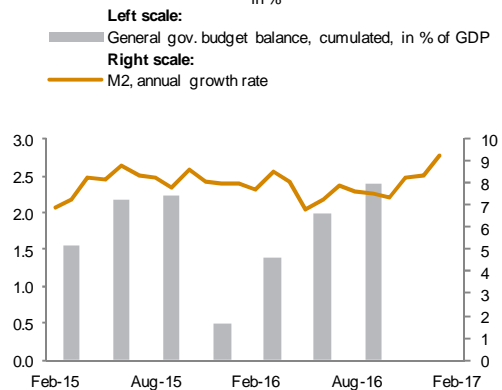
Unit labour costs in industry
annual growth rate in %



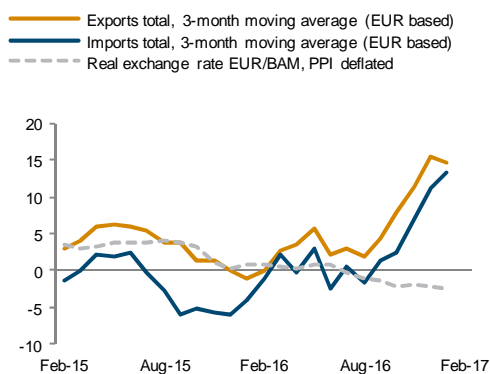
Inflation and unemployment
in %



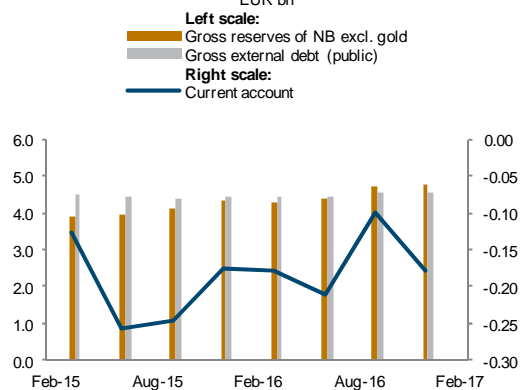
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

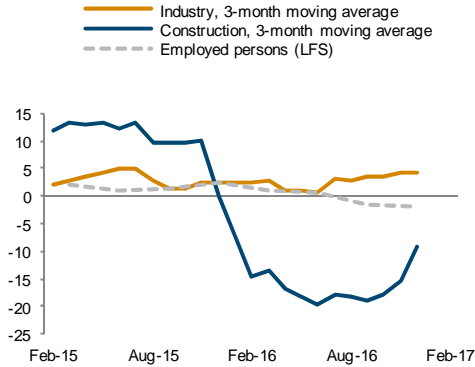
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database.html>

Bulgaria

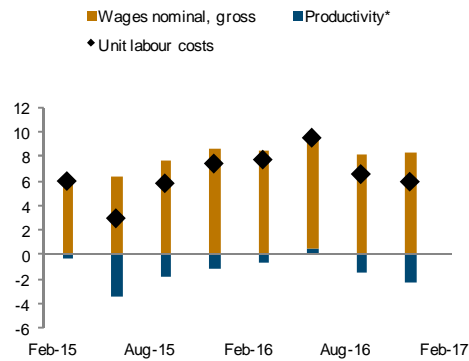
Real sector development

annual growth rate in %



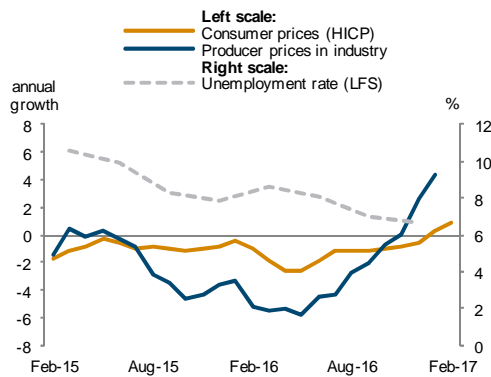
Unit labour costs in industry

annual growth rate in %



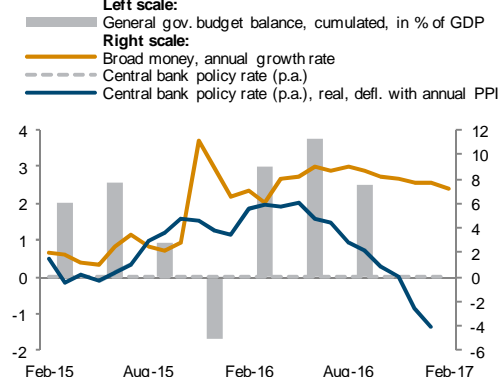
Inflation and unemployment

in %



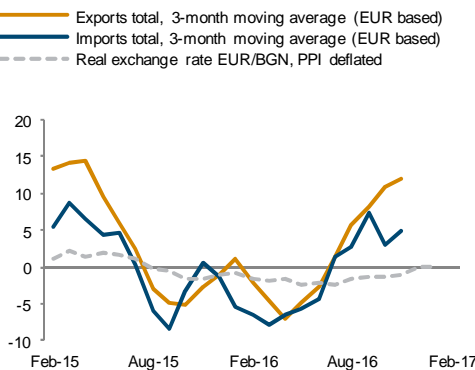
Fiscal and monetary policy

in %



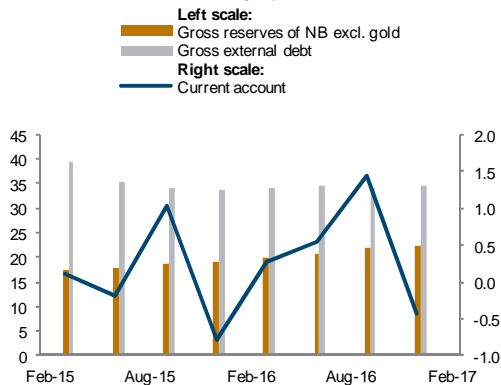
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

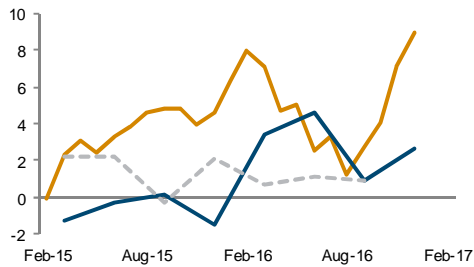
<https://data.wiiw.ac.at/monthly-database.html>

Croatia

Real sector development

annual growth rate in %

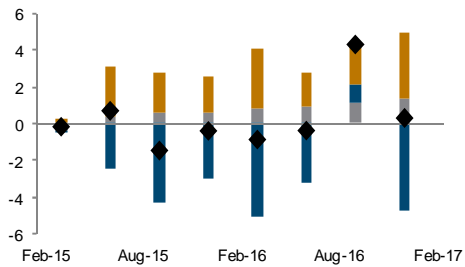
— Industry, 3-month moving average
— Construction, 3-month moving average
- - - Employed persons (LFS)



Unit labour costs in industry

annual growth rate in %

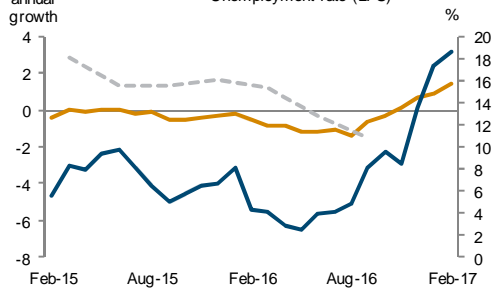
■ Wages nominal, gross ■ Productivity*
■ Exchange rate ◆ Unit labour costs



Inflation and unemployment

in %

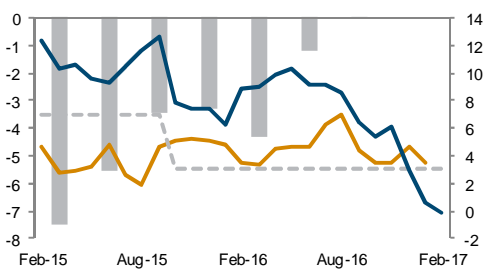
Left scale:
— Consumer prices (HICP)
— Producer prices in industry
Right scale:
- - - Unemployment rate (LFS)



Fiscal and monetary policy

in %

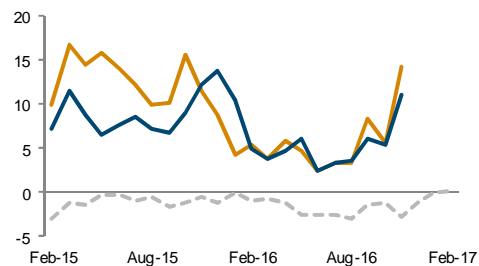
Left scale:
■ General gov. budget balance, cumulated, in % of GDP
Right scale:
— Broad money, annual growth rate
- - - Central bank policy rate (p.a.)
— Central bank policy rate (p.a.), real, defl. with annual CPI



External sector development

annual growth rate in %

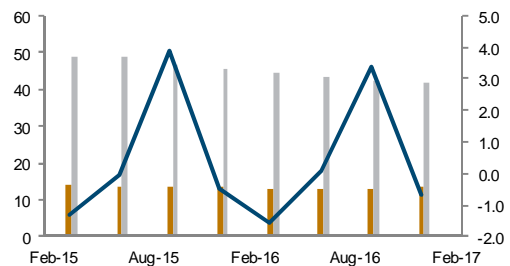
— Exports total, 3-month moving average (EUR based)
— Imports total, 3-month moving average (EUR based)
- - - Real exchange rate EUR/HRK, PPI deflated



External finance

EUR bn

Left scale:
■ Gross reserves of NB excl. gold
■ Gross external debt
Right scale:
— Current account



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

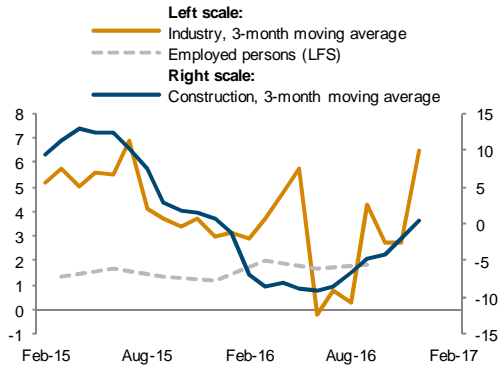
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database.html>

Czech Republic

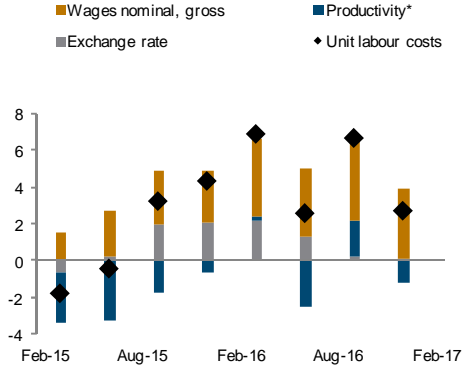
Real sector development

annual growth rate in %



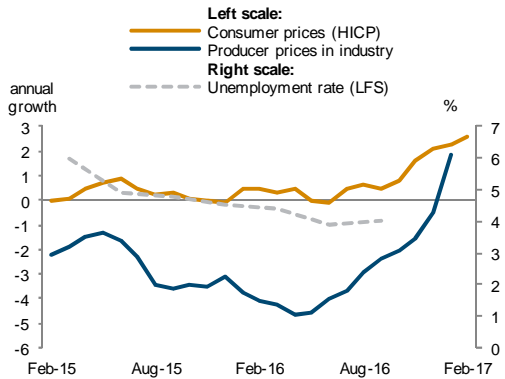
Unit labour costs in industry

annual growth rate in %



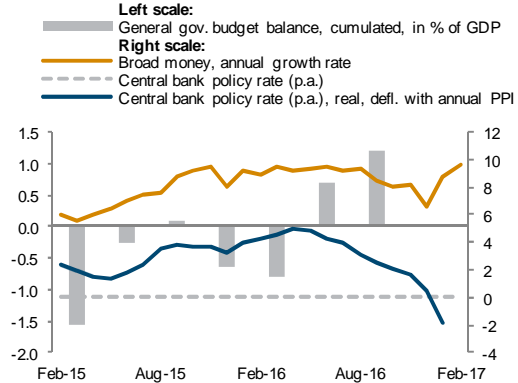
Inflation and unemployment

in %



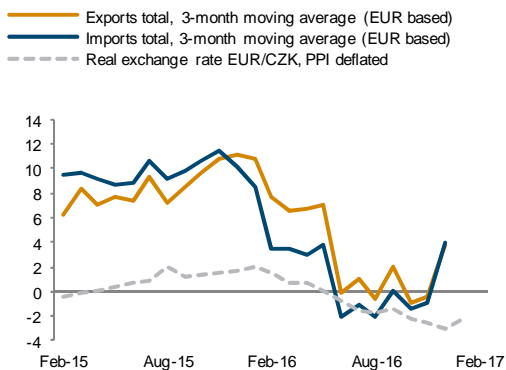
Fiscal and monetary policy

in %



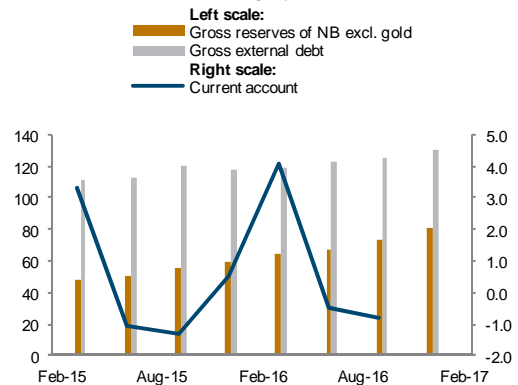
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

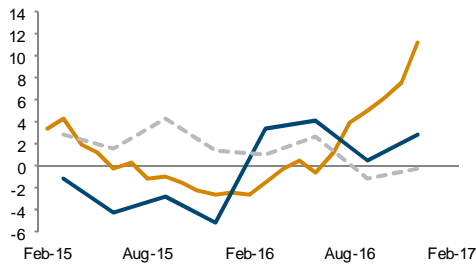
<https://data.wiiw.ac.at/monthly-database.html>

Estonia

Real sector development

annual growth rate in %

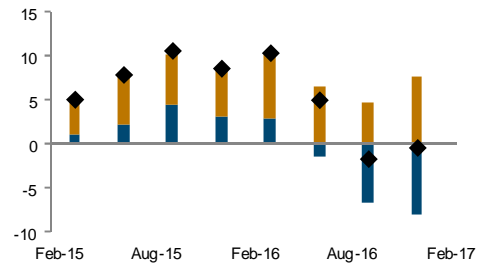
- Industry, 3-month moving average
- Construction
- - - Employed persons (LFS)



Unit labour costs in industry

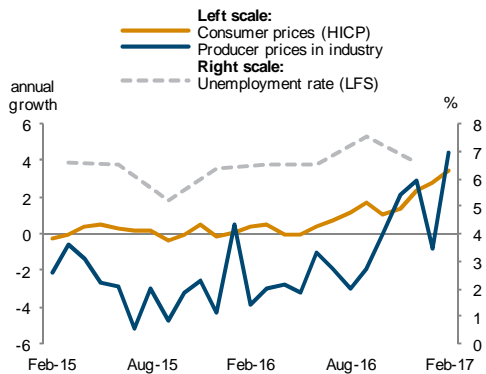
annual growth rate in %

- Wages nominal, gross
- Productivity*
- ◆ Unit labour costs



Inflation and unemployment

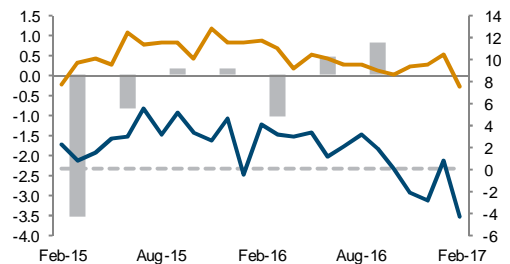
in %



Fiscal and monetary policy

in %

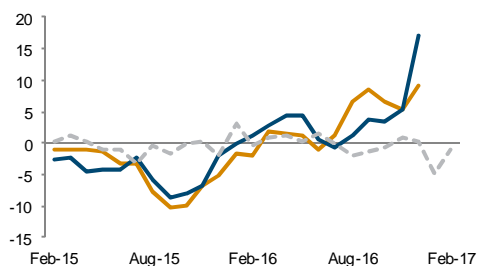
- Left scale: General gov. budget balance, cumulated, in % of GDP
- Right scale: Broad money, annual growth rate
- - - Central bank policy rate (p.a.)
- Central bank policy rate (p.a.), real, defl. with annual PPI



External sector development

annual growth rate in %

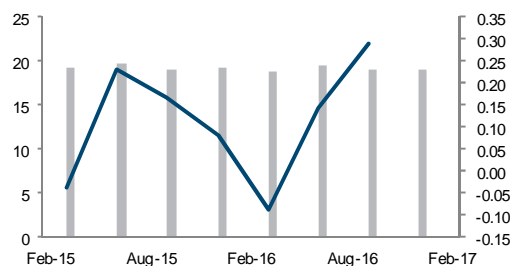
- Exports total, 3-month moving average (EUR based)
- Imports total, 3-month moving average (EUR based)
- - - Real exchange rate EUR/EUR, PPI deflated



External finance

EUR bn

- Left scale: Gross external debt
- Right scale: Current account



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

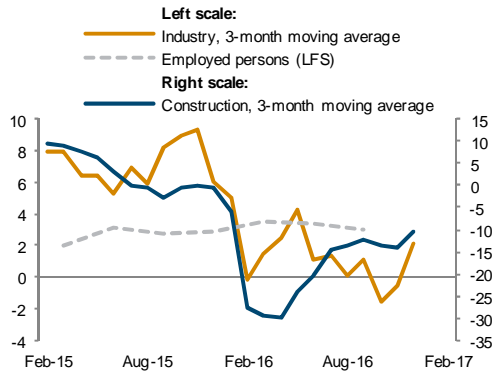
Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

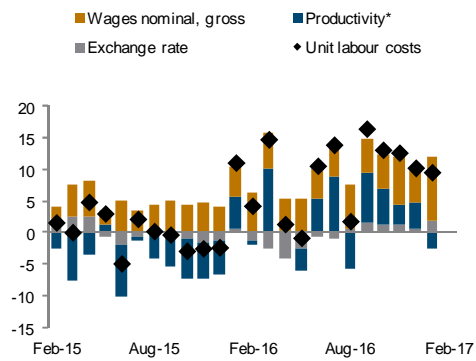
<https://data.wiiw.ac.at/monthly-database.html>

Hungary

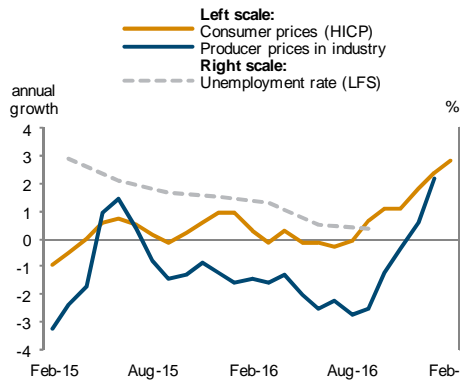
Real sector development
annual growth rate in %



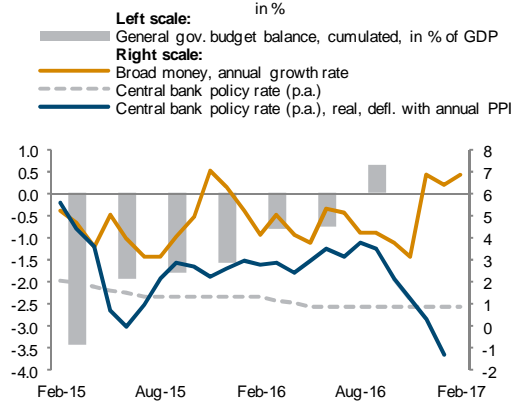
Unit labour costs in industry
annual growth rate in %



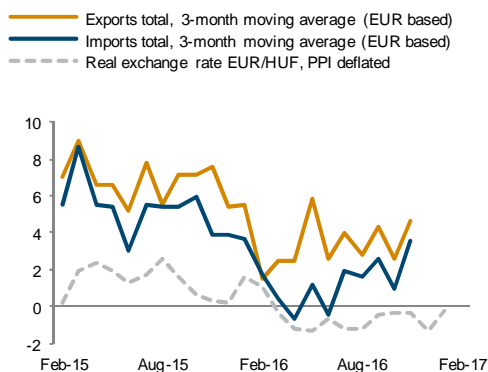
Inflation and unemployment
in %



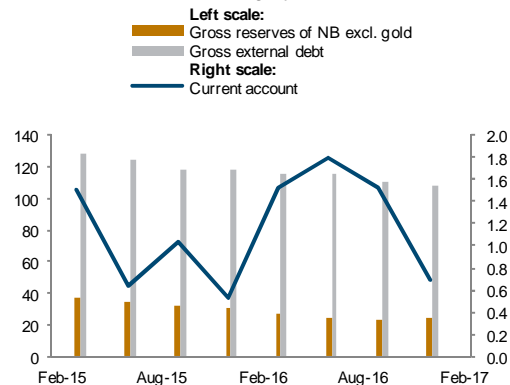
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

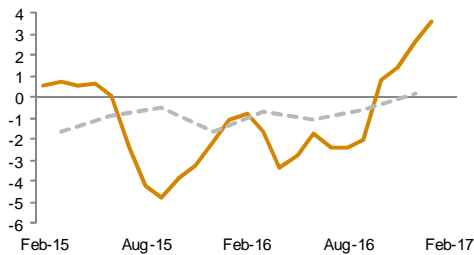
<https://data.wiiw.ac.at/monthly-database.html>

Kazakhstan

Real sector development

annual growth rate in %

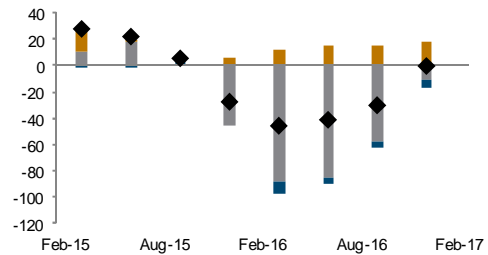
— Industry, 3-month moving average
- - - Employed persons (LFS)



Unit labour costs in industry

annual growth rate in %

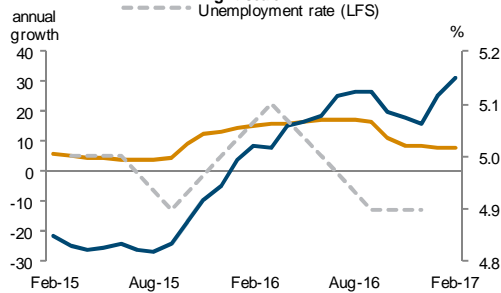
■ Wages nominal, gross ■ Productivity*
■ Exchange rate ◆ Unit labour costs



Inflation and unemployment

in %

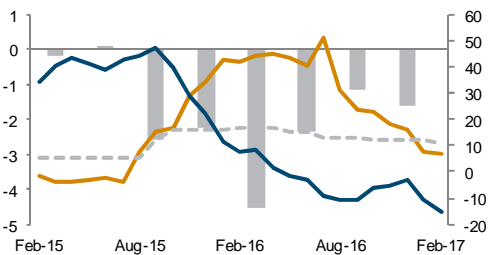
Left scale:
— Consumer prices
— Producer prices in industry
Right scale:
- - - Unemployment rate (LFS)



Fiscal and monetary policy

in %

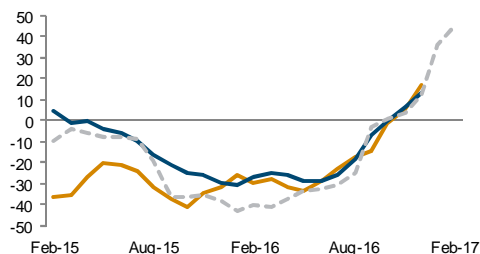
Left scale:
■ General gov. budget balance, cumulated, in % of GDP
Right scale:
— Broad money, annual growth rate
- - - Central bank policy rate (p.a.)
— Central bank policy rate (p.a.), real, defl. with annual PPI



External sector development

annual growth rate in %

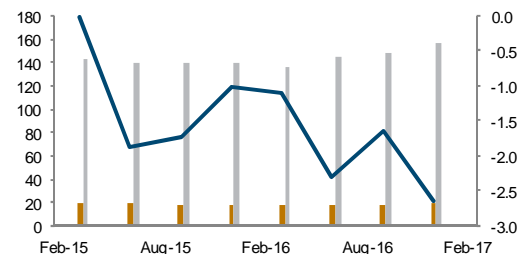
— Exports total, 3-month moving average (EUR based)
— Imports total, 3-month moving average (EUR based)
- - - Real exchange rate EUR/KZT, PPI deflated



External finance

EUR bn

Left scale:
■ Gross reserves of NB excl. gold
■ Gross external debt
Right scale:
— Current account



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

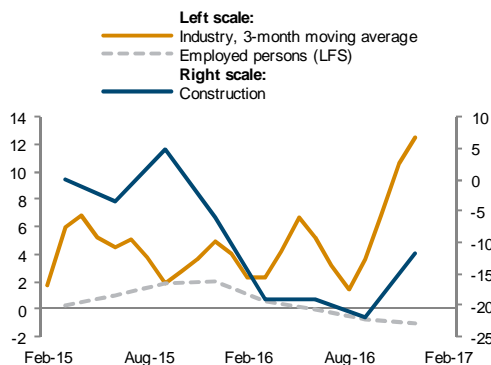
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Latvia

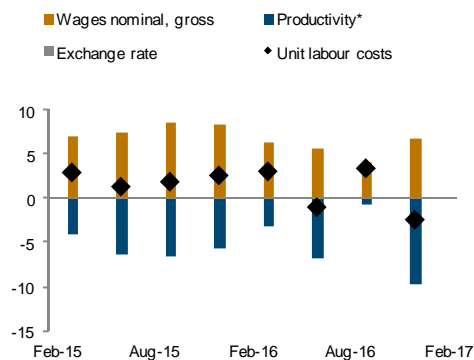
Real sector development

annual growth rate in %



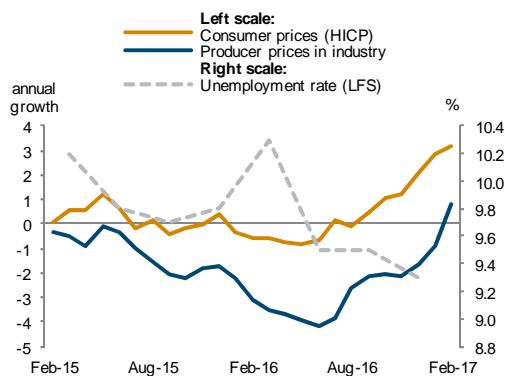
Unit labour costs in industry

annual growth rate in %



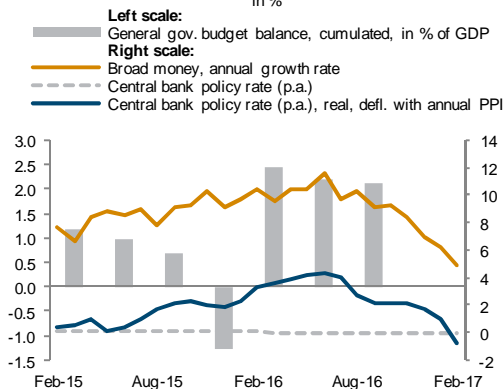
Inflation and unemployment

in %



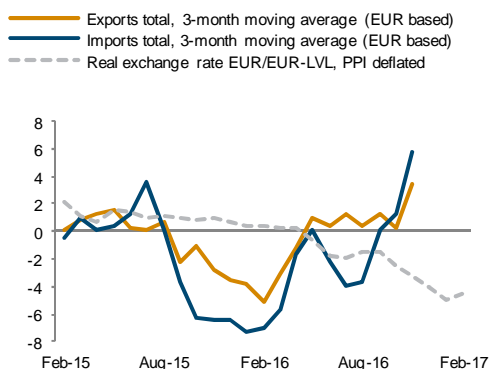
Fiscal and monetary policy

in %



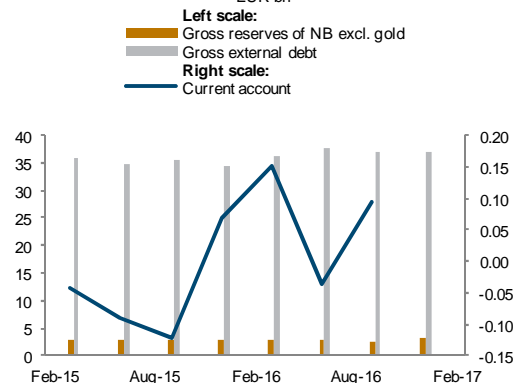
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

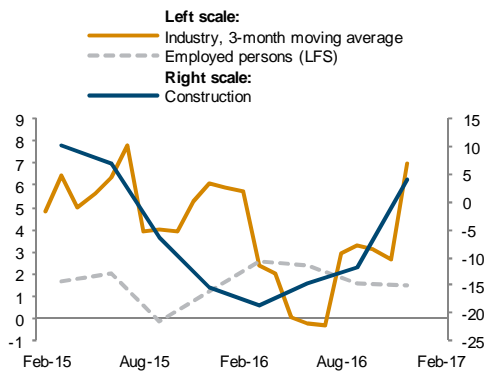
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database.html>

Lithuania

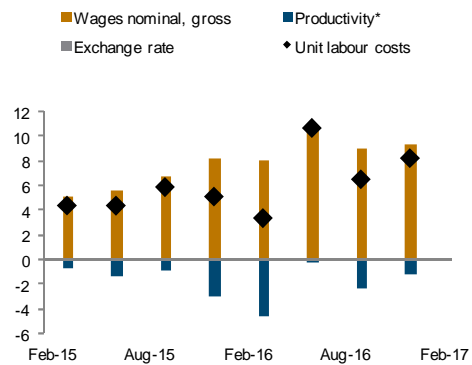
Real sector development

annual growth rate in %



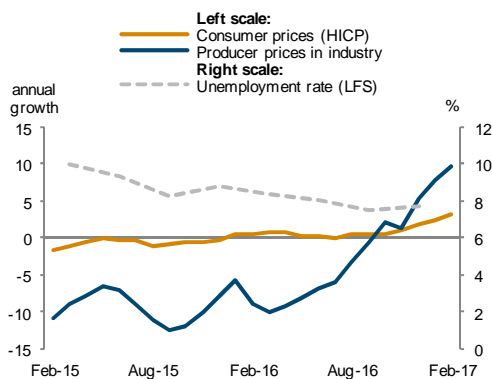
Unit labour costs in industry

annual growth rate in %



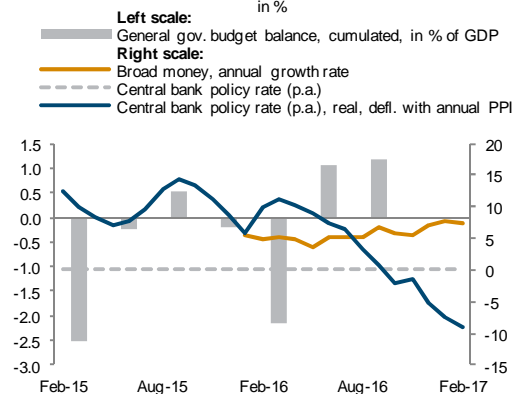
Inflation and unemployment

in %



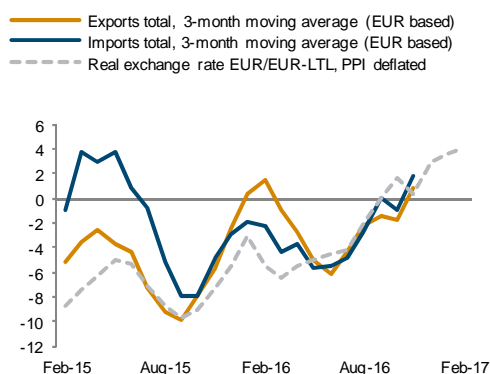
Fiscal and monetary policy

in %



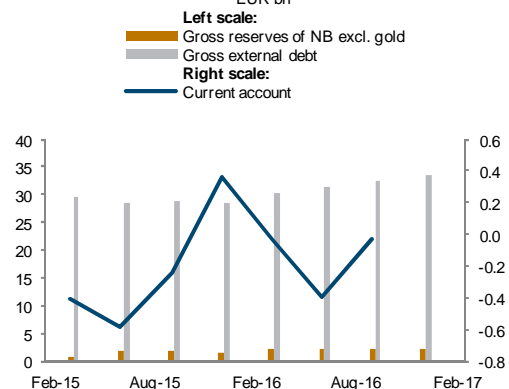
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

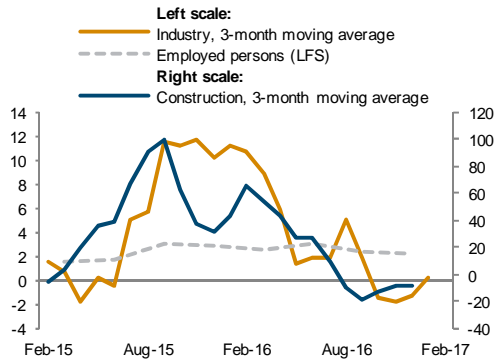
Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

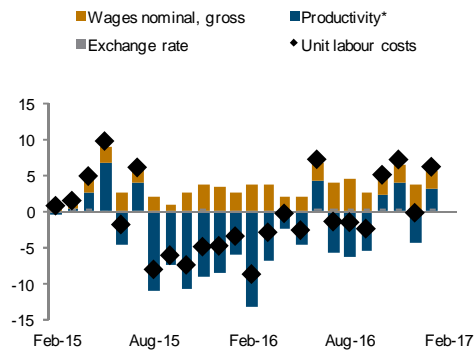
<https://data.wiiw.ac.at/monthly-database.html>

Macedonia

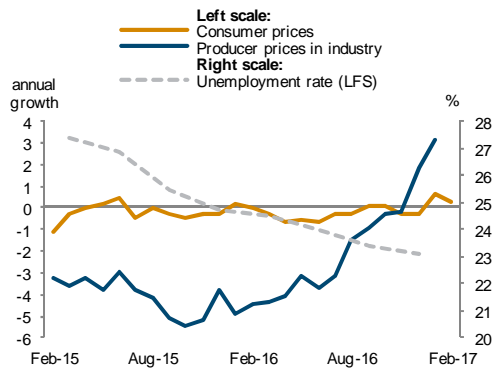
Real sector development
annual growth rate in %



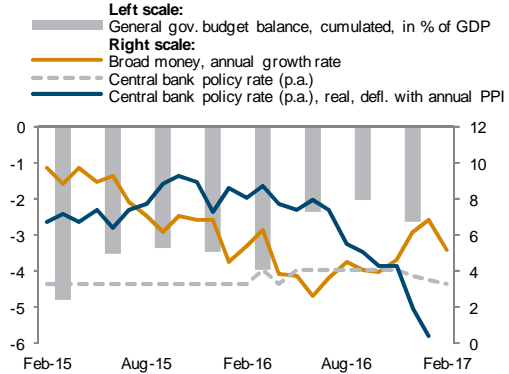
Unit labour costs in industry
annual growth rate in %



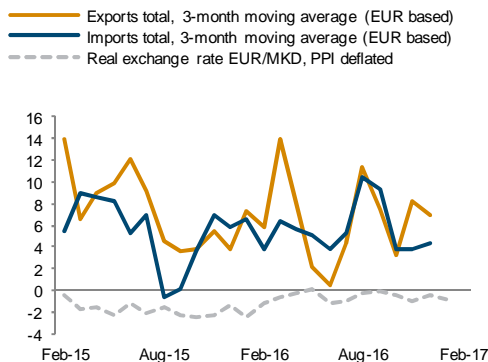
Inflation and unemployment
in %



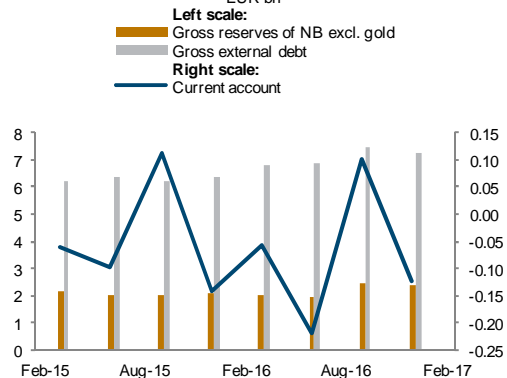
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

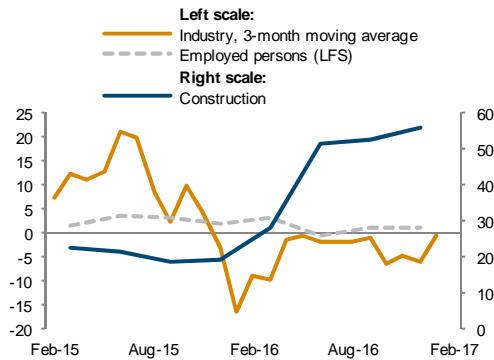
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database.html>

Montenegro

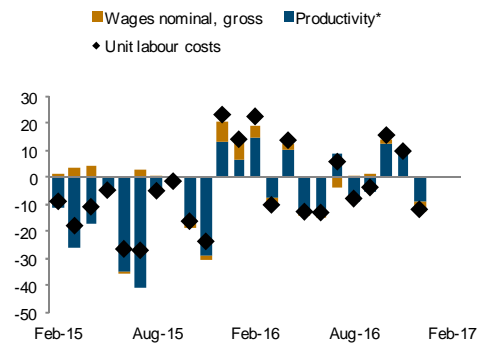
Real sector development

annual growth rate in %



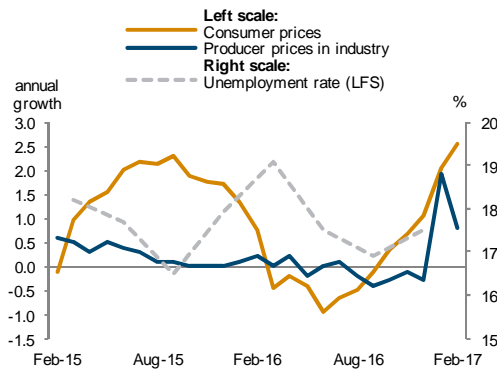
Unit labour costs in industry

annual growth rate in %



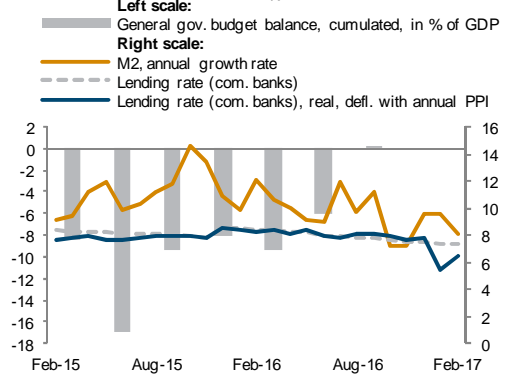
Inflation and unemployment

in %



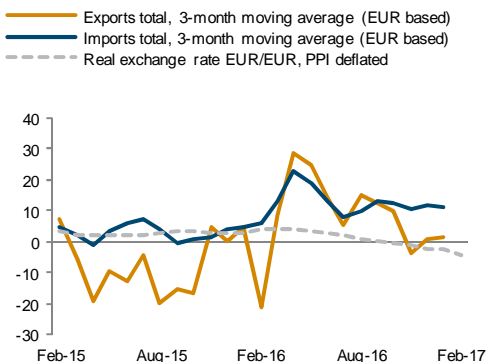
Fiscal and monetary policy

in %



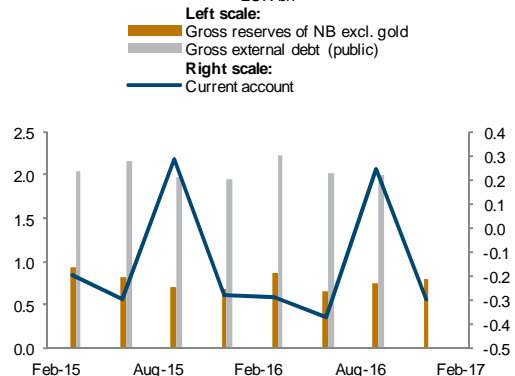
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

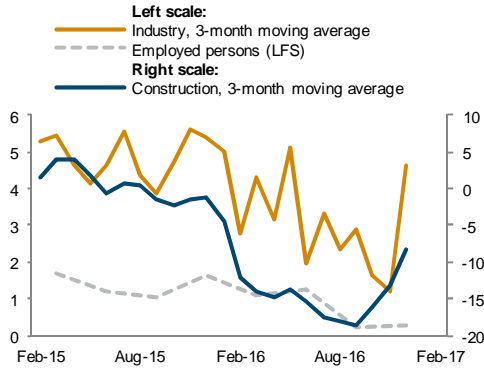
Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

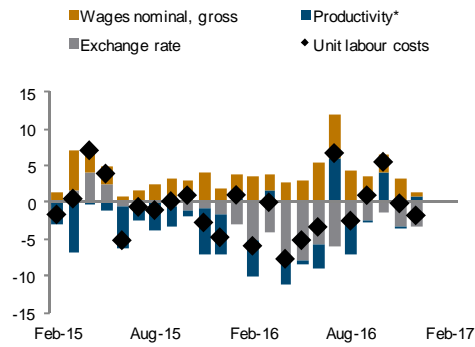
<https://data.wiiw.ac.at/monthly-database.html>

Poland

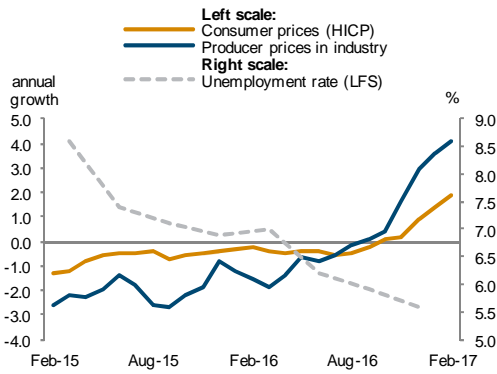
Real sector development
annual growth rate in %



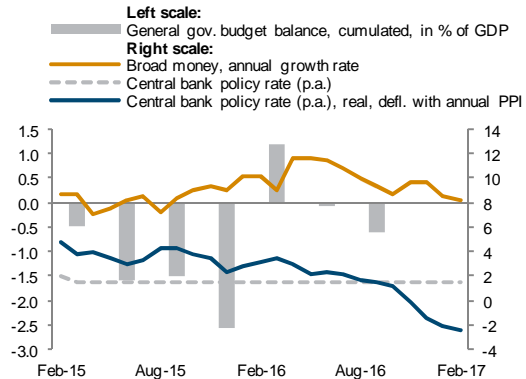
Unit labour costs in industry
annual growth rate in %



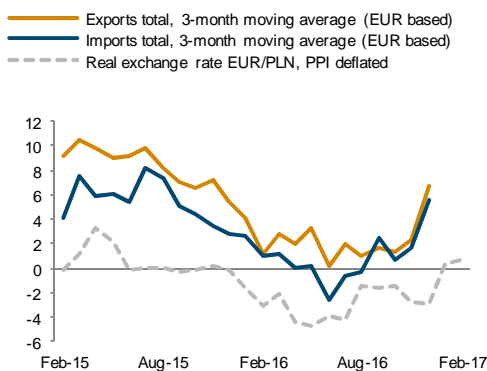
Inflation and unemployment
in %



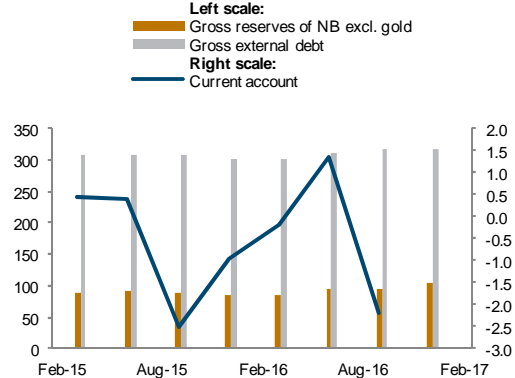
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

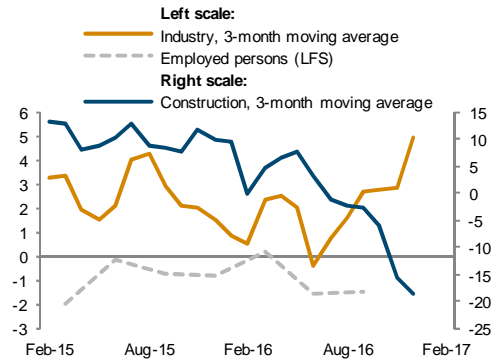
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database.html>

Romania

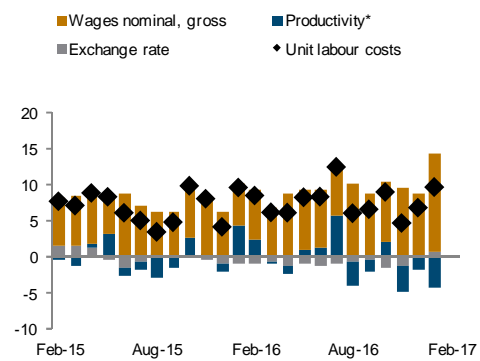
Real sector development

annual growth rate in %



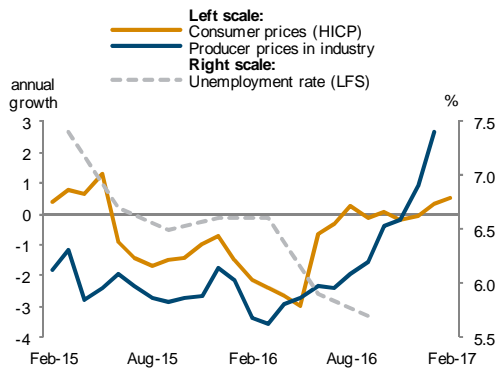
Unit labour costs in industry

annual growth rate in %



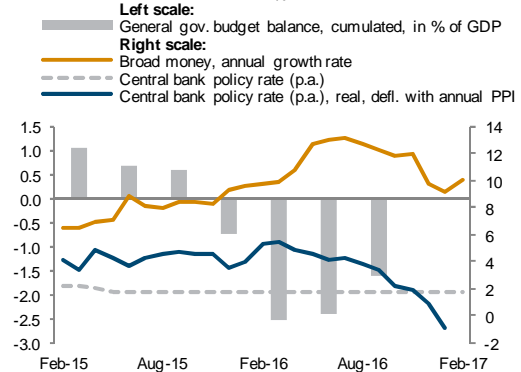
Inflation and unemployment

in %



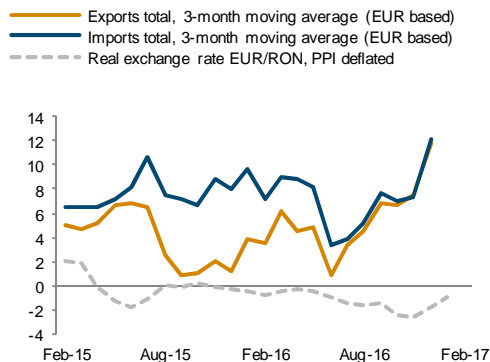
Fiscal and monetary policy

in %



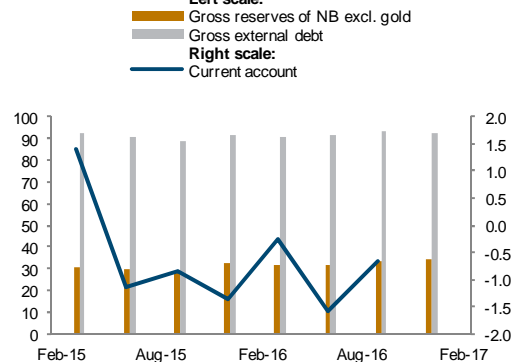
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

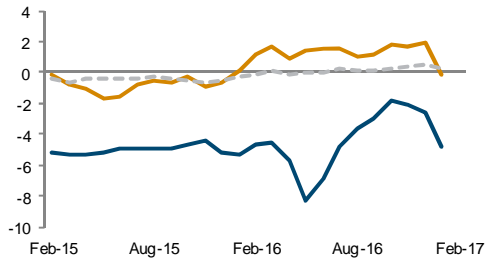
<https://data.wiiw.ac.at/monthly-database.html>

Russia

Real sector development

annual growth rate in %

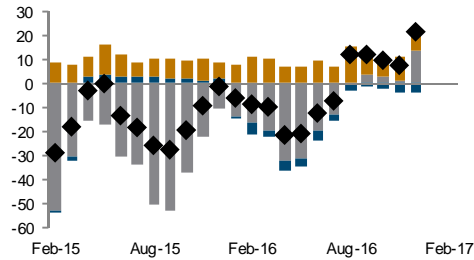
- Industry, 3-month moving average
- Construction, 3-month moving average
- - - Employed persons (LFS)



Unit labour costs in industry

annual growth rate in %

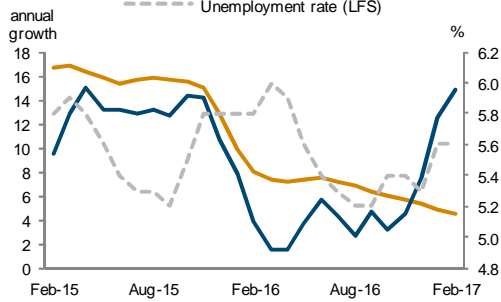
- Wages nominal, manuf., gross
- Exchange rate
- ◆ Productivity*
- ◆ Unit labour costs



Inflation and unemployment

in %

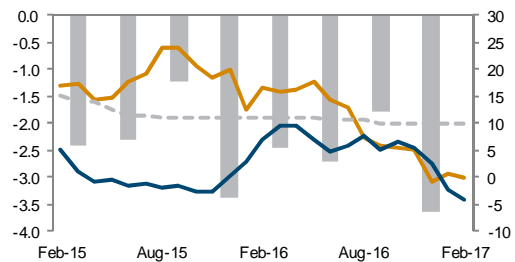
- Left scale:**
- Consumer prices
- Producer prices in industry
- Right scale:**
- - - Unemployment rate (LFS)



Fiscal and monetary policy

in %

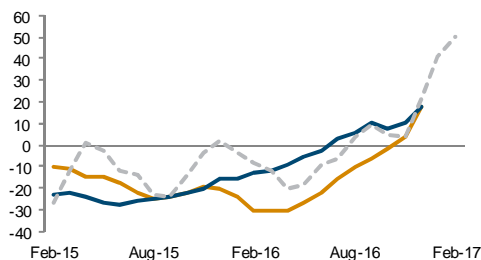
- Left scale:**
- General gov. budget balance, cumulated, in % of GDP
- Right scale:**
- M2, annual growth rate
- - - Central bank policy rate (p.a.)
- Central bank policy rate (p.a.), real, defl. with annual PPI



External sector development

annual growth rate in %

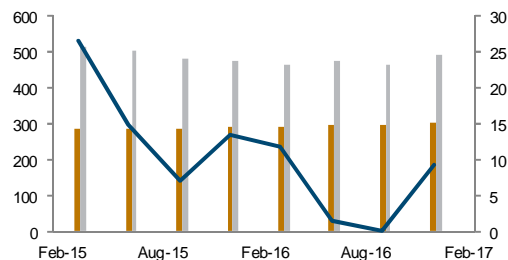
- Exports total, 3-month moving average (EUR based)
- Imports total, 3-month moving average (EUR based)
- - - Real exchange rate EUR/RUB, PPI deflated



External finance

EUR bn

- Left scale:**
- Gross reserves of NB excl. gold
- Gross external debt
- Right scale:**
- Current account



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

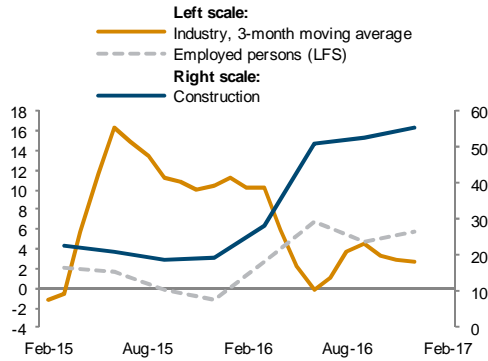
Baseline data, country-specific definitions and methodological breaks in time series are available under:

<https://data.wiiw.ac.at/monthly-database/html>

Serbia

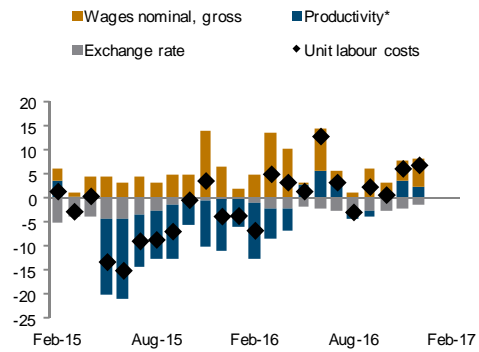
Real sector development

annual growth rate in %



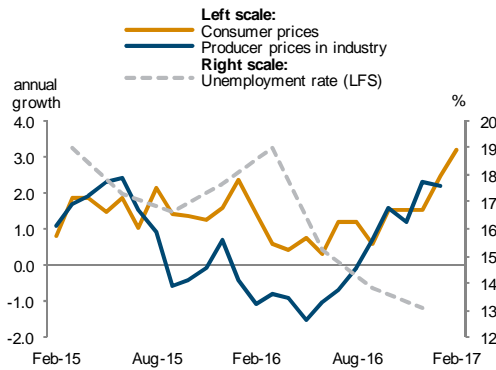
Unit labour costs in industry

annual growth rate in %



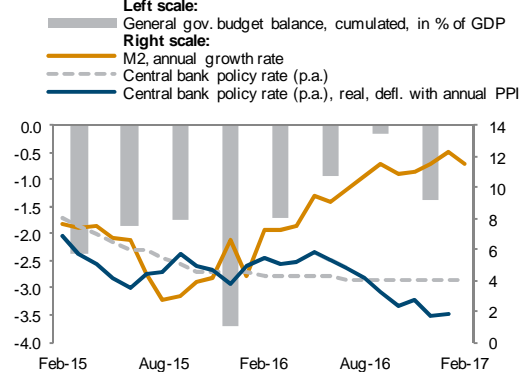
Inflation and unemployment

in %



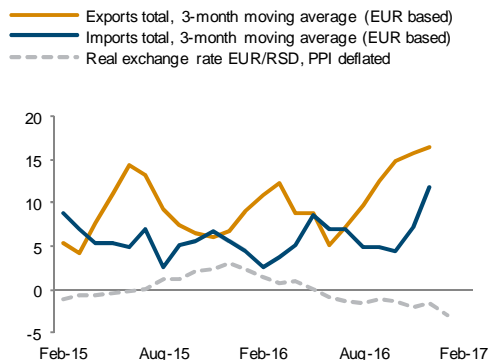
Fiscal and monetary policy

in %



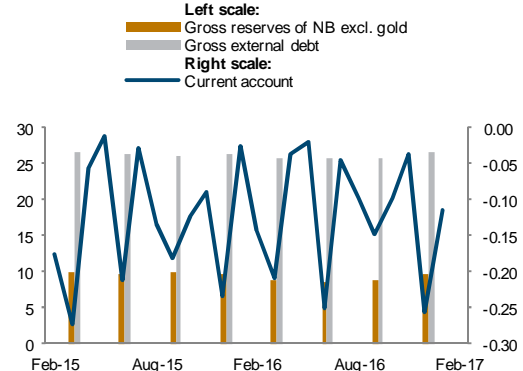
External sector development

annual growth rate in %



External finance

EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

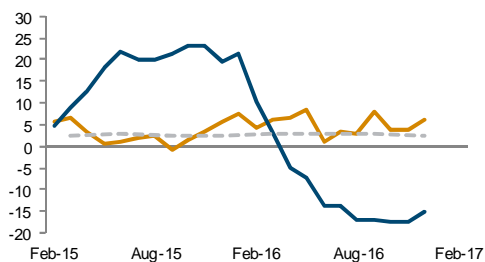
<https://data.wiiw.ac.at/monthly-database.html>

Slovakia

Real sector development

annual growth rate in %

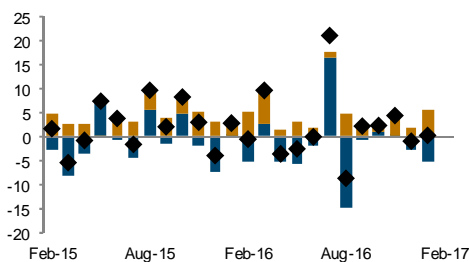
- Industry, 3-month moving average
- Construction, 3-month moving average
- - - Employed persons (LFS)



Unit labour costs in industry

annual growth rate in %

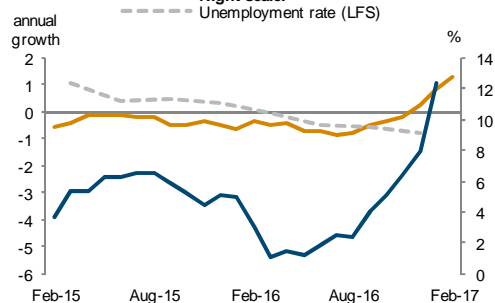
- Wages nominal, gross
- Productivity*
- ◆ Unit labour costs



Inflation and unemployment

in %

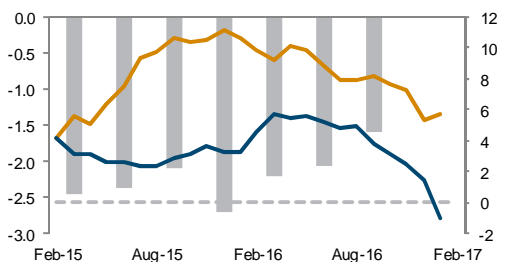
- Left scale: Consumer prices (HICP)
- Producer prices in industry
- Right scale: Unemployment rate (LFS)



Fiscal and monetary policy

in %

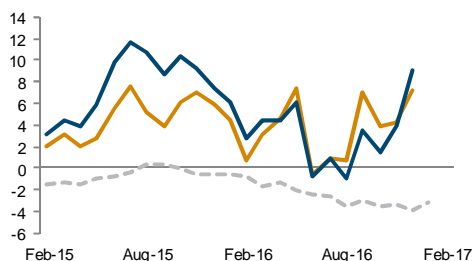
- Left scale: General gov. budget balance, cumulated, in % of GDP
- Right scale: Broad money, annual growth rate
- Central bank policy rate (p.a.)
- Central bank policy rate (p.a.), real, defl. with annual PPI



External sector development

annual growth rate in %

- Exports total, 3-month moving average (EUR based)
- Imports total, 3-month moving average (EUR based)
- - - Real exchange rate EUR/EUR, PPI deflated



External finance

EUR bn

- Left scale: Gross external debt
- Right scale: Current account



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

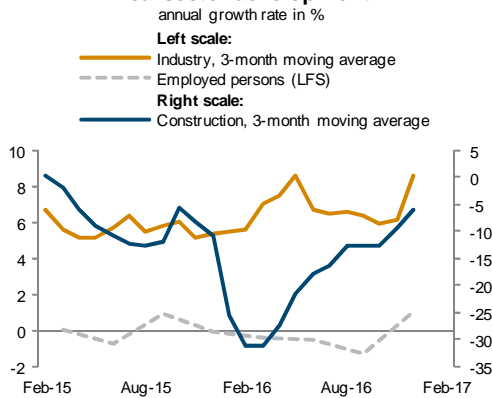
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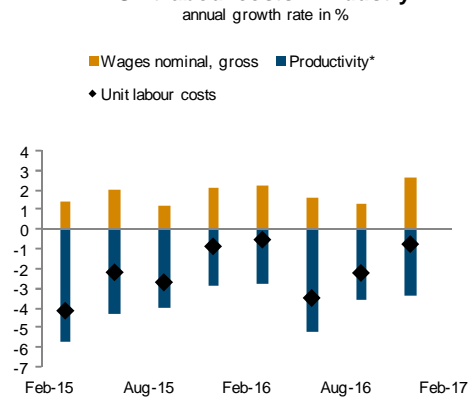
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Slovenia

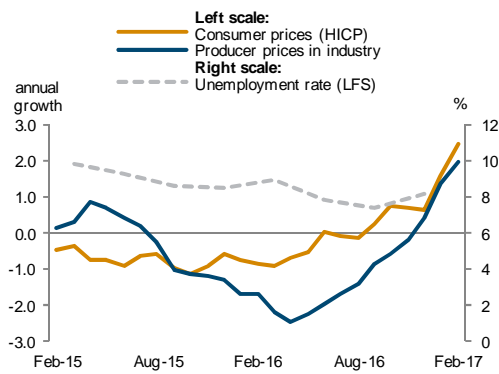
Real sector development



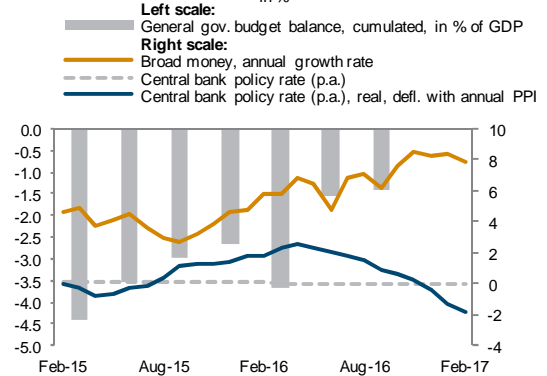
Unit labour costs in industry



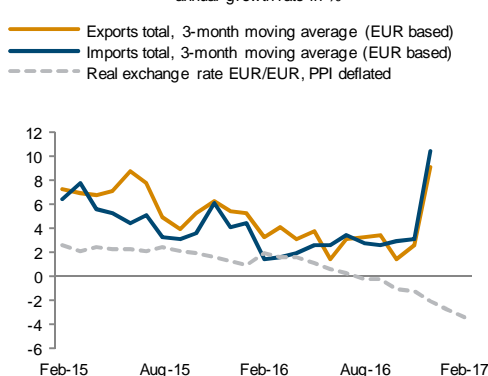
Inflation and unemployment



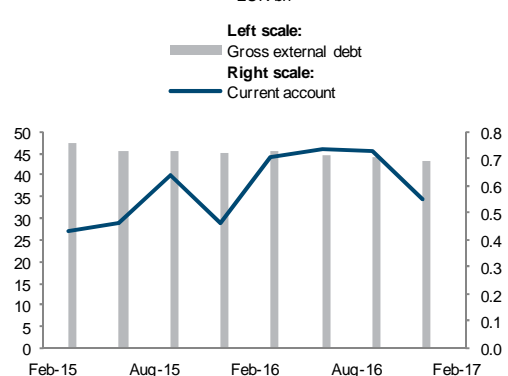
Fiscal and monetary policy



External sector development



External finance



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

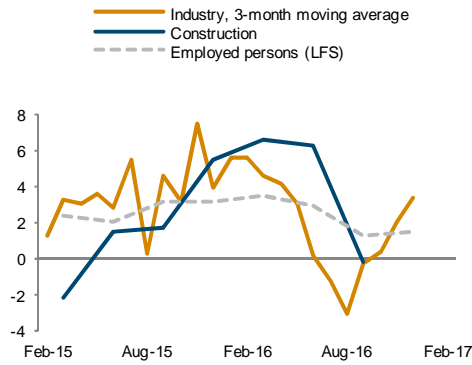
Source: wiiw Monthly Database incorporating Eurostat and national statistics.

Baseline data, country-specific definitions and methodological breaks in time series are available under:

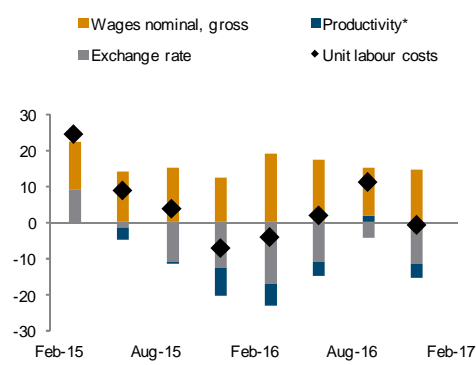
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Turkey

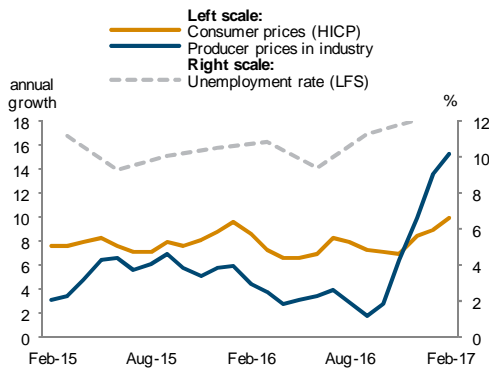
Real sector development
annual growth rate in %



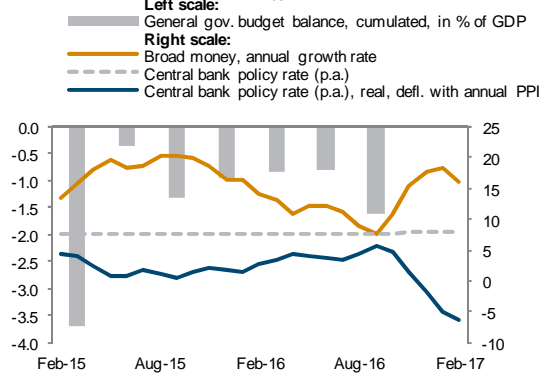
Unit labour costs in industry
annual growth rate in %



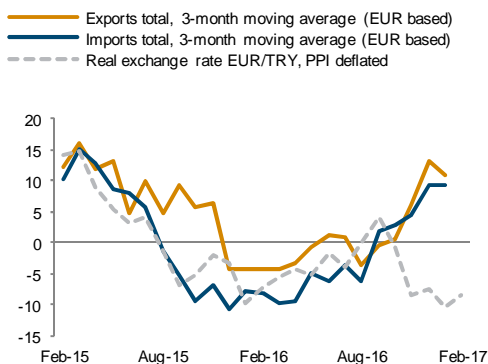
Inflation and unemployment
in %



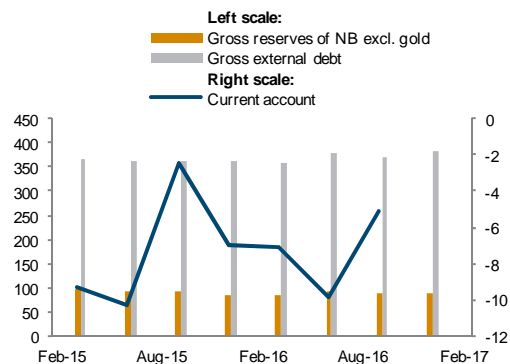
Fiscal and monetary policy
in %



External sector development
annual growth rate in %



External finance
EUR bn



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.

Source: wiiw Monthly Database incorporating Eurostat and national statistics.

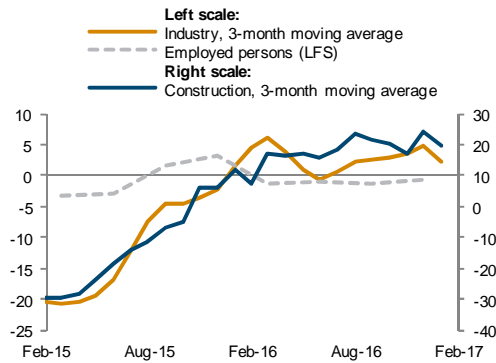
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Ukraine

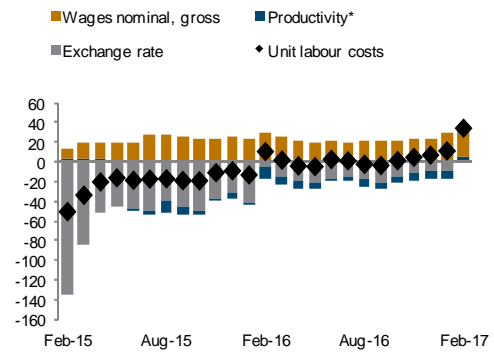
Real sector development

annual growth rate in %



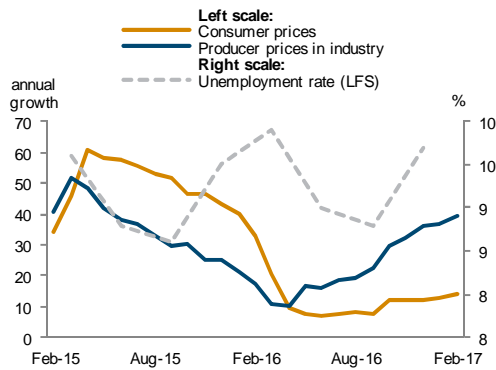
Unit labour costs in industry

annual growth rate in %



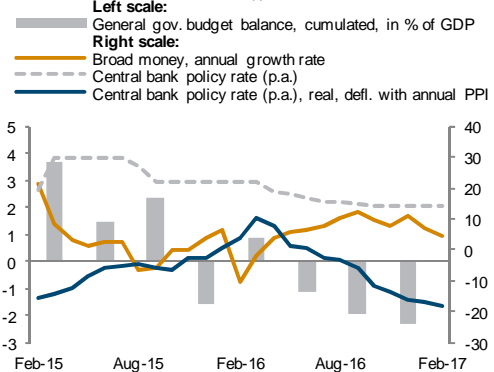
Inflation and unemployment

in %



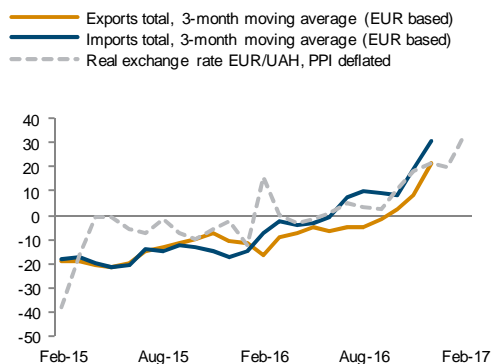
Fiscal and monetary policy

in %



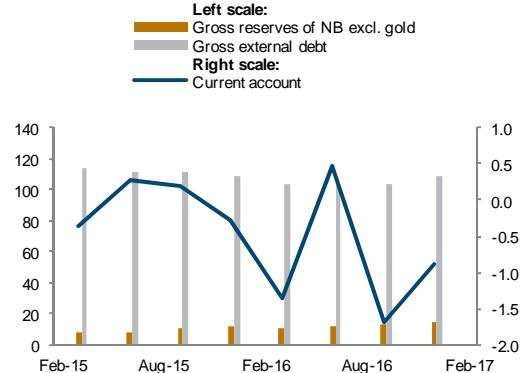
External sector development

annual growth rate in %



External finance

EUR bn



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