TBC CAPITAL

THEMATIC INSIGHTS FROM THE CHIEF ECONOMIST: IS GEORGIAN ECONOMY OVER-HEATING?

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Introduction. In 2021 the Georgian economy rebounded at 10.4%. The strong momentum also continued in 2022 with latest consensus projection among professional forecasters[1] of at least close to 10% driven by the rebound in the tourism industry as well as other inflows. This dynamics raises questions on the sustainability of growth, whether the Georgian economy is overheating, resulting in lower than potential economic activity in the following years? To answer this question we review internationally accepted key indicators starting with the output gap.

YoY, %	2020 Actual	2021 Actual	2022 Updated Baseline
EXPORTS*	-12.0	+26.5	+28
TOURISM (incl. migration impact)*	-83.4	-62.0% vs 2019	+5% vs 2019
REMITTANCES*	+5.5	+25.5	+23.0
FDI (incl. reinvested earnings)*	-30.5	+33.0	+35%
IMPORT OF GOODS AND SERVICES*	-19.3	+21.5	+30
FISCAL DEFICIT**	9.3	6.7	2.2
BANK CREDIT***	+9.1	+18.3	+18.5
GDP GROWTH	**-6.8%**	**+10.4%**	**+10.6%**

*Growth in USD ** Ratio to GDP, as planned by the MoF, IMF methodology ***Year-end
For GDP estimation inflation adjusted period credit growth is used. Also, the calculation is based on the estimation of inflows in real terms in GEL, not in USD. Moreover, various other assumptions are used in terms of the impact of key macroeconomic variables on economic growth

Source: Geostat, NBG, MoF, TBC Capital

1. Based on the latest Monetary Policy Report, 2022 August

Output gap. Output gap, as a difference between actual GDP and an unobservable measure of its 'potential', is considered to be one of the the main indicators for identifying the state of the economy during the business cycle fluctuations. Potential output can be interpreted as an output of the economy that does not accelerate additional pressures on inflation and a point at which economy operates at its maximum capacity. Therefore, a level of real GDP above the potential is often seen as an inflationary and a signal for the authorities to tighten policies.

However, it should be mentioned that estimation of potential output has many caveats due to variety of methodologies, some being strictly statistical, while others being structured in theoretical ways, being less aligned with the actual data. In addition, frequent structural changes in the developing economies compared to developed countries create additional difficulty of identifying correct dynamics of the potential output. Therefore, the concept of the potential output is often debatable, especially in the developing countries where the estimates are fraught with uncertainty[2].

Nevertheless, we provide the relevant estimates. The ongoing analysis of the GDP gap is based on the production function approach along with Kalman filter technique, incorporating structural relationships between variables, namely the real GDP and the core inflation[3].

The production function approach is based on a simple neoclassical Cobb-Douglas production function decomposing growth into the contributions of capital accumulation, employment growth, and total factor productivity growth. Our estimation of the production function assumes average total factor productivity growth rate of 2.6%, being consistent with the corresponding indicator level for peer developing countries[4], while considering partial long-run slowdown of the productivity growth due to the development of the economy. While relatively moderated level of investments, evident in the first quarter, is logical, as after the slowdown in growth, the investment demand recovers with the time lag, the investment good imports, having historically high correlation with the former one, despite high base effect in Q2 2021 has demonstrated a very strong rebound, making an argument for expected investment rebound in coming quarters. At the same time, FDI inflows recovered significantly in the first quarter, importantly also on the back of higher equity inflows, even though one large transaction had a significant contribution. In addition, following consolidation process, current budget plan implies an increase of public investment, being additional source of capital accumulation.

Another driver of potential output based on production function is an additional input of labor in the form of employment growth, this year being much higher due to the migration. In particular, based on the preliminary estimates, excluding temporary tourism and transit related stays, around 75000 foreign citizens from

2. IMF, 2015, Evolving Monetary Policy Frameworks in Low-Income and Other Developing Countries

3. Excluding food and non-alcoholic beverages, tobacco; energy, regulated tariffs, transport (specific tariffs), which can be debatable as only around 50% of goods and services is left, though still should be seen as an useful indicator.

4. World Bank, 2013, Georgia: Sustaining Rapid Economic Growth, Country Economic Memorandum.

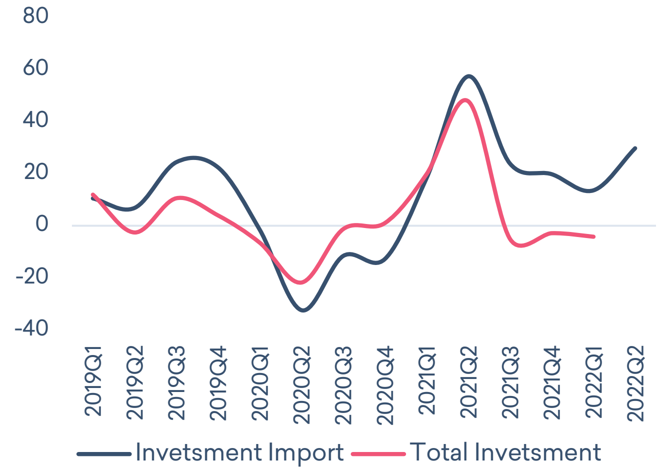
Ukraine, Russia and Belarus are currently in the country, out of which we assume around 30000 to be permanent with around 5 times higher productivity than an average employee in Georgia. The impact of migration on the local labor market indicators and productivity level should be studied further in more details, however, we believe that at the moment, this quantitative estimate broadly reflects the input from the migration effect for this particular exercise as a major driver of employment and productivity, boosting potential output this year.

As a result, production function approach suggests significant boost in potential output in 2022 on the back of more productive and higher labor input and higher capital accumulation resulting in lower output gap, while slowing down in the coming years approaching its long-term growth rate of 5.2 percent. In addition, Kalman technique of decomposing actual data into trend and cyclical components, also suggests increase in potential output in 2022, resulting in 1.8% output gap in 2022, narrowing in the coming years.

As a summary, considering different methodologies with uncertainties related to them and different results, still based on provided estimates one can argue that if the positive output gap exists, the magnitude is not that large enough for the conclusion on strong signs of overheating.

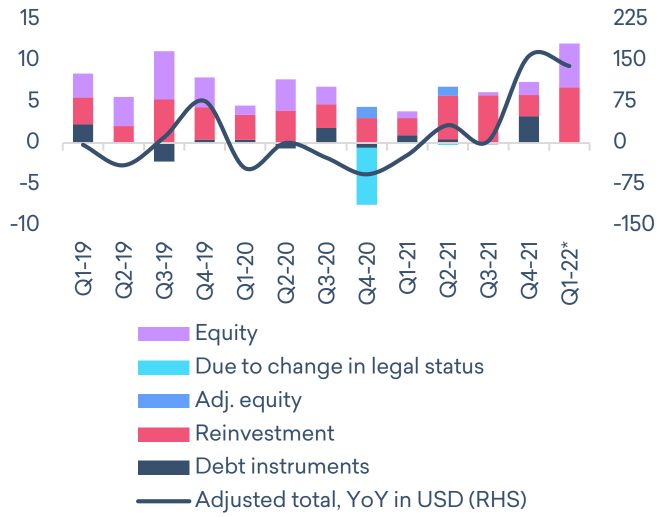
At the same time, given above mentioned caveats of estimation of the potential output level, other indicators and additional analysis is required to answer the question of whether economy has signs of overheating.

INVESTMENT IMPORT AND TOTAL INVESTMENT
(in GEL, YoY, %)



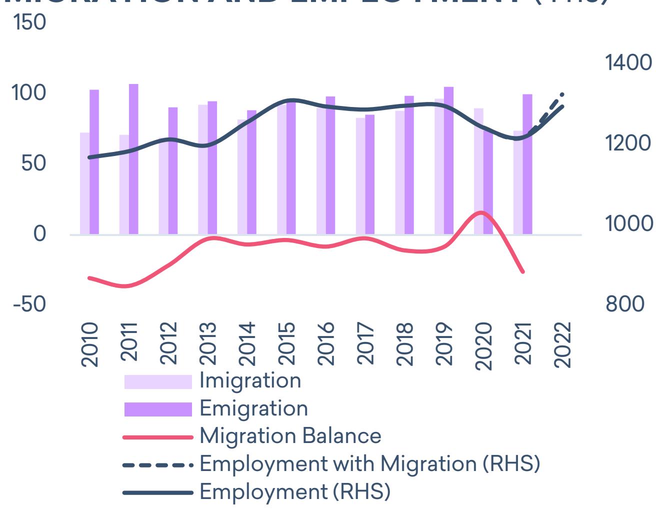
Source: Geostat, TBC Capital

FDI INFLOWS BY COMPONENTS
(% of GDP)



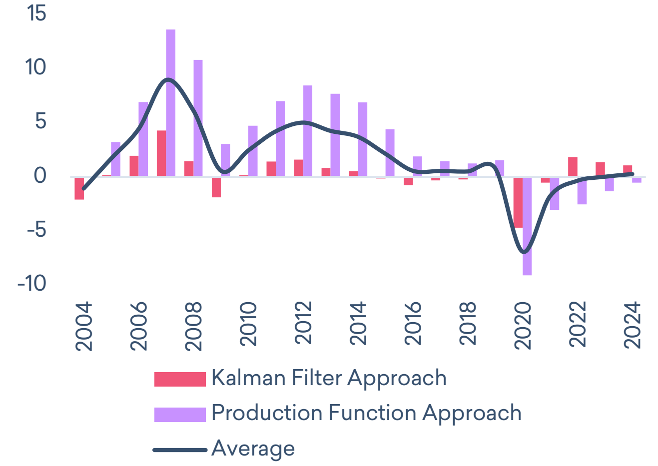
Source: Geostat, NBG, TBC Capital

MIGRATION AND EMPLOYMENT (Ths)



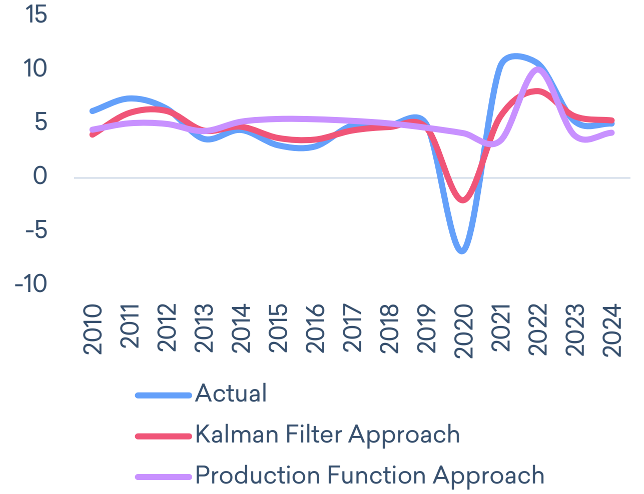
Source: Geostat, TBC Capital

OUTPUT GAP (%)



Note: In case of Production Function 0 gap is assumed in 2003
Source: Geostat, NBG, TBC Capital

POTENTIAL OUTPUT GROWTH (%)

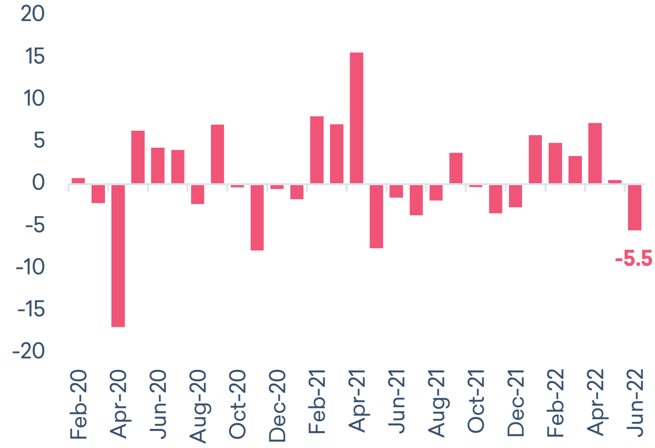


Source: Geostat, NBG, TBC Capital

The growth is already cooling down. The actual growth dynamics and even the bullish projection suggest that the Georgian economy has already reached its highs and in the coming quarters the quarterly, seasonally adjusted growth most likely will be negative. In particular, after a very strong expansion of 10.8 and 6% in the first and the second quarters in seasonally adjusted QoQ terms, the full year real GDP in 2022 to be 10.6% above its 2021 level, the 3rd and the 4th quarter growth should stand at around -4.6 and -1.2%. Notably, besides the expectations of the global slowdown, the similar trend is already observed in the US as the economy is in technical recession.

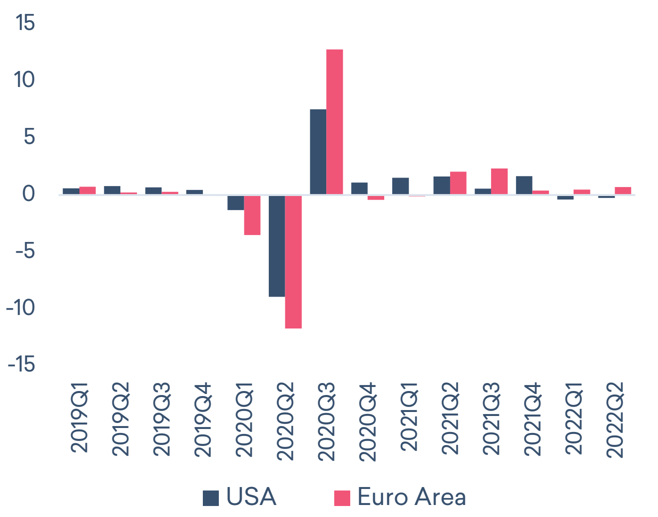
In our view, this is another indicator, that even if the signs of an overheating would be present, worrying now would clearly be "behind the curve" stance.

SEASONALLY ADJUSTED REAL GDP GROWTH (MoM, %)



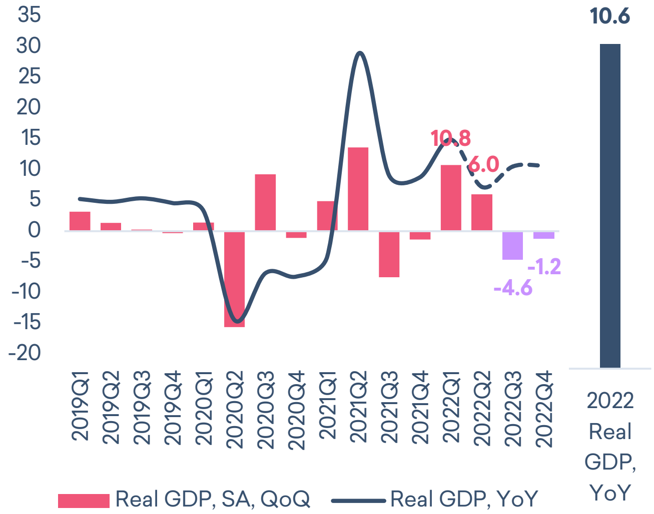
Source: Geostat, TBC Capital

SEASONALLY ADJUSTED REAL GDP GROWTH (QoQ, %)



Source: FRED, EUROSTAT

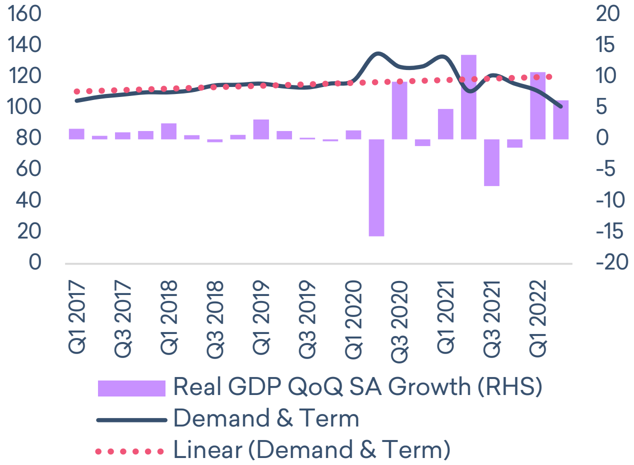
REAL GDP GROWTH (%)



Source: Geostat, TBC Capital

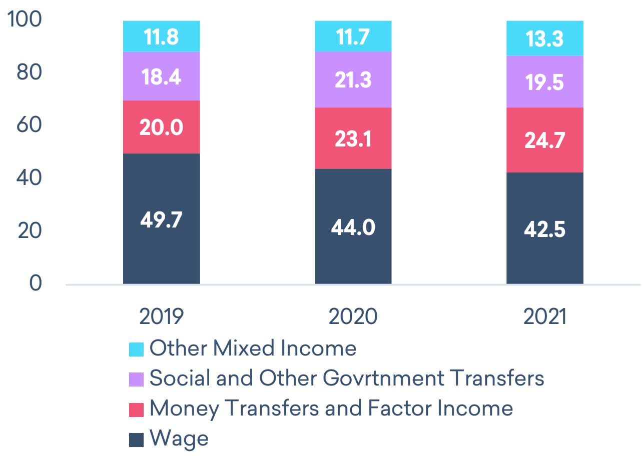
Household consumption is also moderating. Strong household consumption, especially when being almost the only driver of growth is often seen as a sign of an overheating. Indeed, compared to other drivers, in 2022&2021 household consumption has been strong. However, on the back of the government transfers, resilient remittances and in 2021 strongly supported by the spending of a pandemic related excess savings. Record low USD deposit rates, elevated inflation and also lately an appreciation of the GEL have also a positive impact with so far only marginal contribution of the consumer credit. Going forward, already in 2022, we expect the share of the household consumption to normalize on the back of slower increase in household consumption itself and recovering net exports and investments.

HOUSEHOLD SAVING DEPOSITS DIVIDED BY QUARTERLY GDP AND GDP GROWTH



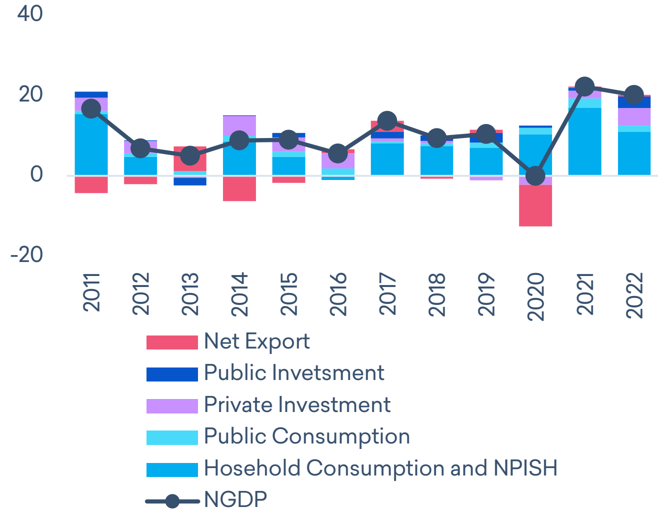
Source: Geostat, NBG, TBC Capital

HOUSEHOLD DISPOSABLE INCOME BY COMPONENTS (%)



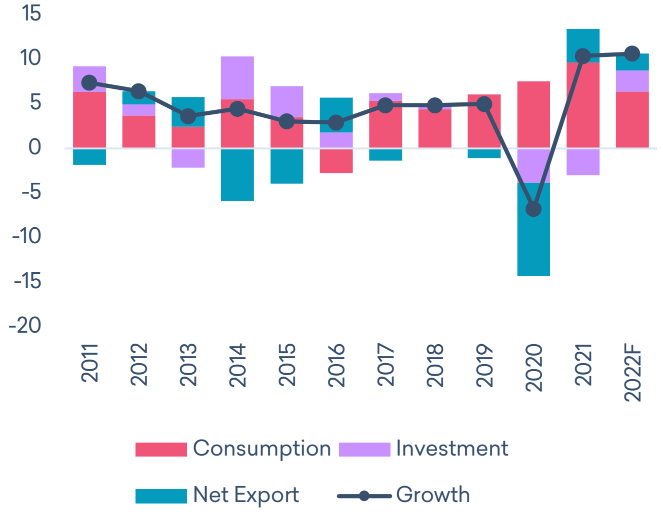
Source: NBG

NOMINAL GDP GROWTH DECOMPOSITION (YoY, %)



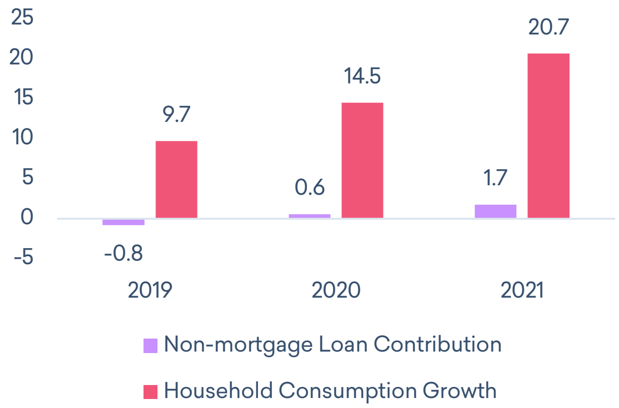
Source: Geostat, NBG, TBC Capital

REAL GDP GROWTH DECOMPOSITION (YoY, %)



Source: Geostat, NBG, TBC Capital

HOUSEHOLD CONSUMPTION – NOMINAL GROWTH AND NON-MORTGAGE CONTRIBUTION (%)

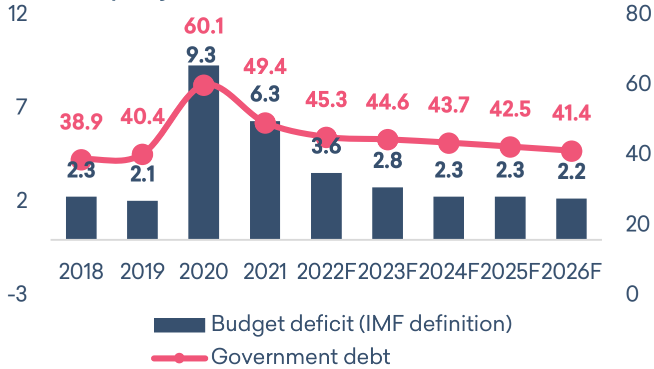


Source: Geostat, NBG, TBC Capital

Fiscal is already contractionary. Overheating is often also associated with high fiscal deficits. After the pandemic related stimulus, the deficit as well as the debt to GDP ratio is declining. At the moment, we have only June budget estimates, with implied 6% growth and average 9.1% inflation. The revision is expected in September with higher revenues, but likely even with lower deficit than 3.5%.

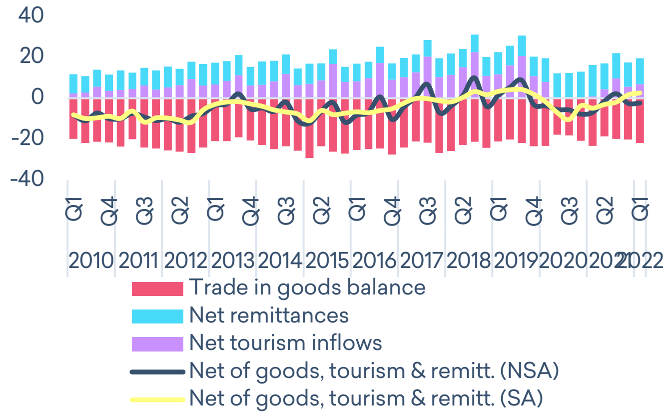
Current account deficit is also narrowing. Widening of the current account deficit is another indication of an overheating. Our baseline is the ratio to GDP to reach sustainably seen around 5.3% in 2022. At the same time, it should be argued, that in commodity dependent economies, in fact, current account surplus is associated with an overheating of the economy. In this regard, important to recheck if inflows, including and mainly tourism being the major driver of the improvement is at an elevated levels. As well as there are no signs of an excessive inflows from the financial account.

BUDGET DEFICIT AND GOVERNMENT DEBT (% of GDP, as of June-22 updated macro projections)



Note: Estimates are retrieved on the latest macro projection update of Ministry of Finance of Georgia based on FY 6% real GDP growth and average inflation of 9.1%
Source: MoF

TRADE IN GOODS, TOURISM INFLOWS AND REMITTANCES (% of GDP)



Source: Geostat, NBG, TBC Capital

Selected items of Balance of Payment (not seasonally adjusted)

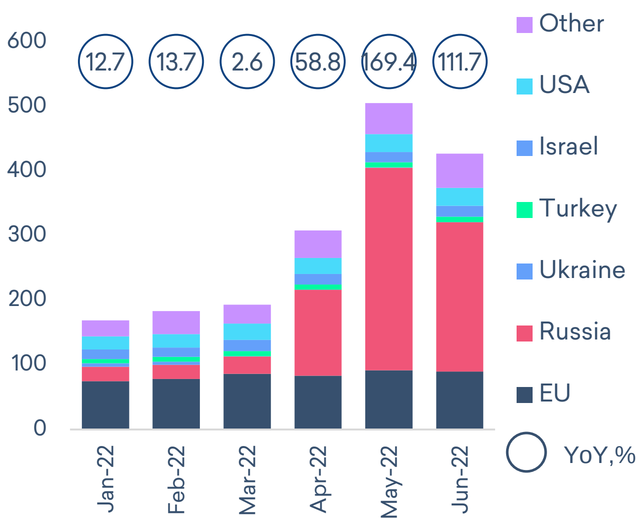
in USD billion	**2017**	**2018**	**2019**	**2020**	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	Q1 2022
Export of goods	**3.63**	**4.45**	**4.99**	**4.37**	1.08	1.38	1.45	1.66	**5.57**	1.52
Net tourism (incl. migration impact)	**2.24**	**2.70**	**2.61**	**0.36**	0.03	0.21	0.50	0.31	**1.06**	0.32
Net remittances	**1.45**	**1.63**	**1.73**	**1.91**	0.54	0.59	0.63	0.66	**2.42**	0.58
Import of goods	**7.43**	**8.56**	**8.77**	**7.54**	1.89	2.25	2.46	2.77	**9.36**	2.53
Net	***-0.11***	***0.21***	***0.56***	***-0.90***	*-0.24*	*-0.06*	*0.12*	*-0.13*	***-0.31***	*-0.10*
Investment income	**-1.42**	**-1.38**	**-1.59**	**-1.24**	-0.25	-0.43	-0.48	-0.42	**-1.58**	-0.47
CA incl. other items	**-1.31**	**-1.19**	**-1.02**	**-1.98**	-0.43	-0.49	-0.39	-0.57	**-1.88**	-0.60
CA incl. other items in % of GDP	**-8.0**	**-6.8**	**-5.8**	**-12.5**	-12.5	-10.4	-7.7	-10.3	**-10.0**	-13.0
Net FDI, *out of which:*	**1.71**	**0.98**	**1.05**	**0.55**	0.05	0.22	0.22	0.34	**0.83**	0.45
Equity and FDI-related debt	**1.35**	**0.83**	**0.65**	**0.31**	0.06	0.05	0.01	0.25	**0.36**	0.22
Reinvested earnings	**0.36**	**0.15**	**0.40**	**0.24**	-0.01	0.17	0.22	0.10	**0.47**	0.23
Government	**0.45**	**0.29**	**0.47**	**1.53**	0.41	0.22	0.29	0.36	**1.29**	-0.04
Banks, external borrowings	**0.18**	**0.02**	**0.31**	**0.02**	0.12	-0.18	-0.10	0.33	**0.18**	0.26
Banks, FC holdings*	**-0.14**	**0.31**	**-0.16**	**-0.17**	-0.27	0.51	-0.07	-0.01	**0.15**	-0.15
Other private sector borrowings	**-0.24**	**0.26**	**-0.12**	**0.16**	0.21	-0.30	-0.03	0.04	**-0.09**	0.17
Gross international reserves*	**-0.24**	**-0.28**	**-0.20**	**-0.31**	-0.24	0.19	-0.18	-0.22	**-0.45**	0.19
Net	***1.72***	***1.58***	***1.35***	***1.78***	*0.28*	*0.66*	*0.13*	*0.83*	***1.91***	*0.89*
Other items	***-0.20***	***-0.91***	***-0.52***	***-1.54***	*-0.49*	*-0.21*	*-0.07*	*-0.71*	***-1.47***	*-0.28*

*Negative sign means increase
Source: Geostat, NBG, MoF, TBC Capital

Terms of trade is stable. Importantly, the terms of trade, measured as exports prices over imports prices, remained stable indicating a reasonably balanced net effect of the highly volatile commodity prices. Therefore, it is difficult to argue on the existence of unsustainable, temporary net exports of goods revenues. Also, looking separately at oil prices and the current account, Georgia's exposure seems to be reasonably balanced.

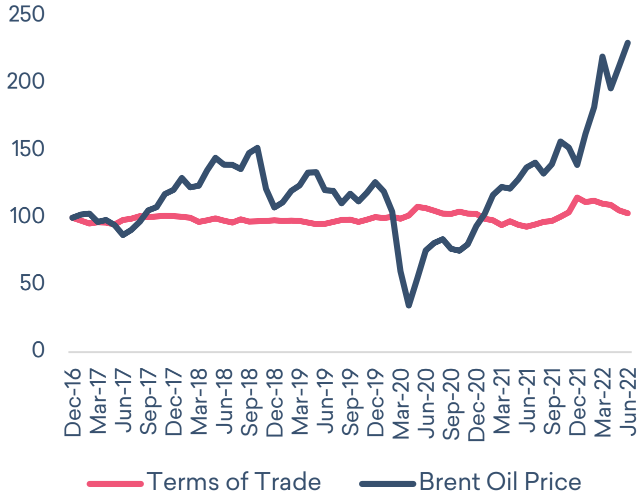
Remittances are strong, but only moderately above trend after adjustment. Remittance inflows have been strong, recently with an abnormal growth due to the elevated transfers from Russia. At the same time, for our BoP estimates, we adjust large share of remittances from Russia as those represent a double counting with the tourism inflows. For this and number of other reasons, our 2022 outlook for the remittance inflows stands at 23%.

REMITTANCES BY COUNTRIES (million USD)



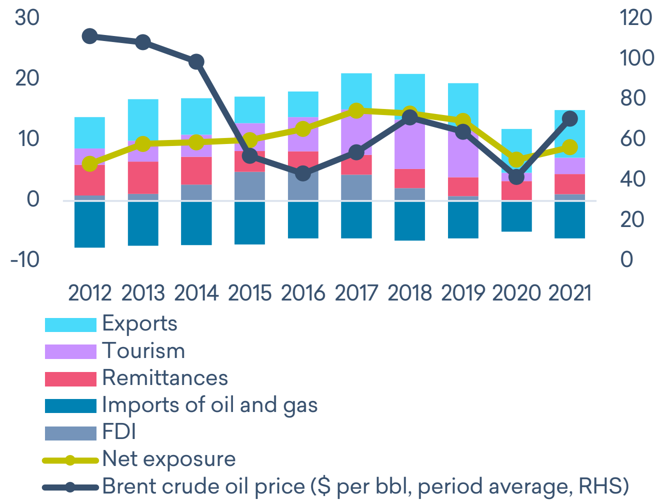
Source: NBG

TERMS OF TRADE AND BRENT OIL PRICE (Dec-16 = 100)



Source: Geostat, Bloomberg, TBC Capital

IMPORT OF OIL AND GAS RECEIPTS FROM OIL EXPORTERS AND OIL PRICE (% of GDP)



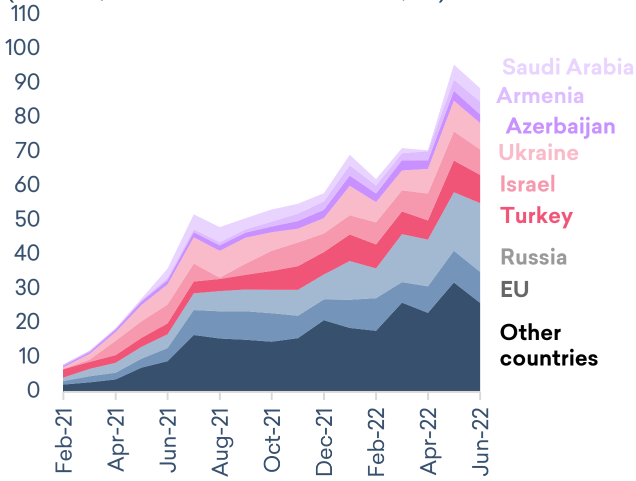
Source: Geostat, NBG, TBC Capital

Note: Taking into account the different elasticities of currency inflows and imports of petroleum products against oil prices, the country's overall net exposure to oil prices appears to be reasonably balanced. For example, a possible drop in oil prices should have a greater proportional impact on petroleum imports than on tourism or export inflows. The impact also depends on the prices of oil, which is assumed in the state budgets of relevant countries

Tourism inflows, including the migration impact, only to reach depressed 2019 level. If tourism inflows, including the migration impact would suddenly jump to a very high level, that would be an indication of overheating. But again, the overall inflows are just around 2019 level which itself can be seen as below trend due to the Russian flight ban in the same year. This is also confirmed by the recent hotel occupancy rates when compared with 2019. And what if migrants leave? Well, first, as mentioned above, we believe at least significant part of migration should be seen as permanent. Second, difficult to believe, but still even if the pre Russian invasion of Ukraine geopolitical status quo is back soon, again, including the migration impact the tourism recovery is still around 2019 levels which is not difficult to reach even without migration. In fact, that was the trend of conventional tourism inflows before the invasion and therefore, the 2019 level would be reached anyway as well as the country would benefit from the normalization of the higher risk premium in the region after the invasion.

TOURISM INFLOWS: RECOVERY BY COUNTRIES

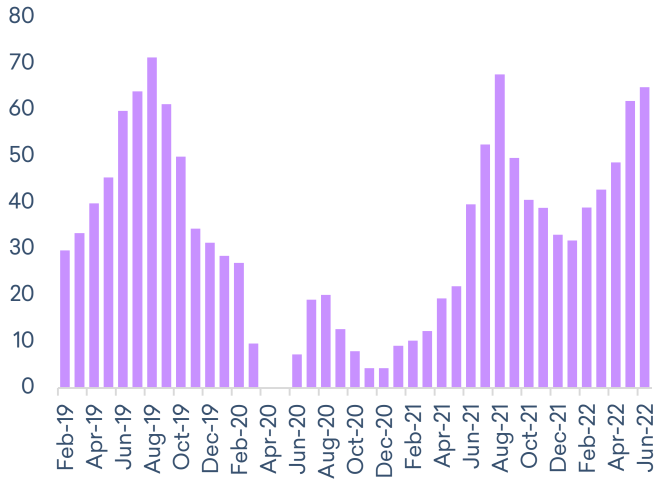
(in USD, same month 2019 = 100, %)



Source: NBG

HOTEL OCCUPANCY RATE

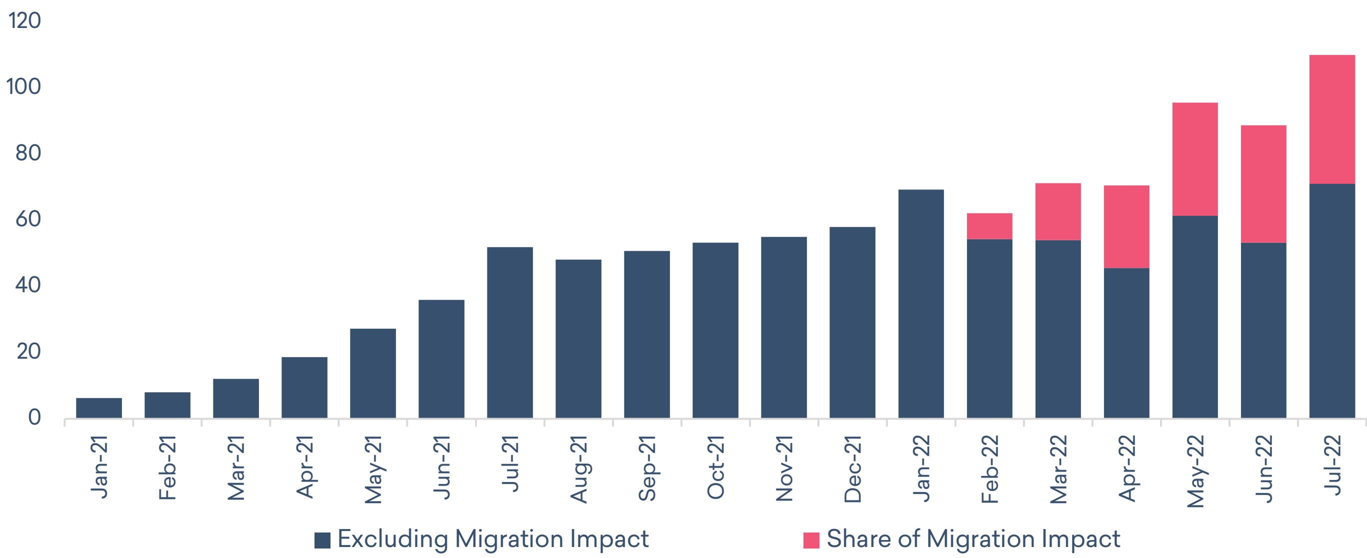
(%, as of June-2022)



Source: AIRDNA, TBC Capital

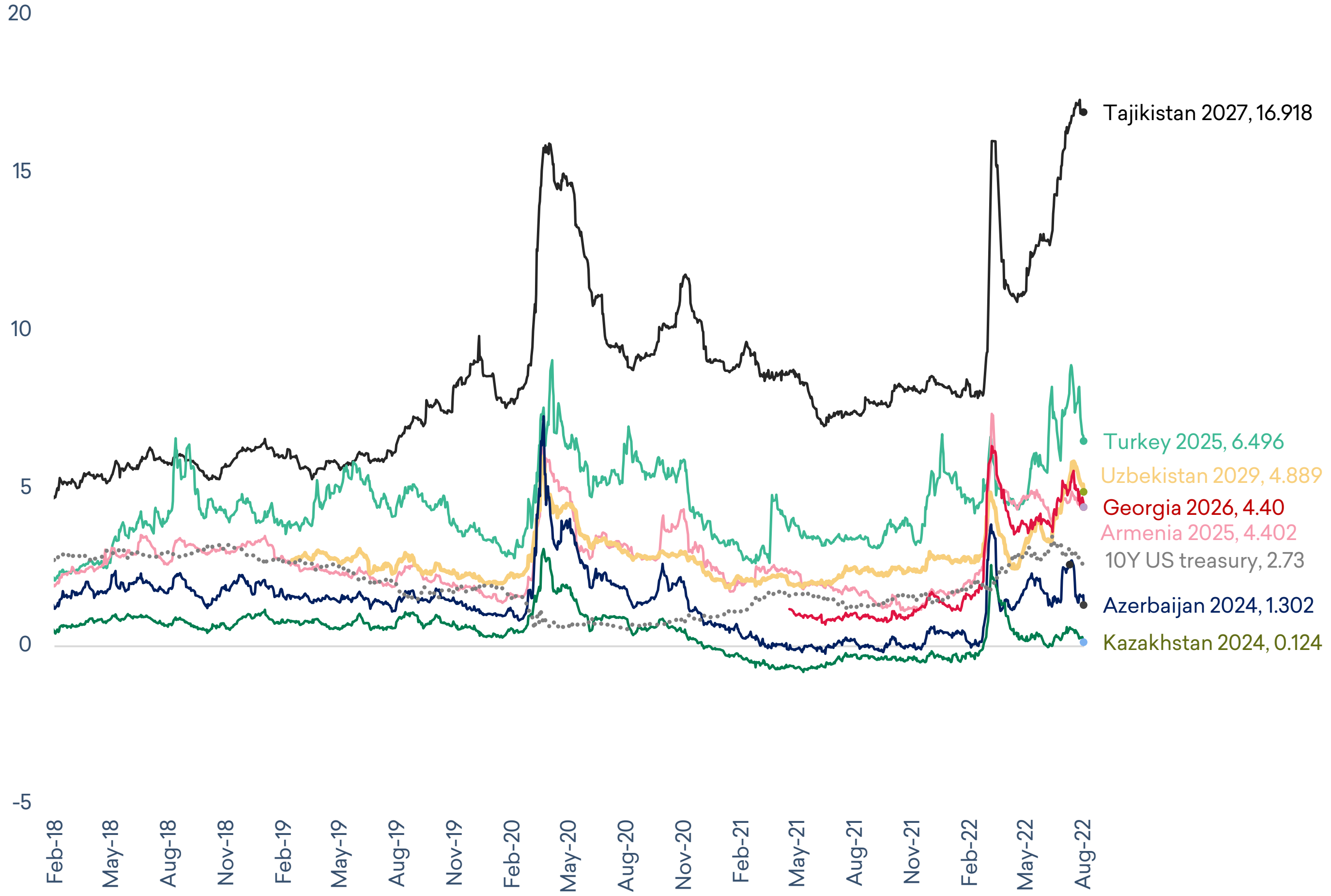
TOURISM INFLOWS

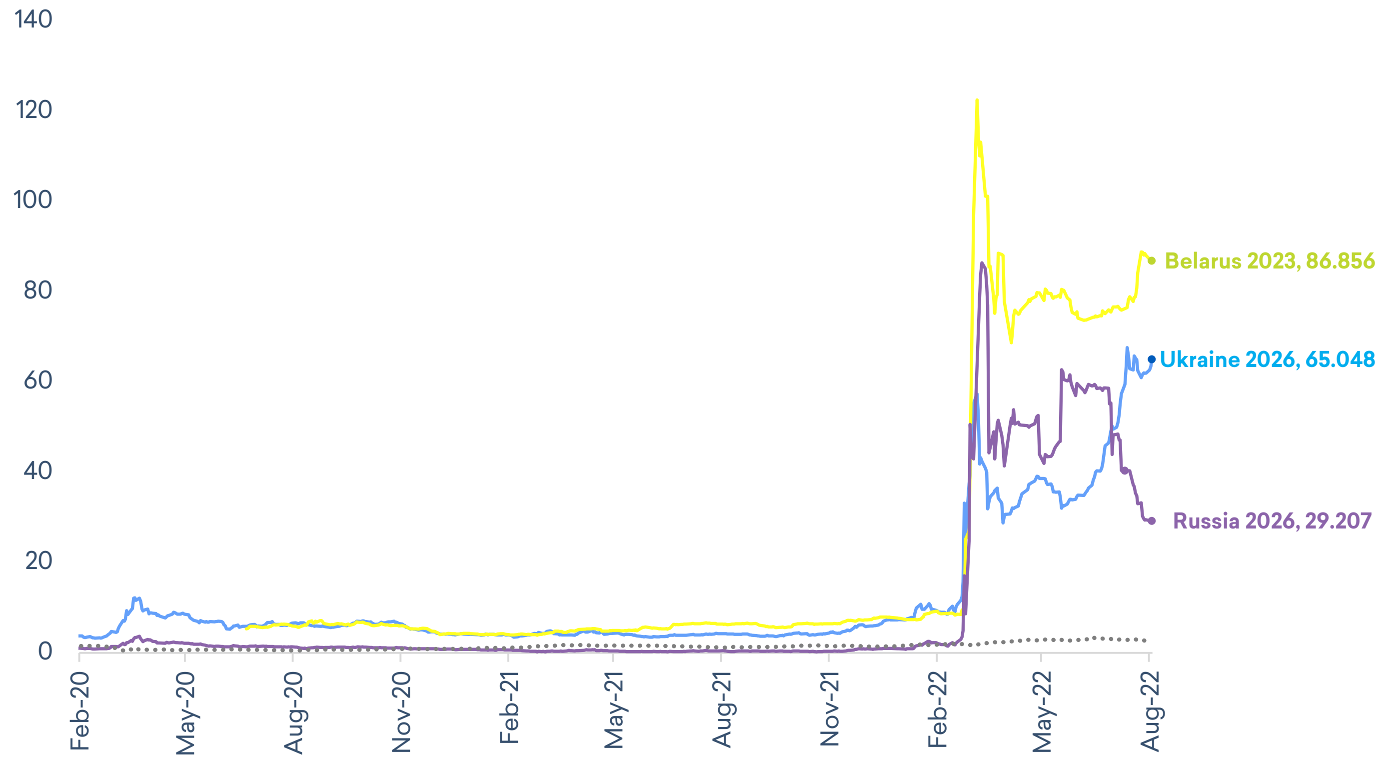
In USD, same month of 2019 = 100)



Source: NBG, TBC Bank, TBC Capital

SOVEREIGN EUROBOND SPREADS OVER 10Y US TREASURY YIELD
(PP, as of 3-August)

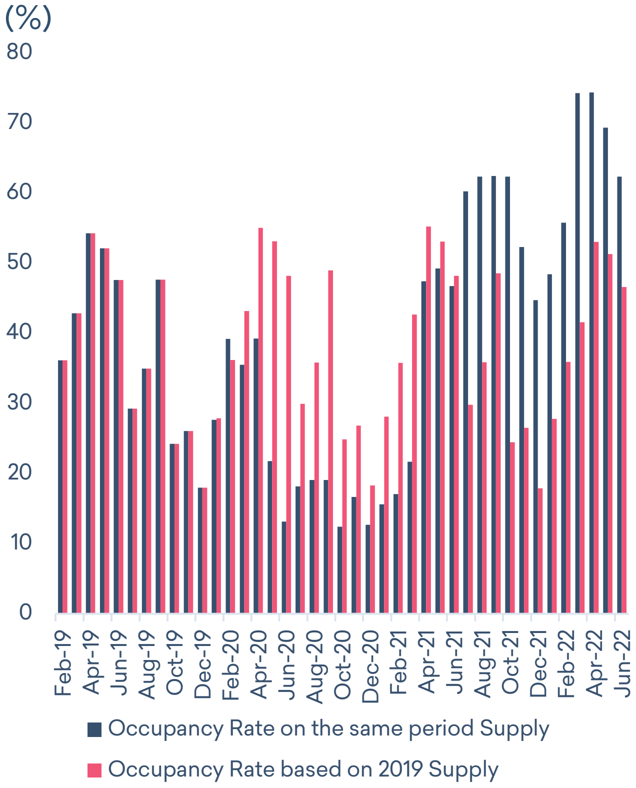




Source: Bloomberg

And what about the housing market? Certainly the migration leads to the demand mainly in the housing market. Notably, due to the lag in the vaccination and just reopened land borders, the tourism recovery, without the migration impact, has been much weaker from the closer neighborhood, which also leads to relatively higher demand in the housing, rather than hotels market. In this regard, when looking at the AIRBNB occupancy rates, adjusted for the lower supply compared with 2019, the occupancy appears to be much lower. Definitely, the rental demand and the supply has moved to more longer term rentals, rather than relatively short term AIRBNB market, but still, to some extent the migration is substituting the shortfall of the tourism recovery from the closer neighborhood. Overall, only to some extent as the yields have substantially surpassed the pre-COVID levels.

AIRBNB OCCUPANCY RATE



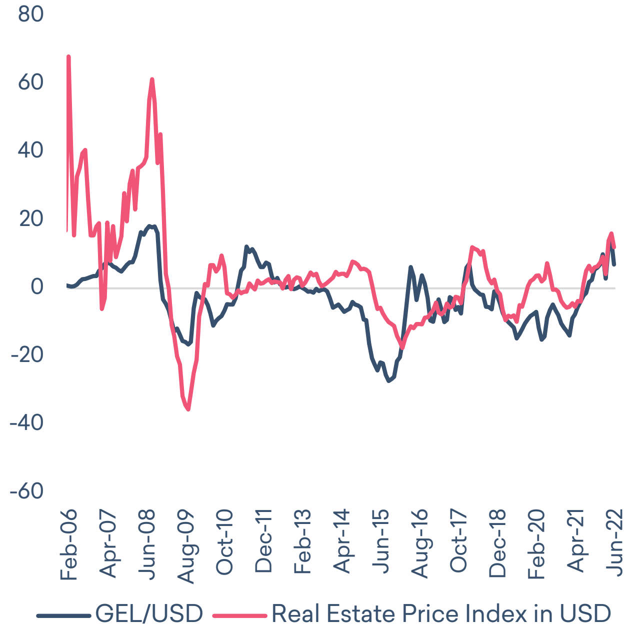
Source: AIRDNA, TBC Capital

Tourism Inflows by Countries (January 2022 / January 2020)		
	Growth, %	Contribution to growth, %
Ukraine	30	4
Saudi Arabia	45	2
Israel	-28	-4
Other	-14	-6
Iran	-66	-7
Armenia	-60	-9
EU	-37	-10
Azerbaijan	-76	-20
Turkey	-56	-20
Russia	-56	-29

Source: Geostat, Bloomberg, TBC Capital

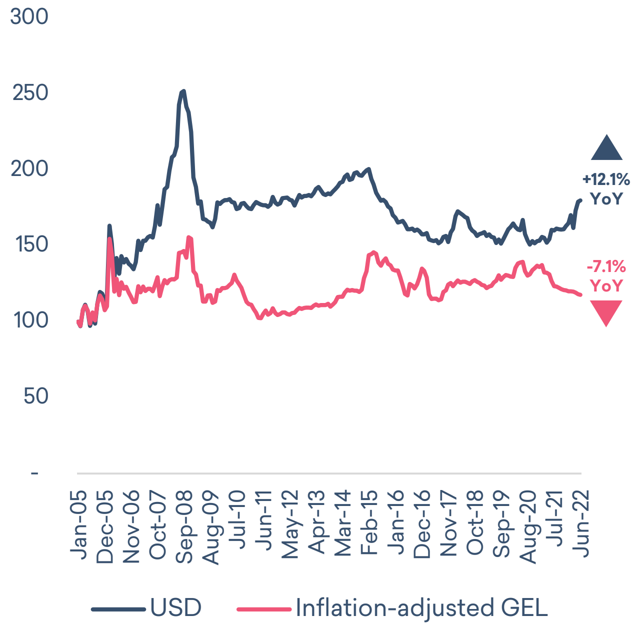
Now the logical question is whether we have signs of bubble in the housing market? Before looking at the internationally conventional[5] macro-financial analysis, the local context requires first to answer the housing market currency denomination question. In particular, while the common market belief would be that the market is in the USD, the GEL/USD and the housing price in the USD relationship clearly indicates that the price is highly sensitive to the exchange rate movements. Therefore, internationally accepted indicator, the real price in the national currency, also seems to work better in Georgia[6]. In fact, this is also evident when looking historically at the housing price as the real one in the GEL is much less volatile than the one in the USD. Based on this assumption, 1st out of 3 top down indicators does not indicate to a bubble combined with the fact that the price increase even in the USD still looks relatively moderate. Second, the decline in the rent-to-price ratio compared to its long term trend is another indicator of the bubble as during the hot housing market the price tends to increase faster than the rent[7] and there is no such evidence as the yield has increased substantially, initially together with the recovery in the hospitality sector and lately due to the demand from migrants. For the housing market fundamentals assessment, even excluding the latest spike in rentals would lead to the same conclusion. Third, the yield should be compared with the most conventional instrument of savings. In our view

GEL EXCHANGE RATE AND REAL ESTATE PRICE (YoY, %)



Source: NBG, TBC Capital

HOUSE PRICE INDEX (USD/sqm)



Source: NBG, TBC Capital

5. World Bank, 2014, [Macroprudential Policy Framework: A Practicle Guide]
6. We are a long term favorite of the development of the inflation-linked market in Georgia, which can work in bonds, commercial and possibly also residential real estate rentals, as well as loans and deposits markets. See [Pricing GEL Inflation-Linked Bonds Using USD Benchmark]
7. See [Comparison of 2008 and 2020 shocks]

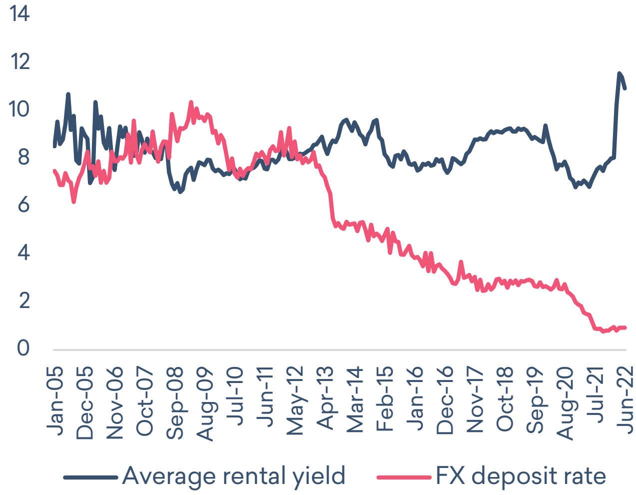
it's clear that in the Georgian context it's a dollar deposit and the gap is the large. Here we note that there may be a counterargument to look at the GEL deposit rate, however, a) when we say the prices are in GEL, we mean real not the nominal GEL and b) from the behavioral perspective, it is the dollar deposit which is comparable to the housing investments, as unlike the GEL, in the housing and the USD deposit markets, the perception of an investment being highly risky in terms of maintaining its value is not that material.

Therefore we assess housing market with no evident sign of the bubble. However, this relates to the price, rather than yield. If something is unsustainable in this environment, it is clearly the housing rental yield, in our view. Namely, as described above, we believe the significant part of the migrants will stay in Georgia for the long term, however, some of them could leave and even those who stay will move to buying, rather than renting an apartments. Based on our estimates, when excluding the temporary drivers, an average rental yield in Tbilisi at the moment should stand at around 8-8.5% being around 3-3.5 percentage points lower than the actual one. Same estimates for Batumi show up to 1 percentage point's higher rates in both cases.

As for the price outlook, the demand is strong driver, however, recently the supply is also strong[8] and the construction costs are declining. At the same time, the real price in GEL looks more undervalued, rather than overvalued as in the long term, the real price should increase probably by slightly more than 2% per year. As for the USD price, as mentioned, the one also

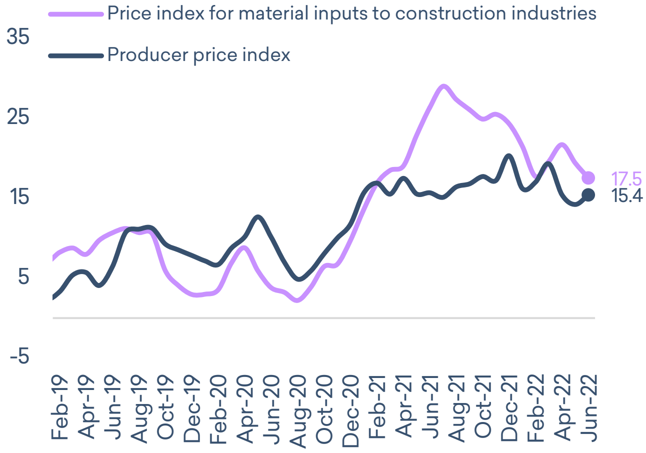
8. Housing Sector review in the forthcoming Tbilisi Residential Market: Monthly Watch

RENTAL YIELD (Rent/Price) AND DEPOSIT YIELDS IN GEORGIA



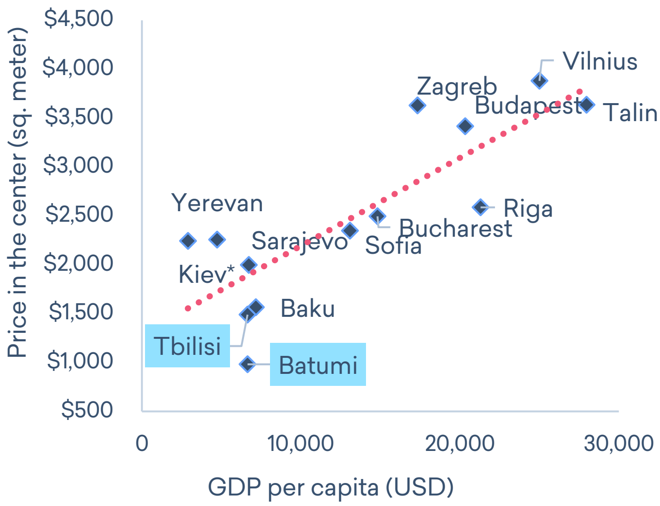
Note: Rental yield data since Jan-20 is based on MyHome data
Source: NBG, TBC Capital

PRICE INDICES
(YoY, %)



Source: Geostat

COMPARISON OF RESIDENTIAL PROPERTY PRICES BY CITY
(2021, USD/sqm)



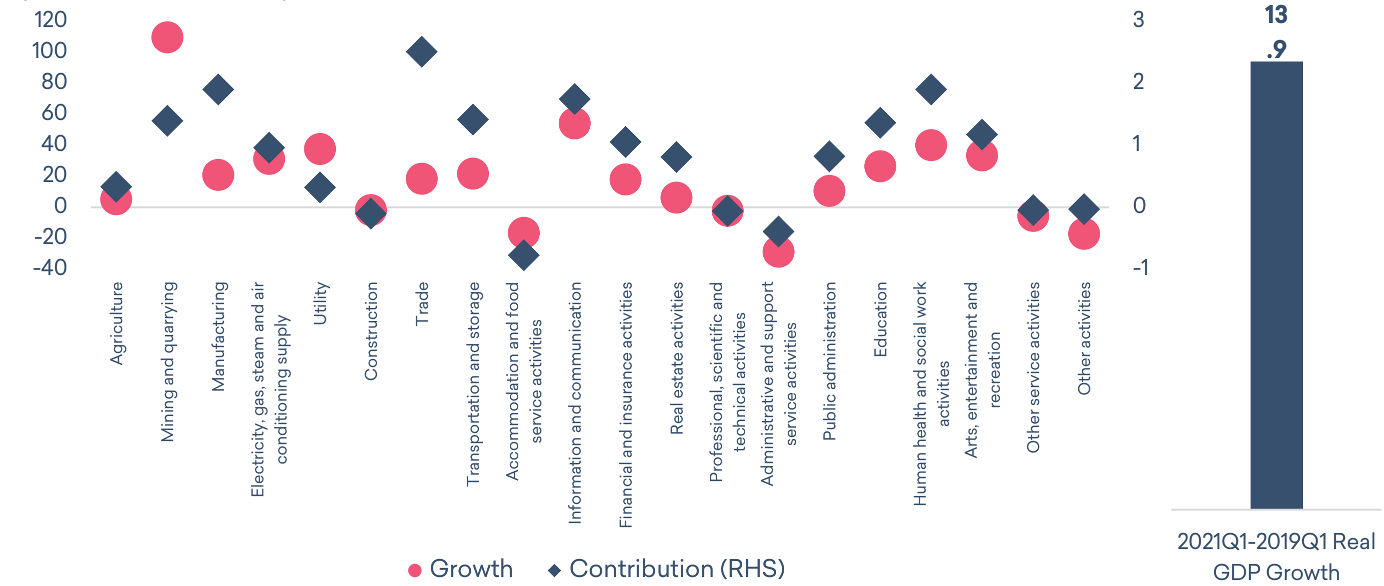
*Estimate. In case of cities, GDP per capita for the corresponding country is considered
Source: IMF, Numbeo

depends on the USD/GEL. Also important to highlight, that the price in the EUR, in terms of the underlying value, demonstrated higher stability than the USD, but that's the topic for another discussion.

Overall, from the sectors perspective, when comparing Q1 2022 with the same period of 2019, probably fair to say not based on a comprehensive and forward looking analysis, but still it could be argued, that we don't see the strongest growth in the industries which are more expanding during an overheating periods, such as the real estate, manufacturing, trade. In fact, the very strong growth in the information and communication sector likely indicates to higher activity in IT industry which was on the increase even before Russian invasion in Ukraine also supported by the virtual zone tax legislation.

REAL GDP GROWTH AND CONTRIBUTION BY SECTORS

(2022Q1 – 2019Q1, %)

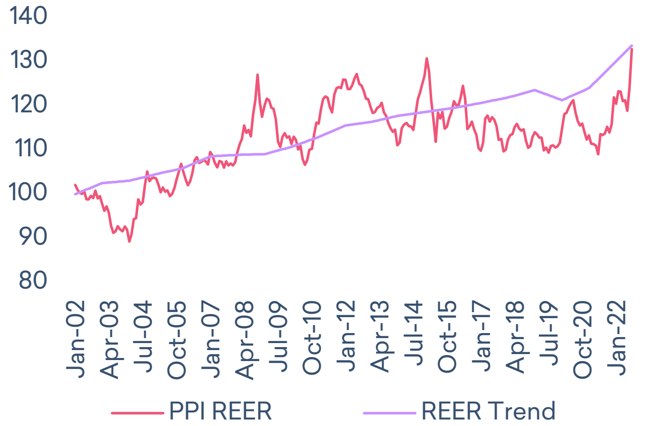


Source: Geostat

The GEL close to its long term trend. The GEL has strengthened recently, though after being heavily undervalued, in our view. We estimate the long term trend using standard Balassa-Samuelson approach and PPI for the measure of prices in the trading partner countries. Based on the estimates, the GEL still seems to be close to its long term trend being an important argument as during the overheating the exchange rate tends to appreciate unsustainably. Furthermore, traditionally, we are less concerned on the competitiveness as based on a VAR model*, we find very little (if any) evidence of a weak GEL supporting growth through the export expansion and import substitution effect. In particular, the model is constructed to reveal the balance between the trade and financial effects of the GEL real effective exchange rate (REER) and the GEL nominal exchange rate to USD for the Georgian economy. The model consists of the real GDP, the GEL nominal exchange rate towards the USD, the REER, and control variables such as commodity prices and foreign demand.

GEL REER ACTUAL AND FITTED REER

(As of 6-Aug-22, increase means GEL appreciation)

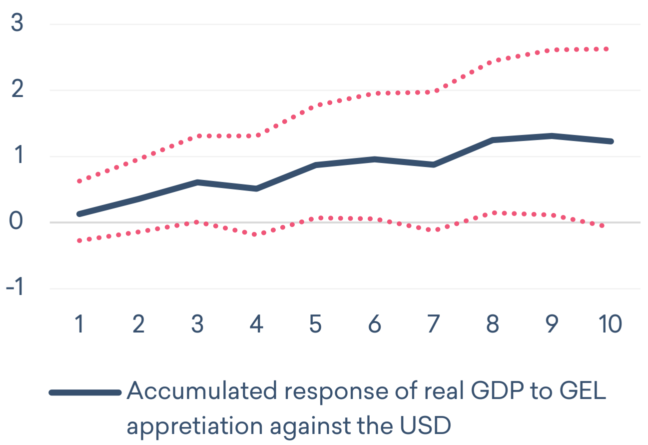


Note: PPI REER data is estimated from January 2013
REER Trend is estimated based on GDP per capita growth differential between Georgia and its main trading partners using relative trade weights and adjusted for the share of non-tradable sector
Source: NBG, IMF, WB, TBC Capital

Appreciation of the GEL towards the USD causes real GDP to increase (from the financial/income effect), while appreciation of the REER initially leads to an counterintuitive increase of real GDP with a negative impact (from the trade/substitution effect) only observed after five periods. However, the latter effect does not seem to be significant, unlike the effect of the USD/GEL. While further study into this matter is necessary for more accurate results, the findings appear to be valid when taking into account the characteristics of the Georgian economy. This is important from the policy response perspective as the depreciation certainly may lead to lower imports, however, at the expense of slower growth due to adverse balance sheet effect and deterioration in consumer and business sentiments.

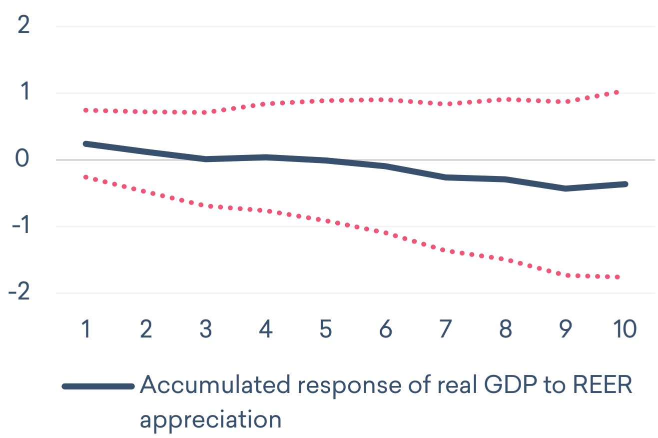
THE USD/GEL AND REAL GDP GROWTH

(%)



THE GEL REER AND REAL GDP GROWTH

(%)



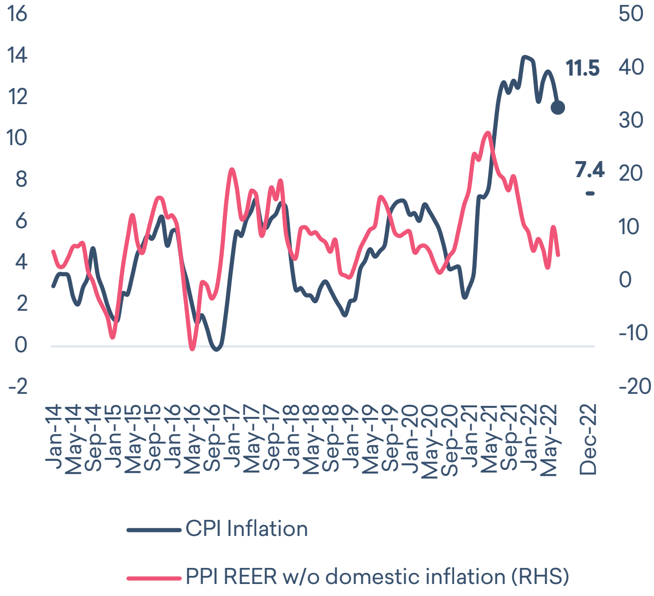
*The approach is based on the autoregressive distributed lag (ARDL) model from the BIS 86th annual report, Box III.B: Exchange Rates: Stabilizing or Destabilizing.
Source: NBG, BIS, Bloomberg, TBC Capital

12 months ahead we may see even deflation.

Yes, it's almost always about the GEL REER. July CPI inflation print came in at 11.5% YoY being 1.3 percentage points lower than a month ago, in line with our expectations. The decline is sharp, however, monthly seasonally adjusted inflation in July has been still high, at around 0.9% and therefore, the drop is on the back of the high base effect. Nevertheless, we still expect well below the target monthly inflation rates already starting August and the year end CPI inflation to reach 7.4% based on our latest estimates. Again, this means that the 2022 year end inflation will stay above target only on the back of high inflation in the first 7 months at seasonally adjusted annualized 15.8%, while in the last 5 months the same estimate stands at negative, -3.7%. We don't think so, but even our estimates are optimistic and the year-end CPI inflation would stand at 10.5%, that still implies that in the last 5 months, monthly seasonally adjusted inflation is on target. As there is the general consensus among professional forecasters that the 10.5% is pessimistic assumption that clearly implies the above target inflation pressures are over.

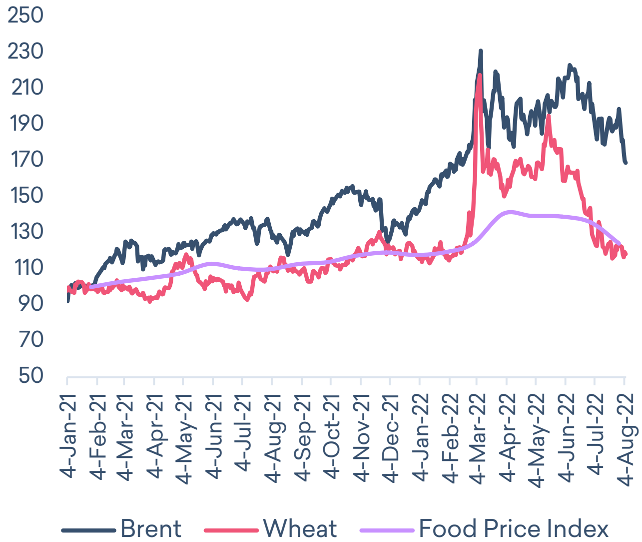
Certainly, to assess the risks of the inflation spiral, one should look at other measures of inflation as well. In this regard, an estimated domestic inflation being lower than the headline one, until very recently had an increasing trend. However, in July the decline is also evident in this measure and furthermore, when excluding say bread with the price being almost fully determined by the imported wheat and energy prices and the housing rent, the domestic inflation demonstrates quite a different pattern. And with less pass-through, but domestic inflation, due to the high share of imported inputs, is also determined by the GEL REER. Certainly, the demand also plays a role, however, not the key one, and anyway, as outlined in the growth section, the growth is cooling. Also, estimated core and service inflation show somewhat similar pattern the latter being more closely aligned with wages.

INFLATION (YoY, %) **AND PPI REER EXCLUDING DOMESTIC INFLATION**
(YoY, %, increase means GEL depreciation)



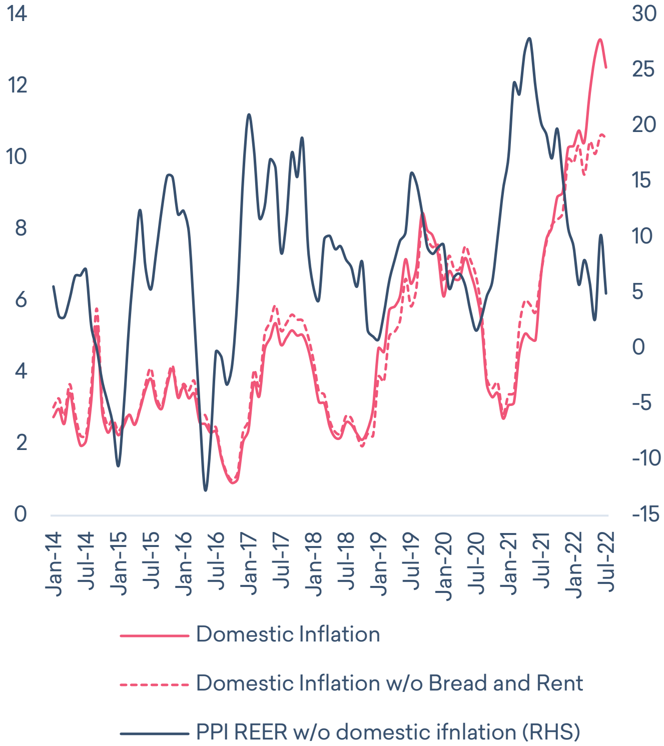
Source: Geostat, NBG, TBC Capital

SELECTED COMMODITY PRICE INDICES
(Jan-2021 = 100, As of 5-Aug-2022)



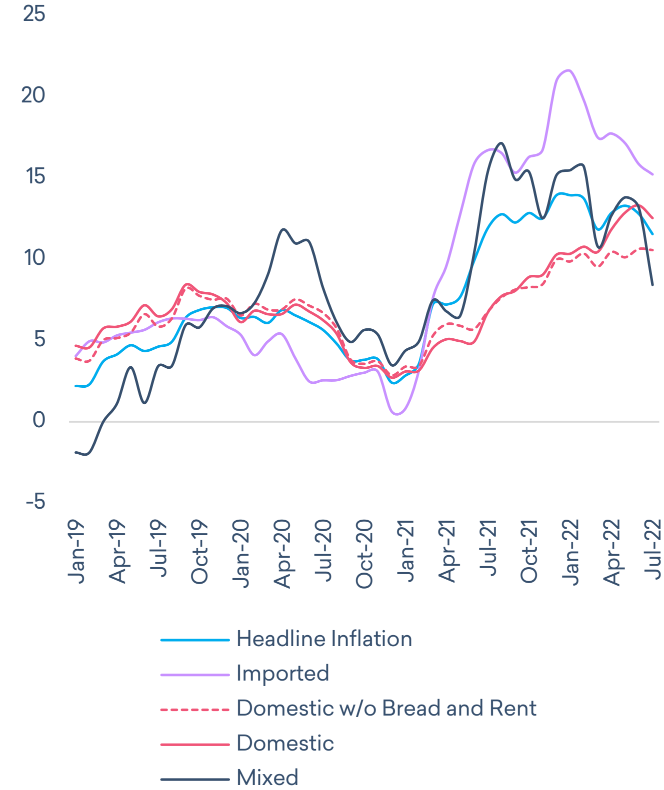
Source: CME, ICE, FAO

ANNUAL INFLATION AND PPI BASED REER (YoY, %, increase means GEL depreciation)



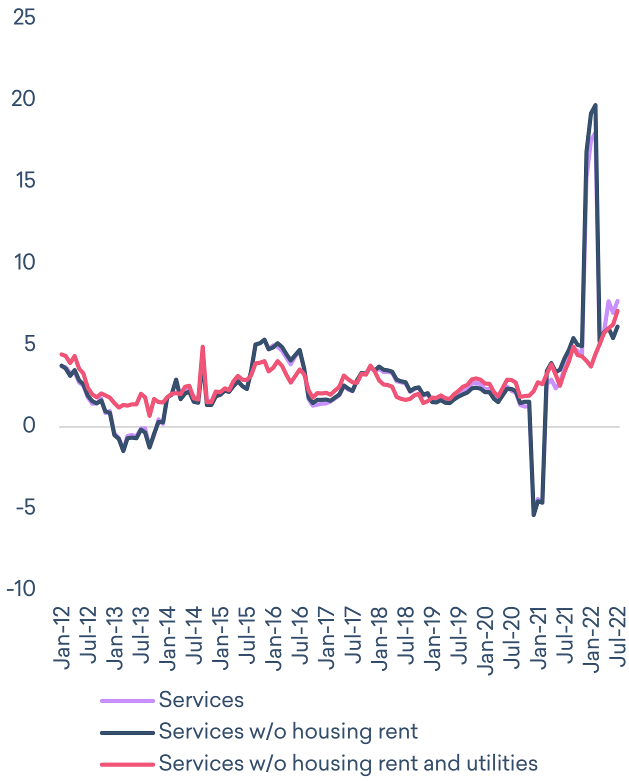
Source: Geostat, NBG, TBC Capital

INFLATION (YoY, %)



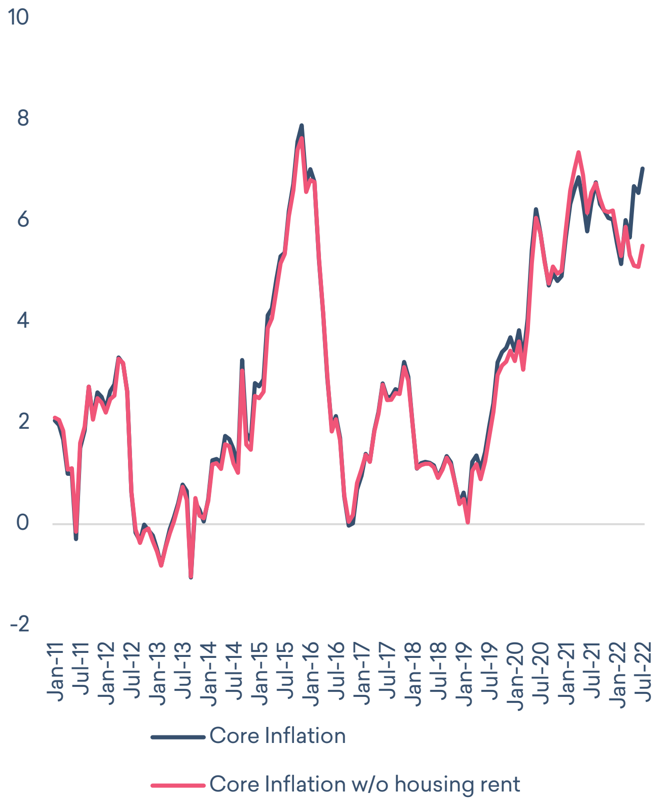
Source: Geostat, NBG, TBC Capital

SERVICE INFLATION (YoY, %)



Source: Geostat, TBC Capital

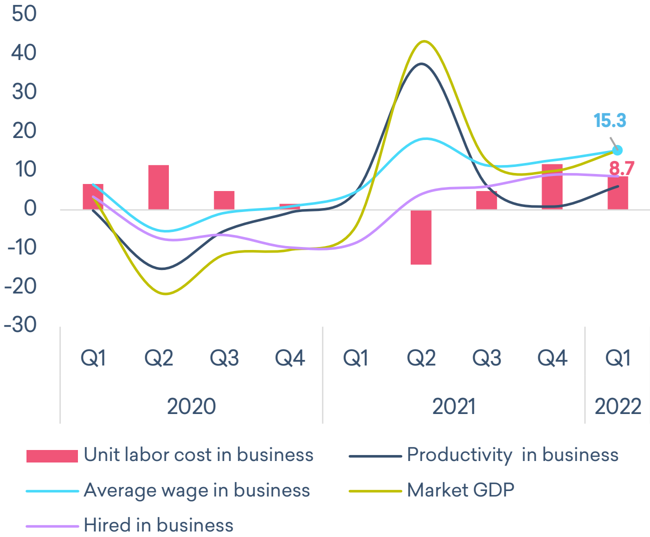
CORE INFLATION (YoY, %)



Source: Geostat, TBC Capital

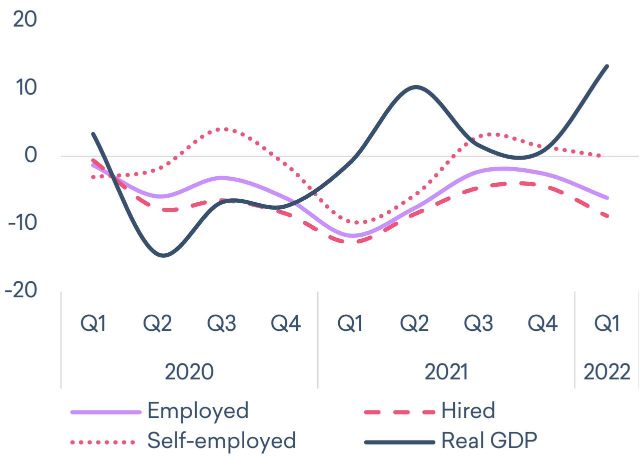
Wages are higher, but unit labor costs relatively moderate. Unit labor costs, measured as nominal wage increase adjusted by the change in the productivity also went up, however, to much less extent than the headline inflation. Furthermore, our estimates show that **wages are also and likely even to more extent determined by the inflation, rather than the growth only**. Therefore, together with the moderation in the inflation, we expect wage growth also to moderate to stay traditionally reasonably positive in the real terms. Another argument of the labor market not really been as hot as an overheating would imply is the fact that the **jobs are still recovering to reach 2019 levels**.

UNIT LABOR COST BASED ON MARKET GDP (YoY, %)



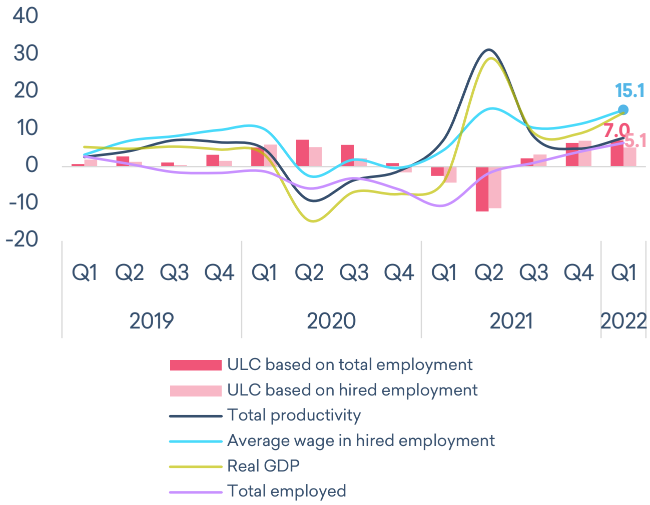
Source: Geostat, TBC Capital

EMPLOYMENT, REAL GDP AND WAGE DYNAMICS (%, compared to the same period of 2019)



Source: Geostat, TBC Capital

UNIT LABOR COST BASED ON TOTAL GDP (YoY, %)

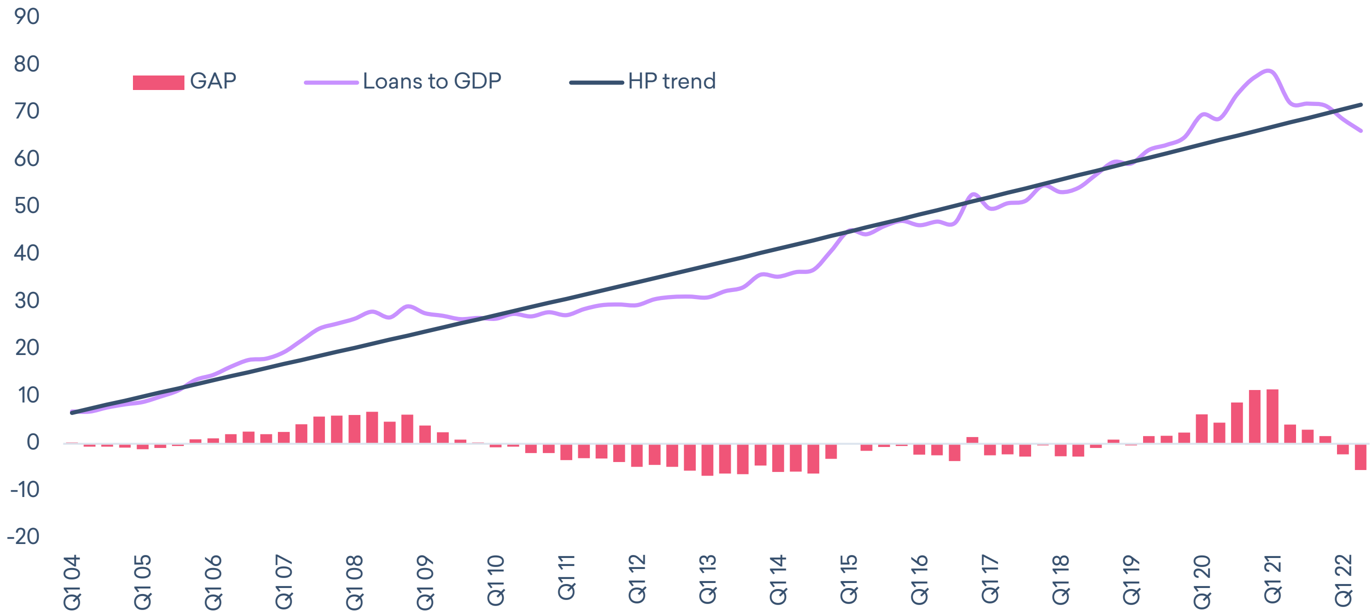


Source: Geostat, TBC Capital

	2014	2015	2016	2017	2018	2019	2020	2021	2022F
Nominal Wage in Business Sector	5.3	12.0	4.6	8.7	8.0	5.5	5.3	17.1	16.0
Average Inflation	3.1	4.0	2.1	6.0	2.6	4.9	5.2	9.6	11.1
Real Wage	2.2	7.7	2.5	2.5	5.3	0.6	0.0	6.9	3.9
Real GDP	4.4	3.0	2.9	4.8	4.8	5.0	-6.8	10.4	10.6

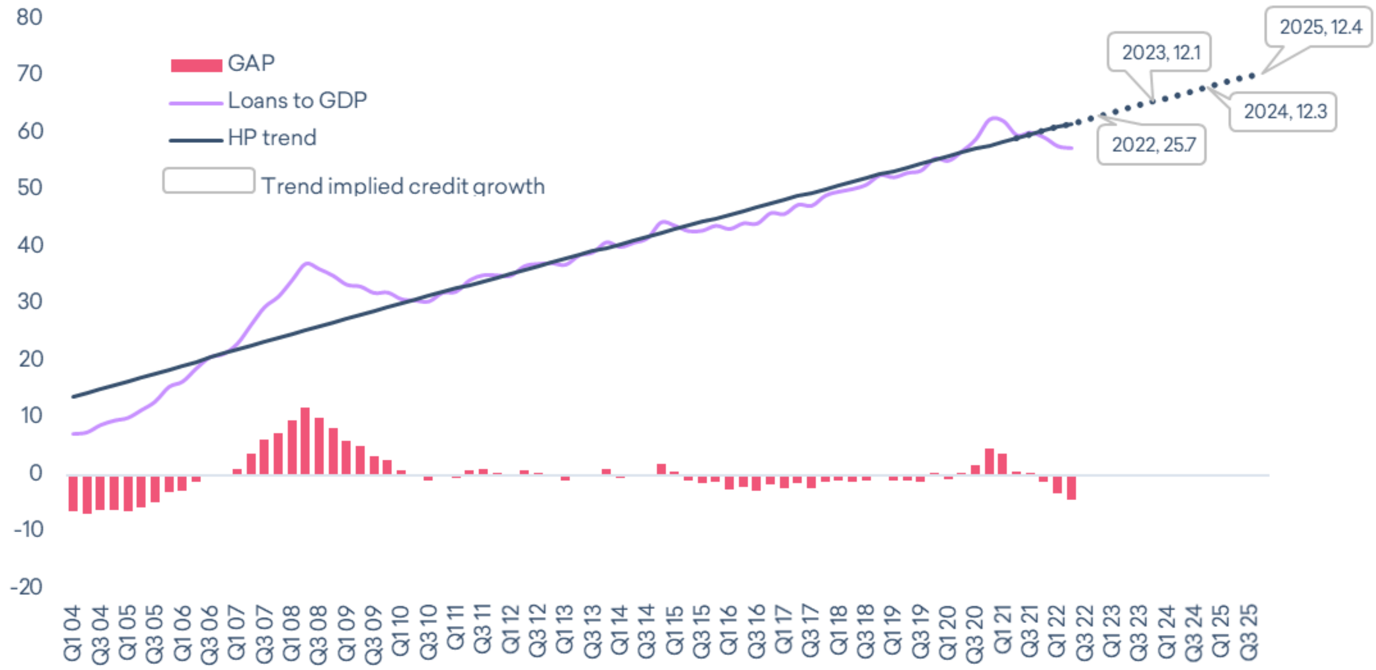
Credit-to-GDP gap turned even negative. The Credit-to-GDP gap, a powerful early warning indicator turned negative even when looking at more informative, - constant exchange rate. this is another, and in our review the last indicator that the Georgian economy is not overheating.

CREDIT TO GDP GAP AT CURRENT EXCHANGE RATE (%)



Source: Geostat, TBC Capital

CREDIT TO GDP GAP AT CONSTANT (AVERAGE) EXCHANGE RATE (%)



Source: Geostat, TBC Capital

Concluding remarks

While double digit growth in the second year in a row fairly raises question on the potential overheating, the relevant indicators demonstrate that the unsustainable growth is difficult to argue, though in our view, keeping in mind temporarily elevated housing rentals. Furthermore, using a forward-looking approach, the economy and inflation is cooling down and therefore we would be very careful on the tightening measures, including too contractionary fiscal stance. Certainly, we are not advocating for the large deficit, though the one below 3% would require additional justification. In this regard, the urgent need for current as well as capital expenditures, still declining public debt to GDP ratio are an additional arguments. The investments in the regional infrastructure would be our favorite as we believe working remotely also other than in Tbilisi and Batumi, for foreign as well as Georgian citizens is one of the key untapped competitive advantages of the country. This looks to be true especially as some remaining infrastructure in the regions already exists as during a post-soviet times the regional cities as well as the villages saw a largest decline in the population. Therefore, the return form the investment would be much higher as compared with the greenfield one. Important to highlight, that by "infrastructure" we mean complete set of goods and services to be demanded by the targeted upper middle class and the approach should be based on so called "industrial policy" principles[9].

9. Nadaraia, Otar et al, 2013. Economic Growth and Structural Transformation , *Economy and Banking, 1(2),* 7-21.

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