GEORGIA

SELECTED ISSUES

May 2024

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GEORGIA

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April 29, 2024

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GEORGIA: DRIVERS OF INFLATION AND MONETARY POLICY[1]

Inflation spiked in Georgia following the pandemic and Russia's war in Ukraine. And only recently has it been brought under control. Given the challenges in managing inflation in a highly dollarized, small open-economy prone to large external shocks, it is important to look at the drivers of inflation in Georgia, the monetary policy stance including the natural rate, the transmission mechanism including the impact of dollarization, and the appropriate monetary policy path going forward. Using a range of approaches, staff establish that monetary policy in Georgia is effective, that it is close to neutral, and that heightened uncertainty supports a gradual policy normalization.

A.   Drivers of Inflation in Georgia

1.   Inflation in Georgia has been volatile in recent years due to the large external shocks that have affected the economy, including commodity price swings, sharp exchange rate movements, and war-related migration and FX inflows. After spiking in 2021-22, headline inflation fell in 2023 and reached 0.3 percent (y/y) in February 2024, down from a peak of 13.9 percent in January 2022 (Figure 1). Food, transport, housing, and fuel costs, which at their peak in 2022 contributed 11.3 percentage points to inflation are now dragging inflation down by 0.7 percentage points (Figure 2). Core inflation has also fallen along with headline inflation and was at 2.6% in February 2024.

Figure 1. Headline and Core Inflation
(y/y percent)

Source: HAVER analytics; and NBG.

Figure 2. Decomposition of Headline Inflation
(y/y percent)

Sources: GEOSTAT; IMF staff calculations.

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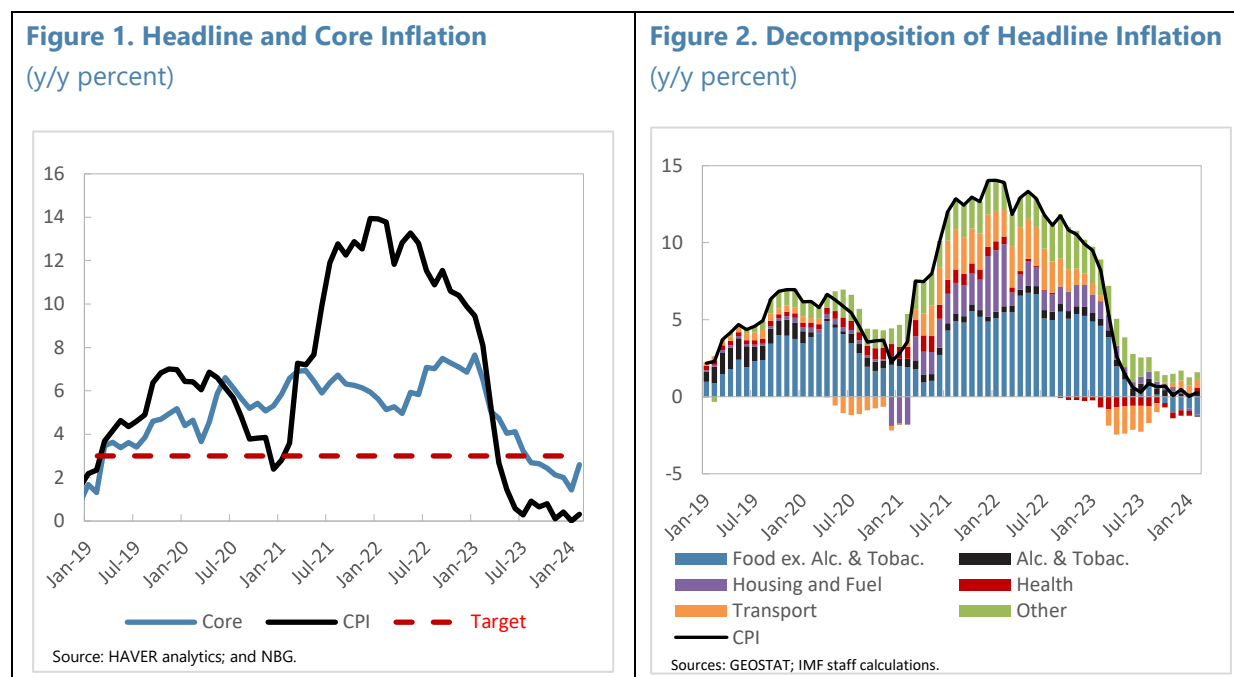
[1] Prepared by Will Abel (MCD).

2.   Commodity prices faced by Georgia, rose steadily from 2020 to mid-2022, but have
declined since then (Figure 3). The increase at
first reflected recovery from pandemic induced
lows, when oil prices had fallen substantially.
Later it was primarily driven by Russia's invasion
of Ukraine (IMF 2022) which pushed commodity
prices higher. Since July 2022 though,
commodity prices have come down, easing
inflationary pressure in Georgia. Declines in fuel
costs have been passed through relatively
quickly to consumers, with transport fuel costs
(representing roughly 8 percent of the CPI
basket) falling every month between July 2022
and May 2023. They have since risen again but
remain 10% below their July 2022 peak.

Figure 3. Georgian Import Weighted
Commodity Import Price Index (2012=100)

Source: IMF
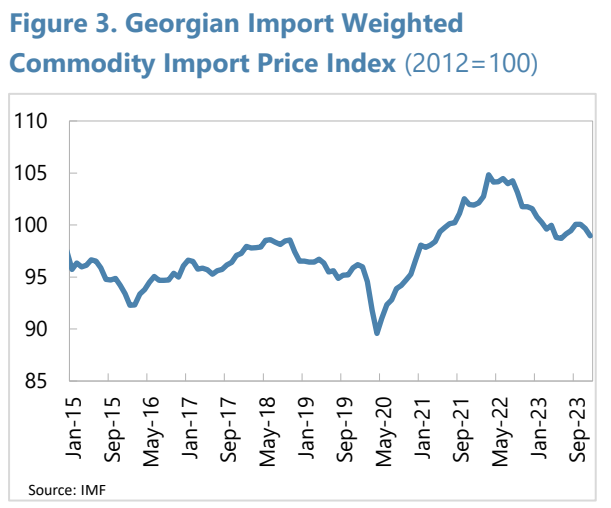
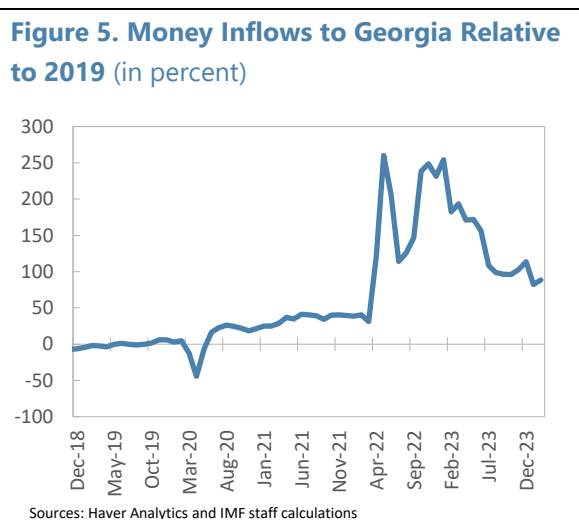**3.   The lari nominal effective exchange rate (NEER) has appreciated roughly 70 percent**
since February 2021 (**Figure 4**). Over half of this appreciation has occurred since the start of the
Russian invasion of Ukraine, which resulted in over 100,000 migrants moving from Russia and
Belarus to Georgia in 2022 (German Economic Team, 2022). This flow of migrants was accompanied
by an 85 percent increase in money transfers into Georgia in 2022 compared to 2021. Financial
inflows remain significantly above pre-war levels, helping to keep the exchange rate elevated
(**Figure 5**). Staff estimate that, at its peak, this appreciation reduced inflation by 6 percentage points.

Figure 4. NEER Appreciation Relative to 2019
(percent)

Source: IMF and staff calculations

Figure 5. Money Inflows to Georgia Relative
to 2019 (in percent)

Sources: Haver Analytics and IMF staff calculations
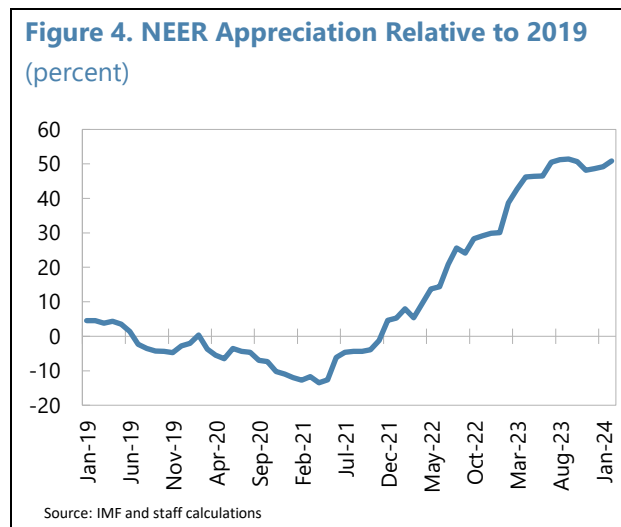
4. **Import prices have reflected the impact of commodity price and exchange rate movements**. Annual price inflation of imported goods[2] peaked at 21 percent at the end of 2021 but has since fallen to close to 0 percent in February 2024 after a period of deflation (**Figure 6**). These goods represent about 25 percent of the Georgian CPI basket.

5. **While external factors have been the primary driver of inflation in Georgia in recent years, domestic cost pressures are still elevated and could play an increasingly important role in driving inflation going forwards.** Georgia grew by 11 percent in 2022 and 7.5 percent in 2023. This high level of growth has resulted in unemployment falling to 16.4 percent in 2023, the lowest rate since 2010 (prior to which unemployment was calculated using a non-comparable methodology). Labor demand remains elevated with the V/U ratio in Q4 2023 close to a record peak and 48 percent of firms surveyed by the Business Association of Georgia (BAG) indicating labor shortages were a hindering factor to business in the same period. This demand has been accompanied by high wage growth (Figure 7); wages grew by 17.3 percent in 2022 and 16.8 percent in 2023. High productivity growth is only a partial explanation for high wage growth as unit wage costs (UWCs) have also been growing rapidly (14 percent in Q4 2023). Despite these pressures though, domestic inflation[3] has fallen, albeit at a slower pace than imported good. Domestic inflation was 2.4 percent (y/y) in February and services inflation, which is typically more sensitive to labor costs, was 5.3 percent.

Figure 6. Imported and Domestic Inflation (y/y)
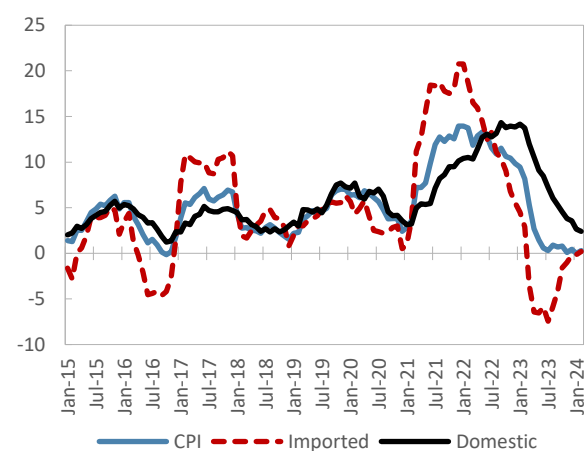
Source: GEOSTAT

Figure 7. Wage Growth in Georgia (y/y)

Sources: Haver Analytics and IMF staff calculations

6. **Historically, the pass through from wages to inflation in Georgia has been weak.** Using the model in Chan, Koop and Potter (2016), and described in further detail in the accompanying structural issues paper on growth, staff estimate that the slope of the Philips curve in Georgia is

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[2] Geostat produces measures of inflation by whether goods and services are produced domestically, imported or a mixture of the two.

[3] It is important to note that this is not the same as domestically generated inflation as it does not control for the impact of external shocks on prices of domestic firms – for example external energy shocks could raise the production costs of domestic producers.

around -0.1. This suggests that for every percentage point unemployment is below the non-accelerating inflation rate of unemployment[4] (NAIRU), this increases inflation by just 0.1 percentage points. This is one potential explanation for why high wage growth in Georgia is not currently reflected in headline inflation. However, in the long run, wage growth must be driven by productivity increases or eventually it will lead to higher inflation.

7.   The recent low labor share of output in Georgia might explain this weak pass-through from wages to inflation. In 2019 the labor share of output was roughly 41 percent; this fell over the pandemic and is only now starting to exceed to pre-pandemic levels (Figure 8). Anecdotal evidence, from discussion with business owners in Georgia, suggests that much of the recent wage growth was to compensate employees for past high inflation (rather than driving it), but that these pressures are now alleviating with falling inflation. In the BAG employment survey for Q1 2024, the share of firms saying they had increased wages rose from 33 percent in Q4 2023 to 48 percent in Q1 2021.

Figure 8. Labor Share of Income (4QMA)

Sources: GEOSTAT and IMF staff calculations
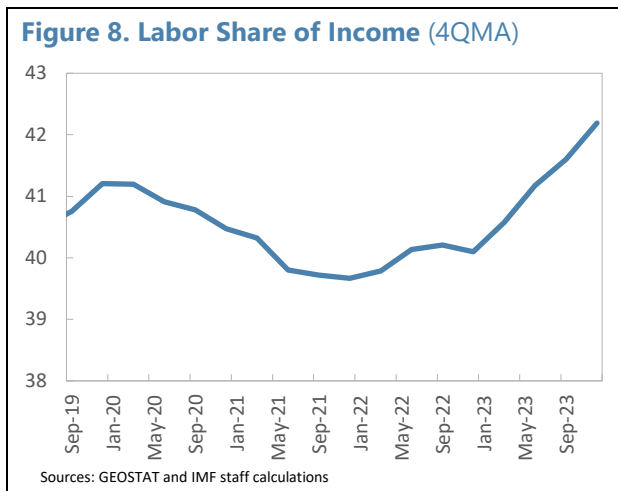
8.   A positive output gap indicates that high demand is generating inflationary pressure in the economy. Figure 9 shows the output gap for Georgia from three models[5] ranging from purely statistical models to ones which try to model the impacts of structural shocks or the effects of the pandemic explicitly. All of them are currently positive indicating that output in Georgia is above a level consistent with trend inflation in the medium term.
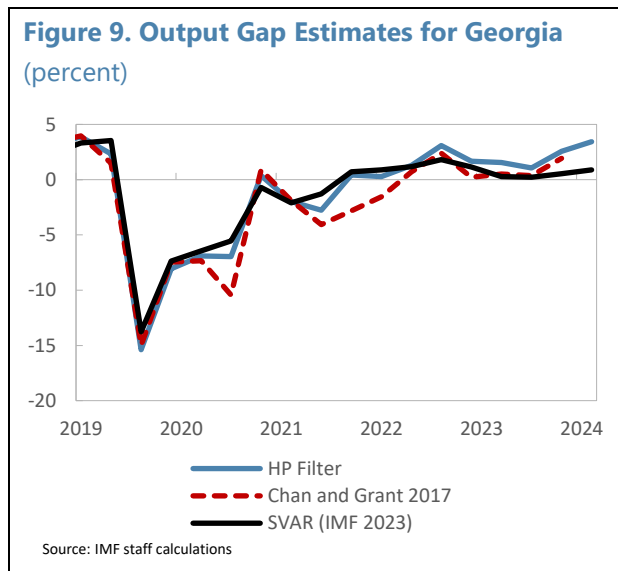
9.   Below target inflation in Georgia then is currently driven by the fall in commodity prices and the appreciation of the lari. However, high domestic demand, driven by the

Figure 9. Output Gap Estimates for Georgia (percent)

Source: IMF staff calculations

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[4] Staff currently estimate that the NAIRU in Georgia is around 17 percent, further details are available in the accompanying structural issues paper on growth.
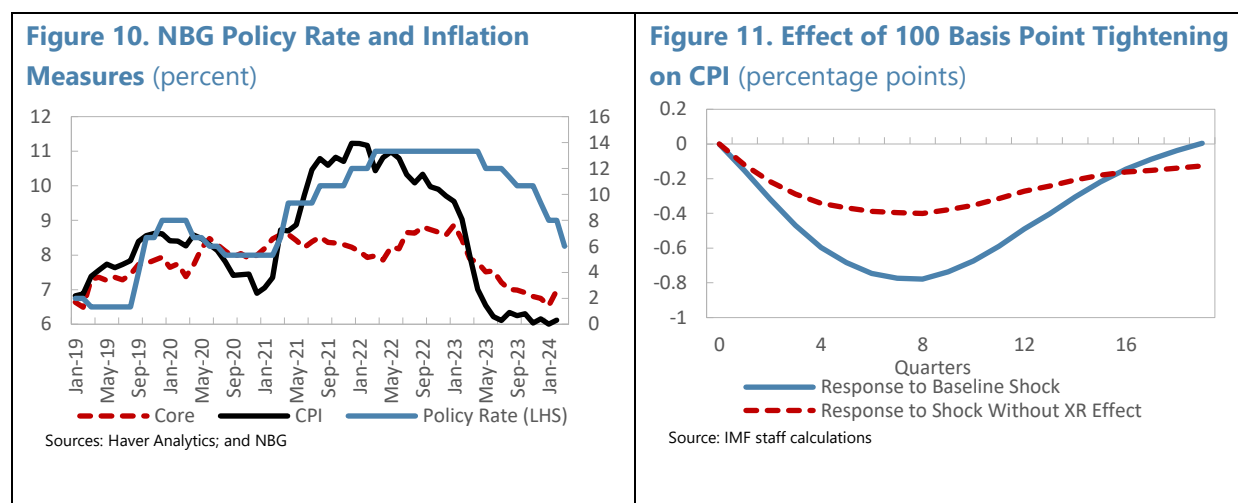
[5] The models are generated by an HP filter, an augmented HP filter as set out in Chan and Grant (2017) and an SVAR as detailed in IMF (2023).

surge in migration, means that the output gap is positively contributing to strong domestic price pressures and potentially pointing to an upside risk to inflation in the medium term.

B. The Monetary Policy Stance

10.   Monetary policy is an effective tool in Georgia for targeting medium-term inflation. Staff estimate that 100 basis points of monetary policy tightening by the NBG decreases inflation by 0.8 percentage point at its peak (Figure 11). Roughly half of this effect comes through the exchange rate channel – with higher interest rates pushing the exchange rate up and lowering the cost of imports. To calculate these effects, a sign-restricted SVAR is used as outlined in the Spring REO (IMF 2023). This model suggests that the peak impact of monetary policy on inflation in Georgia is felt in around 8 quarters. This is important as it highlights the lags in monetary policy effectiveness, the importance of a medium-term perspective, and the challenges in controlling near-term inflation.

Figure 10. NBG Policy Rate and Inflation Measures (percent)

Sources: Haver Analytics; and NBG

Figure 11. Effect of 100 Basis Point Tightening on CPI (percentage points)

Source: IMF staff calculations

11.   Estimates suggest tighter monetary policy in 2021 helped significantly lower peak inflation in 2022. In response to rising inflation, the National Bank of Georgia (NBG) increased the policy rate from 8 percent to 11 percent between January 2021 and April 2022 (Figure 10). Staff estimate that, conservatively, this lowered the peak of inflation by 1.6 percentage points from 15.5 percent to 13.9 percent in early 2022. In May 2023, the NBG began normalizing monetary policy with a 50 basis points cut and has since cut to 8.25 percent across recent meetings. Previously the NBG had emphasized high inflation risks, particularly in the labor market, as support for only cutting interest rates "at a moderate pace" despite low headline inflation. However, accompanying the 75bps cut in March, the NBG cited the failure of upside risks to materialize as a contributing factor for the larger than usual cut.

12.   Importantly, monetary policy has been effective despite the high level of dollarization in the economy. In Georgia about 45 percent of loans are in foreign currency, largely dollars. A high level of dollarization could potentially weaken the monetary transmission mechanism and pose a risk to "the pursuit of a coherent and independent monetary policy" (Baliño, Bennett, and Borensztein, 1999) as the policy rate might have less impact on mortgage and deposit rates as these

are linked to foreign rates such as the US policy rate. However, our empirical evidence of the impact of monetary policy on inflation helps to alleviate this concern. Indeed, while it is clear how high dollarization affects some of the main transmission channels of monetary policy, it isn't obvious theoretically that it should weaken the aggregate impact. For example, while it may weaken some of the financial channels, it could in turn strengthen the exchange rate effect of monetary policy, given increased FX exposures.

13.   Until recently the monetary policy stance was tight in Georgia, helping to reduce inflation. To assess the current stance of monetary policy – whether it is at a level which is pushing up or down on inflation relative to trend, it is necessary to assess what is R* or the 'natural rate'—the policy rate that is consistent with target inflation in the medium term when output is at potential and shocks to the economy have dissipated. This is helpful in setting policy, both for determining the current effects of interest rates on inflation, but also for helping to set expectations as to where interest rates might settle in the future. However, as R* is unobservable, it is notoriously difficult to estimate in real time and subject to large degrees of uncertainty. Using two different models, one based on Laubach and Williams (2009) and another based on Lubik and Matthes (2015), staff estimate that the current level of R* in Georgia is 7.5 percent and 8.25 percent respectively. Due to the high uncertainty around these estimates though they should purely be used as a rough guide. They suggest that monetary policy is quickly approaching neutral in Georgia. They also suggest broadly where monetary policy may stabilize.

C. Challenges for Monetary Policy

14.   Looking forward, the NBG must balance a number of factors as it seeks to bring inflation sustainably back to target. It faces two specific challenges: (1) It must manage the trade-off between below trend inflation and a positive output gap and (2) It faces significant uncertainty as to the persistence of the current positive supply shock that Georgia is facing.

Balancing Inflation and Economic Activity

15.   Monetary policy makers typically want to maintain low and stable inflation while also minimizing fluctuations in economic activity. Often these two objectives coincide – for example during a recession where interest rates can be lowered to both increase economic activity and restore inflation. However, at other times combinations of shocks can cause trade-offs such as when inflation is high and growth is low. Currently Georgia is experiencing this type of trade-off, albeit with inflation below trend but economic activity above potential.

16.   A positive output gap makes it harder for the NBG to bring inflation back to target in a sustainable manner. Were the NBG to cut interest rates more aggressively now to combat low inflation, this would increase inflation in the near term, but further out it is likely that inflation would overshoot, particularly in the context of strong domestic demand and a positive output gap, and the NBG would need to raise interest rates again to contain inflation. This is particularly true because, as noted above, monetary policy acts with a significant lag – so there are limits to what central banks can do about inflation in the near term without large movements in the interest rate that could

introduce volatility and damage the economy – and underscores the importance of a medium-term perspective.

17.   Inflation is likely to rise in the near term. Our short-term inflation projections[6] suggest that inflation will return to close to 3 percent by mid-2024, even without significant cuts in interest rates (Figure 12). This is because much of the low inflation, as described above, is due to one-off factors such as falling commodity prices and exchange rate appreciation which will soon have finished passing through into inflation. Base effects are also playing a strong role keeping inflation down currently—with annualized month on month inflation averaging 2.4 percent over the last 6 months. Indicators that are significant predictors of future inflation, such as core and PPI inflation, have already started increasing.

18.   There is no sign that low inflation is damaging the credibility of the NBG. It is highly unlikely that the current period of below target inflation in Georgia will pull inflation expectations significantly below the 3 percent target. This is because over the period that the NBG has had a 3 percent inflation target, inflation in Georgia has averaged 6.5 percent, suggesting there is minimal risk that inflation expectations become stuck below target. That inflation expectations are unlikely to fall below 3 percent is supported by the fact that the NBG's survey of firm one year ahead inflation expectations is currently at 4.8 percent and has never been below 4 percent since 2014. Outside of direct surveys, which are typically upwardly biased (Weber and others, 2022), one can also attempt to estimate "trend" inflation. By decomposing inflation into a trend and cycle, these models help to establish where inflation is likely to settle when short-term shocks dissipate. Figure 13 shows an estimate of trend inflation for Georgia[7]; the fact that the current estimate for trend is around 4 percent suggests a period of below 3 percent inflation is unlikely to be harmful to the NBG's long term goal of sustainably achieving 3 percent inflation and indeed could help bring inflation expectations closer towards target.

Figure 12. Short term Inflation Projection
(y/y percent)

Figure 13. Estimated Trend Inflation
(y/y percent)

Source: IMF staff calculations

Source: IMF staff

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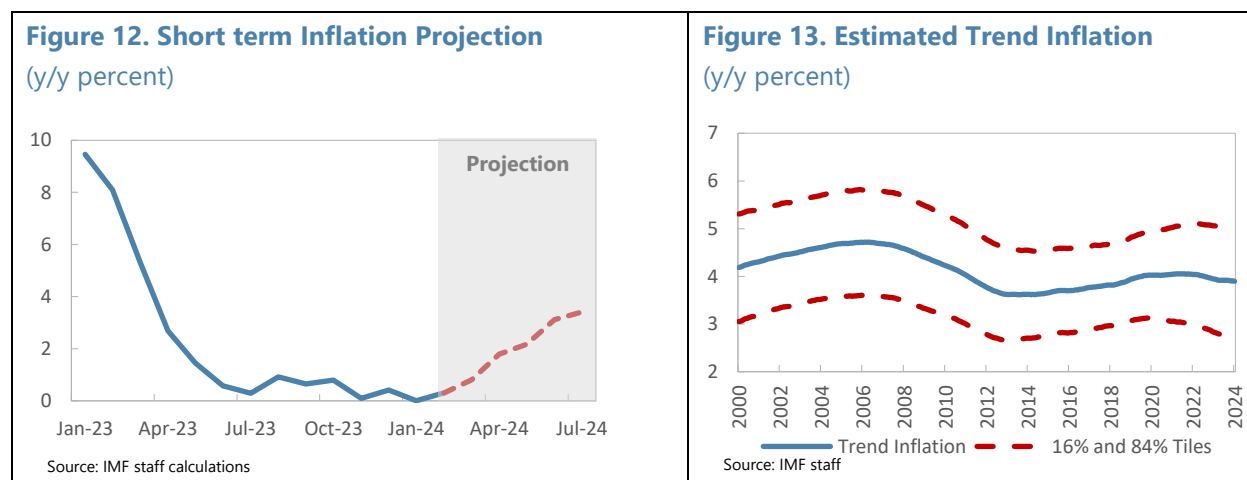
[6] The projection shown is based on the univariate model of inflation described in Chan, Koop and Potter (2013). This is an unobserved components stochastic volatility model with time variation in both the trend and persistence of inflation. These models have been shown to have good forecasting performance.

[7] Based on the same model of Chan, Koop and Potter (2013) described above.

Assessing the Sustainability of Supply

19.   In setting monetary policy the NBG must assess the current and future balance of supply and demand, but there is high uncertainty about the future path of the Georgian economy. Migrant and capital flows triggered by Russia's war in Ukraine have raised both supply and demand in Georgia through multiple channels – demand most obviously through demand for housing, food, and services etc. But they have also had a supply impact by providing labor (many of the migrants are remote workers in sectors such as tech) and by contributing to the exchange rate appreciating including due to migration-related FX inflows—giving Georgians cheaper access to imported inputs into production. This has resulted in a booming economy in Georgia with 11 and 7.5 percent growth in 2022 and 2023 respectively and an appreciation of the lari of almost 40 percent in nominal effective terms since the start of the war. It is highly uncertain though for how long this is likely to last: (i) FX inflows may normalize, potentially causing a depreciation in the exchange rate, and (ii) migrants may return to their home countries or travel further to other countries to settle. Were these events to occur, growth would likely slow substantially, and inflation could rise.

20.   One response to uncertainty is for monetary policy makers to act more cautiously – responding less vigorously with monetary policy to shocks. This potentially allows monetary policy makers time to course correct as they learn more about the economy. This approach is originally attributed to Brainard (1967) and has been influential amongst central bankers.[8] Much academic research though suggests that uncertainty does not necessarily require this cautious response (Hansen and Sargent (2015), Tetlow (2018)), depending on the structure of the economy and the type of uncertainty faced. In practice though, monetary policy makers should consider the balance of risks. Applying this to the current situation in Georgia, it is likely that the cost will be higher if the NBG reduces the policy rate too fast and then must reverse course, compared to cutting more slowly and then needing to cut further if the gains in potential output prove permanent. This is because, as shown above, in Georgia inflation expectations and trend inflation are likely above target – creating an asymmetry in the damage caused by an inflation undershoot versus an overshoot. As such the current uncertainty increases the argument for a more gradual normalization of the policy rate than would be justified otherwise.

D. Conclusion and Policy Recommendations

21.   The current uncertainty over the future path of the Georgian economy supports normalizing the policy rate at a gradual pace. Current below-target inflation in Georgia is due primarily to the fall in commodity prices and exchange rate appreciation. Meanwhile inflows caused by the Russian invasion of Ukraine have caused a boom in Georgia, pushing up wages and domestic inflation, and resulting in a positive output gap. Given high uncertainty regarding the future balance of these demand and supply factors, there is a good case for looking through the current period of low inflation and focusing on closing the output gap to bring inflation sustainably back to target in the medium term.

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[8] Alan Blinder noted that the Brainard result was "never far from my mind when I occupied the Vice Chairman's office at the Federal Reserve. In my view...a little stodginess at the central bank is entirely appropriate" (Blinder, 1988).
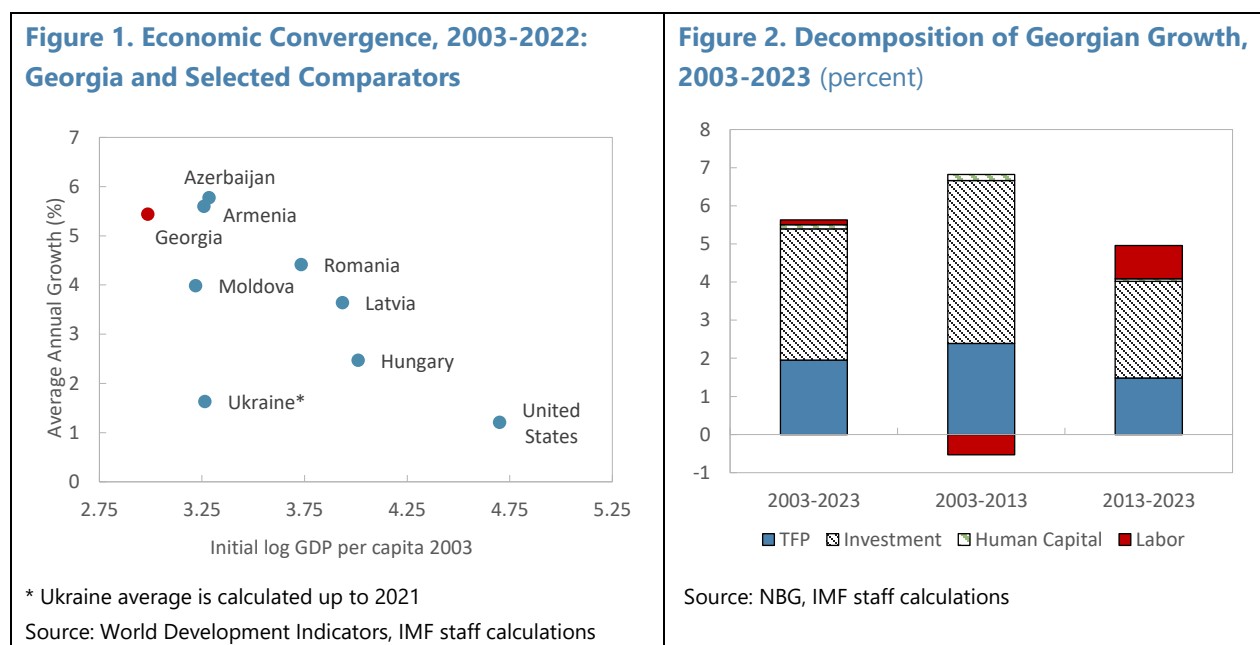
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GEORGIA: MEDIUM-TERM GROWTH PROSPECTS AND POLICIES[1]

Growth in Georgia averaged 5.6 percent per year from 2003-2023. This was mainly driven by a combination of high investment and structural transformation out of agriculture and towards higher productivity services. However, trend growth has slowed in more recent years and was around 4.5-5 percent prior to the pandemic. Looking ahead, demographic headwinds are likely to be a further drag on growth. This chapter estimates potential growth in Georgia and examines the roles of productivity, labor, and capital in driving growth. It finds that, to raise growth, Georgia should focus on improving agricultural productivity, increasing competition in manufacturing and service sectors, and investing in public infrastructure.

A.   Historical Growth in Georgia

1.   Georgia's growth has been consistently strong over the last twenty years, averaging 5.6 percent per year from 2003-2023. This was likely supported by the broad range of structural reforms Georgia undertook over this period reducing corruption, simplifying the tax system, and liberalizing product markets (IMF 2022, 2023). However, much of this growth also likely reflects the forces of economic convergence, given Georgia's low level of GDP per capita compared to comparator nations. When compared to the neighboring countries of Armenia and Azerbaijan who had similar per capita GDPs in 2003, Georgia's growth rate has been remarkably similar (Figure 1).

Figure 1. Economic Convergence, 2003-2022: Georgia and Selected Comparators

* Ukraine average is calculated up to 2021
Source: World Development Indicators, IMF staff calculations

Figure 2. Decomposition of Georgian Growth, 2003-2023 (percent)

Source: NBG, IMF staff calculations

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[1] Prepared by Will Abel (MCD).

2.   Investment has been the largest contributor to growth, accounting for an estimated 65 percent of growth over this period[2] (Figure 2). The remaining 35 percent of growth can be accounted for by total factor productivity (TFP) growth. However, this reflects two very distinct periods: 2003-2013, where growth averaged 6.2 percent and was broadly balanced between TFP and capital growth, and 2012-2023, where growth averaged 4.9 percent and was predominantly driven by investment (70 percent). An aging population and outward migration have meant that labor supply has contributed little to overall growth over either of these periods.

3.   Using a model developed by Grant and Chan (2017),[3] staff estimate that trend growth declined from above 8 percent in the early 2000s to around 5 percent prior to the pandemic (Figure 3). This is slightly above the 5-year average for this period of 4.7.[4] The choice to only look at growth up to the pandemic is made because both the pandemic and then subsequently Russia's invasion of Ukraine represent such large shocks to Georgia's economy that it is too early to infer what impacts these might represent for longer-run growth in the country. Box 1 highlights some of the potential channels through which Russia's invasion of Ukraine may affect growth in Georgia in the longer term.

Figure 3. Trend Growth in Georgia (percent)

Source: IMF staff calculations based on Grant and Chan (2017)

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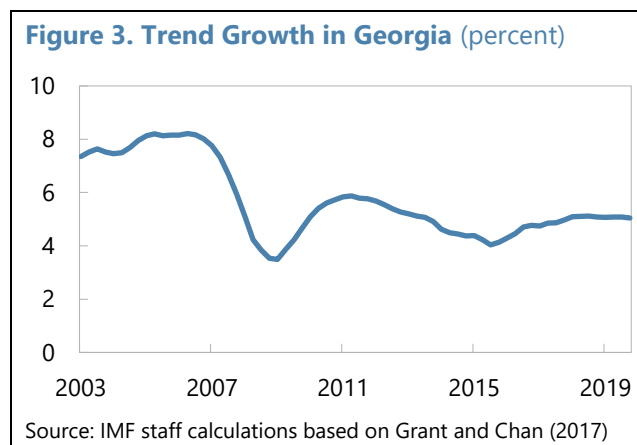
[2] This is based on the NBG's capital stock calculation, which uses a perpetual inventory methodology. However, it is robust to alternative reasonable assumptions for the depreciation rate of capital.

[3] Grant and Chan (2017) estimate an unobserved component (UC) model where trend growth follows a second order Markov process. They show that this flexible approach can reconcile a range of filters and more accurately match the data compared to both standard UC models (such as Morley and others, 2003) and the HP filter. For example, it relaxes the implicit assumption in the HP filter that the cyclical components of GDP are serially uncorrelated, resulting in cyclical patterns in estimates of trend growth.

[4] These findings are consistent with The World Bank Country Economic Memorandum for Georgia (2022), which estimates trend growth to be around 4 percent and argues that "further reforms will be required to keep GDP growth between 4-4.5 percent". The latter was produced prior to GEOSTAT's revisions of GDP from 2003-2023, which were released in February 2024. The revisions raised GDP growth by about 0.5 percentage points per year over this period.

## Box 1. The Impact of Russia's War in Ukraine on Georgian Potential Growth

Georgia experienced high growth in 2022 and 2023 in large part due to spillovers from Russia's war in Ukraine. Growth in Georgia in 2022 and 2023 was 11 and 7.5 percent respectively (Figure 1). This was in part due to over 100,000 migrants from Belarus and Russia moving to Georgia in 2022 (German Economic Team (GET), 2023). Many of these were tech workers with the ability to work remotely, contributing to a roughly 50 percent expansion in ICT as a share of GDP in Georgia from 3.9 percent in 2021 to 6.7 percent in 2023. Along with migrant inflows, money transfers into Georgia also increased by 85 percent in 2022 relative to 2021 and remain elevated (Figure 2).

Figure 1. GDP Growth in Georgia (percent)
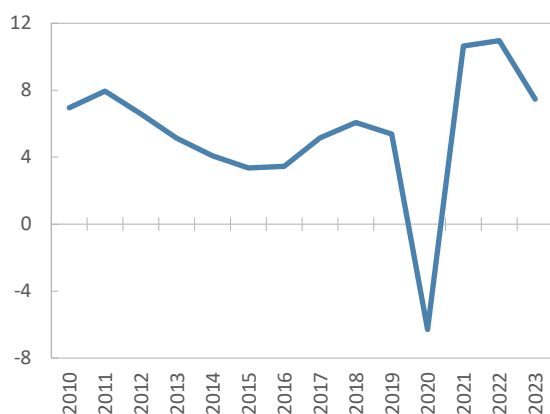
Source: GEOSTAT, IMF staff calculations

Figure 2. Money Inflows to Georgia Relative to 2019 (percent)
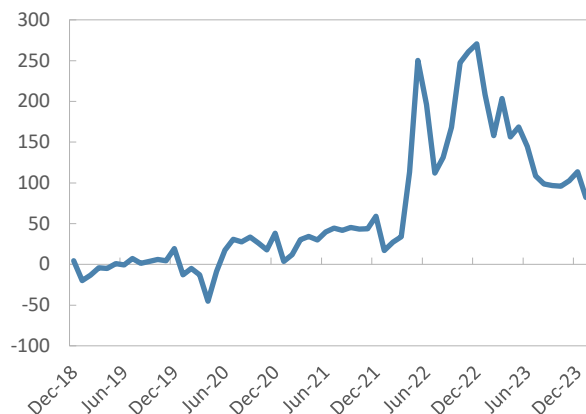
Source: Haver Analytics

Recent high growth is unlikely to be informative about medium-term growth in Georgia. Most of the positive impacts of growth in 2022 and 2023 from war-related spillovers can be best thought of as on the level of GDP rather than the growth rate. The population increase through migration will raise GDP mechanically as these migrants spend and work in the economy. With the recent migrant inflows, this impact may be greater than their share of the population as evidence suggests they have incomes over three times the Georgian average (GET, 2022). Similarly, Georgia is likely to have seen benefits to growth due to the substantial lari appreciation generated by the corresponding money inflows. Using a sign restricted SVAR, staff estimate that the roughly 70 percent appreciation of the lari since February 2021 has led to an increase of growth by around 2.5 percentage points.[1] Both effects though are one-off boosts to the economy; unless elevated migration or appreciation continue, these effects will wane. Furthermore, there is even the risk that, depending on the resolution of the war in Ukraine, these effects will reverse should recent migrants either return to their home countries, or move to other countries over time.

Box 1. The Impact of Russia's War in Ukraine on Georgian Potential Growth (concluded)

Evidence does suggest though, that if the recent migrants settle permanently in Georgia, they may contribute to an increase in per capita GDP growth over the medium term. Jaumotte and others (2016) find for advanced economies an increase in the migrant share raises long-run growth, primarily by increasing labor productivity. This is supported by studies such as Ortega and Perri (2014), which finds a positive link between openness to migration and long-run income per capita. The precise mechanisms at play are less well established, especially for emerging economies. However, evidence for the US suggests that migrants are both higher skilled than the native population and more likely to start their own businesses (Azoulay and others, 2022). Given that many recent migrants to Georgia seem to be disproportionately high-skilled individuals working in sectors such as tech, this likely supports these potential mechanisms. It is too early in this process to include these possibilities in our central assessment of trend growth in Georgia, but this is certainly an upside possibility for the future. To give an idea of the potential magnitude of this effect, using the elasticities estimated in Jaumotte and others (2016), the increase in the migrant share of the working age population, estimated at 4 percentage points, could lead to an increase in long run GDP per capita of 8 percent. Given that these papers are almost exclusively focused on advanced economies, this should only be considered an illustrative number.

Global fragmentation of trade and geopolitical tensions represent a downside risk to Georgian growth. These recent positive flows are a result of larger economic forces which are unlikely to remain beneficial to Georgia. As outlined in the Spring WEO (2023), increasing geopolitical tensions are a risk to both foreign direct investment and trade. Due to its location and desire for Euro-Atlantic integration, Georgia could be exposed to geopolitical tensions, for example between Russia and the EU. Should these tensions persist, it may be increasingly difficult for Georgia to remain economically integrated with both economies, with negative consequences for potential growth.
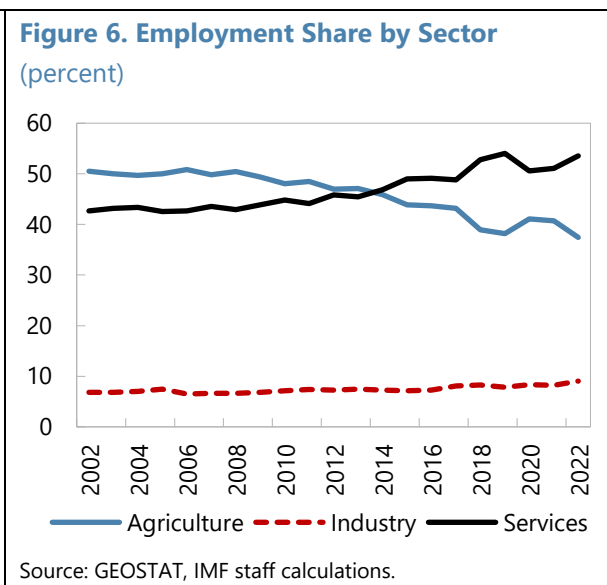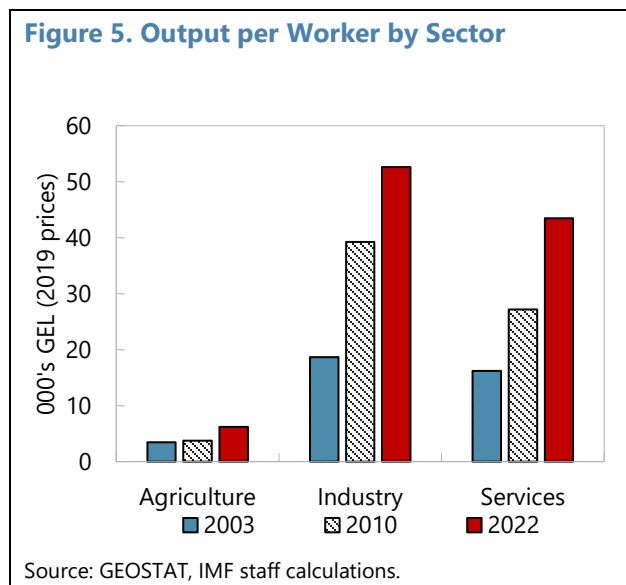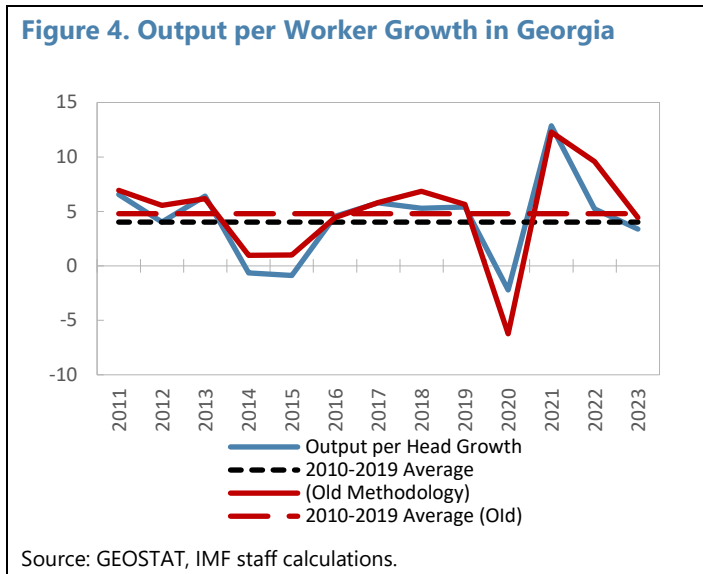
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1/ The SVAR looks at aggregate relationships and so does not outline the precise channels through which exchange rate appreciation operates. Two potential channels are (1) by reducing the cost of imported inputs into production and (2) balance sheet effects due to the high rate of dollarization in the economy.

B. Drivers of Growth in Georgia

Productivity

4.   Productivity has grown steadily over the past decade. Output per worker, a simple measure of productivity, averaged 4.2 percent growth (y/y) from 2010-2023 (Figure 4). However, in 2020 Georgia adopted updated ILO standards, the primary effect of which was to designate subsistence farmers, who had previously been counted as self-employed, as inactive. This lowered employment by roughly 450,000, lowered labor participation, and raised unemployment. This has a significant impact on productivity statistics; using the old

Figure 4. Output per Worker Growth in Georgia

Source: GEOSTAT, IMF staff calculations.

methodology annual output per worker growth averaged 4.8 percent over this period. To allow for comparisons over time and internationally, the following analysis uses the old methodology applied up to 2023, but the broad findings are robust to using either methodology.[5]

Figure 5. Output per Worker by Sector

Source: GEOSTAT, IMF staff calculations.

Figure 6. Employment Share by Sector
(percent)

Source: GEOSTAT, IMF staff calculations.

5.   Structural change has been a key driver of growth. About one-third of growth in output per worker over this period can be attributed to structural change as a declining share of workers required in agriculture has freed up labor to move into higher productivity industry and services,

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[5] Sectoral employment breakdowns and internationally comparable statistics are only available up to 2022.

where output per worker is roughly 7.5 times higher (Figure 5). The share of employment in agriculture has fallen from 50 percent in 2003 to 37 percent in 2022, with the vast majority of this being absorbed into services employment, where the share of employment rose from 43 percent to 54 percent (Figure 6).

6.   Productivity growth within services has also been driven by a shift to more productive sectors, which accounts for close to two-thirds of Georgia's growth since 2010. In 2010, 83 percent of services workers worked in what can be broadly defined as public sector or administrative roles. By 2022 this had fallen to just 45 percent as the share of services accounted for by higher productivity sectors such as construction, retail and professional services expanded substantially (Figure 7). The rise in employment in these more productive sectors has caused a convergence in output per worker between sectors, with only the relatively small and high barrier to entry professional services industry maintaining a significant output differential per worker (Figure 8).

7.   Structural change will remain a core driver of Georgia's growth given Georgia's high levels of agricultural employment. However, as productivity across industry and subsectors of services converge, growth will need to be driven increasingly by raising efficiency and innovation as opposed to pure reallocation.

Figure 7. Distribution of Services Employment Across Subsectors, 2010 and 2022 (percent)
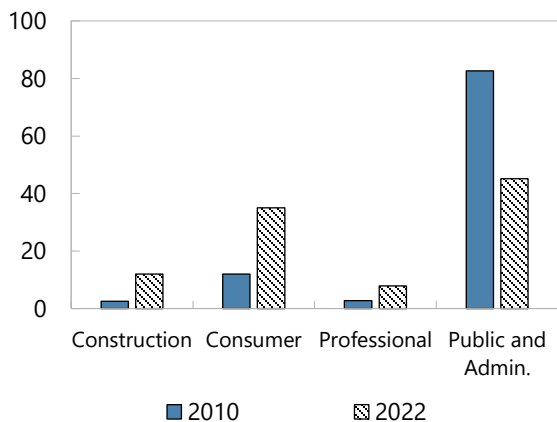
Figure 8. Output per Worker across Services Subsectors, 2010 and 2022

Source: GEOSTAT and IMF staff calculations.

Source: GEOSTAT and IMF staff calculations.

Agricultural Productivity and Structural Transformation

9.   Structural change has been a key driver of growth, but Georgia still has a larger share of agricultural employment than most neighbors. While the share of workers in agriculture has fallen from 50 percent in 2003 to 37 percent in 2022[6] the share of workers is significantly higher than most comparator nations, despite having a lower share of agricultural output in GDP than some others (Figure 9). This suggests that there is significant scope for further shifts of workers out of agriculture to more productive sectors; close to two-thirds of Georgia's agricultural workers, roughly 400,000 individuals, are subsistence farmers who sell less than half of their produce on the market. To maintain this process of structural change, agricultural productivity in Georgia must continue to rise.

Figure 9. Agricultural Output and Employment across Countries, 2022
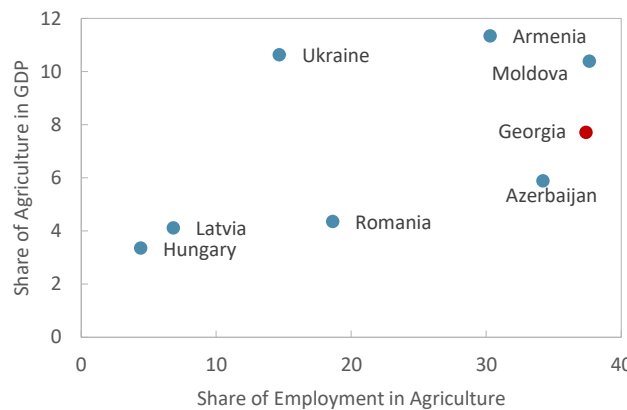
Source: World Bank Development Indicators.

10.   Agriculture in Georgia is dominated by small low-productivity farms. Almost 80 percent of agricultural holdings in Georgia are less than 1 hectare in size and 99 percent are less than 5 hectares. This is in part a consequence of land distribution in the 1990s and subsequent fragmentation through inheritance. While small farms can be productive (Foster and Rosenzweig,

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[6] These figures have been modified to maintain the consistency of the time series across the 2020 methodological break.

2022), this has historically been hindered by limited land registration and weak rural land markets. In 2022 Land registration was around 40 percent and this fell to 20 percent in rural areas. Low registration was in part due to fears of losing social allowances, losing land to lenders, and higher taxation (World Bank, 2022b). An absence of rural land markets limited growth, both by hindering selling land to those who are more invested in making productive use of it and by denying holders of the land adequate collateral to access credit for investment. Banks continued to perceive agriculture as risky due to information asymmetries, inadequate collateral, and production risks (World Bank, 2020, 2022b). Consequently, despite having fertile land and favorable climate conditions for a range of crops, yields per hectare are substantially below global averages and have not shown marked improvement in over a decade (World Bank 2022b).

11.   Significant progress has been made in registering land since 2022 though. The National Agency of the Public Registry (NAPR) has been engaged in systematic land registration, building on a World Bank pilot program started in 2017. Over 2.8 million plots have been registered with the aim for all land to be registered by the end of 2024. As land registration is completed, it is hoped that this supports consolidation of land and eases access to credit raising agricultural productivity.
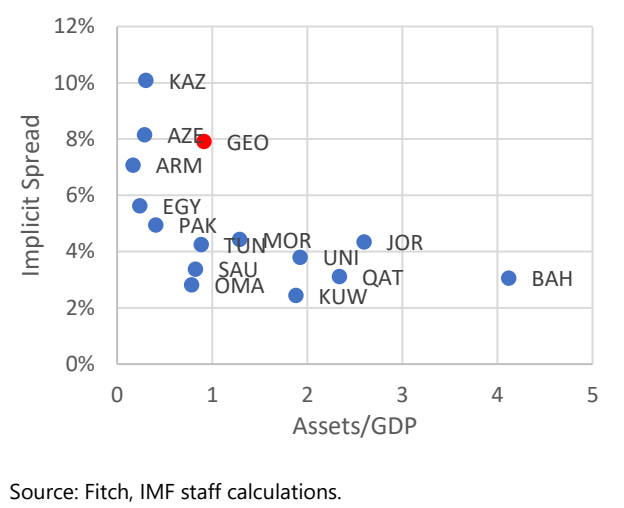
12.   While improvements have been made on land registration, restrictions on land ownership and poor public land management discourage investment. Sixty-four percent of registered agricultural land is under state ownership with unclear responsibility for land management and allocation between national and local authorities (World Bank, 2022b). This leads to underinvestment in soil quality and infrastructure maintenance, due to the resultant tenure insecurity and uncertainty. The privatization process for land in state ownership has practically ceased since 2010. Foreign investment is restricted even further with a constitutional amendment banning the selling of agricultural land to foreign citizens, meaning that in 2022 just 0.3 percent of FDI in Georgia was in agriculture.

13.   As non-agricultural employment grows, productivity growth will need to increasingly come from raising efficiency, as opposed to pure reallocation. As highlighted above, much of the growth in productivity over the past decade has been due to the reallocation within services towards high productivity subsectors. However, as this process has gone on, the output per worker across these sub-sectors has converged dramatically, reducing the scope for this process to continue. The outlier to this has been the professional services industry, but this has high educational barriers to entry and so has limited ability to grow its share of employment dramatically.

14.   Firm-level evidence suggests that some of Georgia's most productive firms are not growing sufficiently. Research by the World Bank using firm-level micro-data, suggests that the majority of employment growth in Georgian firms is in large firms that are relatively less productive, while smaller high productivity firms are failing to grow (World Bank, 2022a). This not only mechanically lowers productivity through poor allocation of workers, but also suggests that larger firms are not being subjected to the competitive pressures they need to encourage them to raise their efficiency.

15.   Ensuring access to finance is key for encouraging a competitive and dynamic private sector. Georgia has done much to liberalize product markets and create a strong environment for private sector growth. However, its banking sector, while relatively well developed in comparison to the region, is highly concentrated with the largest two banks accounting for 79 percent of total deposits and 76 percent of total loans. This level of concentration could in part explain the high implicit spreads[7] experienced in Georgia (Figure 10) and the difficulty for some firms in accessing finance. In the World Bank's Enterprise Survey (ES - conducted in 2023), access to finance was listed as the third largest obstacle to firms, with 16.5 percent pointing to it as their largest obstacle. In the World Economic Forum's Global Competitiveness Index (GCI), Georgia's financial system ranks 91st out of 140 countries in terms of development. Aggregate access to credit in Georgia appears reasonable with relatively high domestic credit to GDP and fewer firms reporting being credit constrained than the average for Europe and Central Asia. However, in comparison to this same group of firms, a substantially higher share of loans require collateral, and the amount of collateral is also higher.

Figure 10. Implicit Spreads in Middle East and Caucuses Countries' Banking Sectors

Source: Fitch, IMF staff calculations.

16.   Further development of infrastructure could also help to raise productivity. Georgia's transport and logistics costs are high, despite a modern customs administration, in part due to poor quality infrastructure – for example Georgia ranked 83rd in transport infrastructure in the last GCI. This represents a bottleneck to growth for all sectors of the Georgian economy. High transport costs not only raise the costs of inputs into production, lowering productivity, but also insulate firms from competition both from foreign firms as well as other domestic firms in different regions. This is reflected in the high non-tariff barriers faced by Georgia (Figure 11). Poor transport and logistics infrastructure are partially captured in non-tariff barrier calculations as they represent an important friction to cross border trade. While much effort has been put into

Figure 11. Cost of Non-Tariff Trade Barriers (percent Ad-Valorem equivalent)

Source: UNCTAD, COMTRADE, IMF staff calculations.

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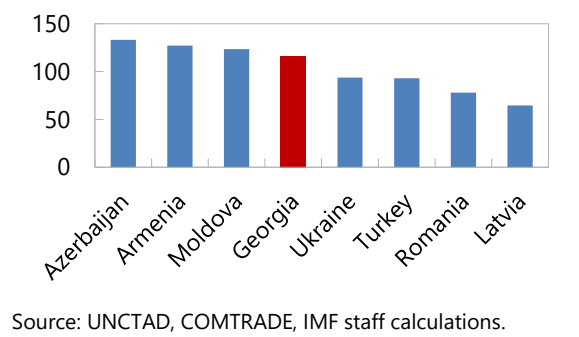
[7] The implicit spread aims to capture the difference between interest rates on loans and deposits. It is implicit as it is constructed from a range of products using detailed Fitch product level data, without a single defined "deposit" and "loan" rate.

developing free trade agreements, such as the Deep and Comprehensive Free Trade Agreement with the EU, their benefits will be limited by these significant non-trade barriers.

Labor

Labor supply in Georgia faces many constraints: a declining population, low rural participation, and high structural unemployment.

17.   Georgia's population is estimated to fall by 2.6 percent by 2030 (United Nations, 2022), relative to 2014-2019, when population growth was broadly flat. This represents a drag on the working age population of around 0.3 percentage point per year. This decline in population is almost entirely driven by outward migration. In the UN's no migration scenario (Figure 12), the population falls by just 0.3 percent over the same period. These calculations do not include the recent increase in population due to war-related migration, however. As there is unlikely to be an ongoing flow of migrants, this factor will have little impact on the projected drag from future net migration captured in the UN analysis.

Figure 12. Georgia Population Projection
(thousands)

Source: UN, 2022.
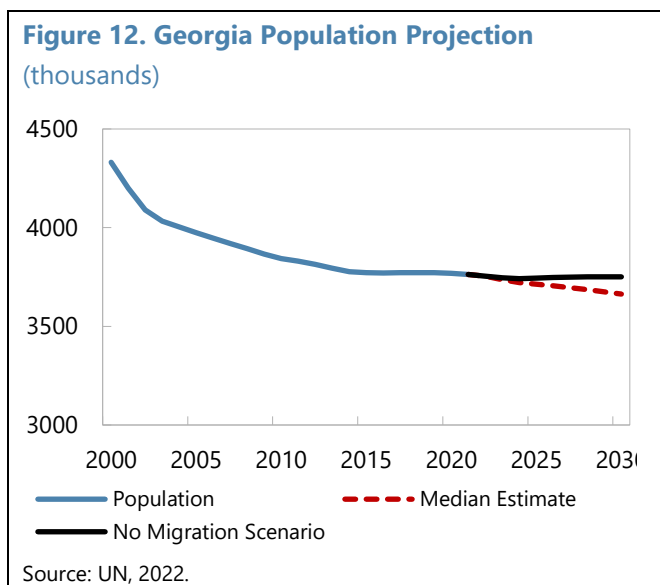
18.   Migration and an aging population are also likely to lead to a drop in participation over the same period. Net migration in Georgia leads to an aging population profile as those who leave are typically younger and more likely to be in their prime working years, compared to those who migrate to Georgia. Georgia's population is also aging even without the role of migration: from 2022 to 2030 the median age is expected to rise from 36.5 to 38.6, only a quarter of which is because of net migration. As older workers are less likely to participate in the labor market, this is projected to be a drag on participation and aggregate labor supply by around 0.1-0.2 percentage point per year.

19.   Rural participation in the labor market is low if subsistence farmers are excluded from the labor force. The labor force participation rate in rural areas, using Georgia's updated methodology, is roughly 5 percentage points lower than in urban areas. The change in methodology led to a drop in recorded aggregate participation of around 11 percentage points and a drop of 24 percentage points in rural areas (Figure 13). In micro-regressions (controlling for a range of demographic information), this is almost entirely accounted for by the lower educational attainment seen in rural areas – 58 percent of individuals in urban areas have either tertiary or vocational education, compared to 35 percent in rural areas (Figure 14). This should not be treated as causal

though – as it is hard to disentangle an individual's educational choices from their expected future working situation. It may be that individuals work on smallholder farms because their education gives them little alternative, however, it may also be that they are required to leave education to go and work on a farm to support their family, or even that they choose not to pursue further education, because they know that they will be working on a family farm where it is not required.

Figure 13. Change in Participation due to Methodological Break (percent)
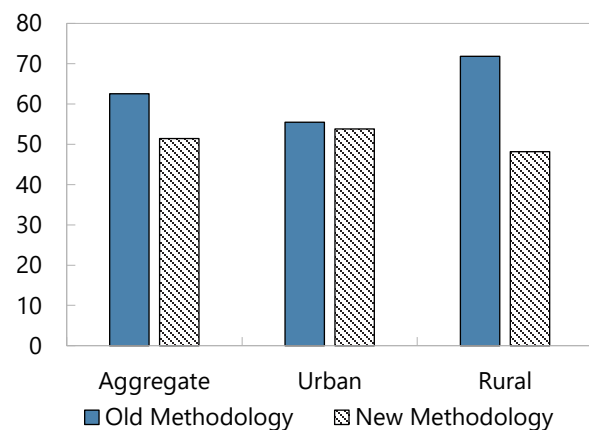
Source: GEOSTAT.

Figure 14. Highest Education Achieved for Individuals aged 16+ by Urban/Rural (percent)
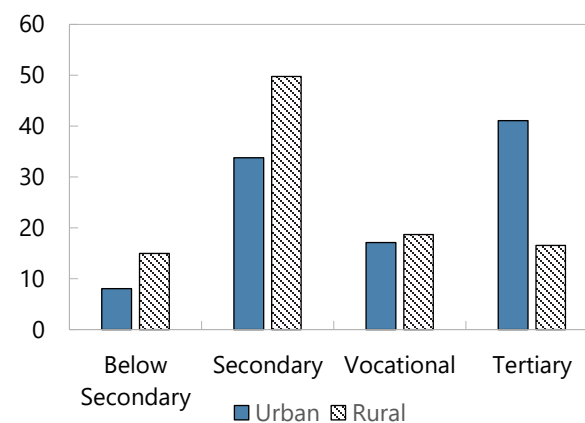

Source: LFS 2022.

20.   How subsistence farmers are recorded is relatively immaterial to the relevant policy solutions. Regardless of whether subsistence farmers are counted as inactive or employed with effectively zero (marketed) output, the central policy issue is that same. There is a very large group of individuals currently not engaged in highly productive work. Finding ways to raise this groups' productivity, either in farming or by helping them join the wider labor force, will be key to maintaining Georgian growth.

21.   Unemployment in Georgia is high. Unemployment in Georgia in 2023 was 16.4 percent down from 17.3 percent in 2022. Again Georgia's 2020 update to labor market definitions changed this measure considerably (causing it to increase by close to 7 percentage points), but even accounting for this, Georgia's unemployment, using more internationally comparable methods (for 2022), is likely above 10 percent and higher than many comparator countries (Figure 15).

Figure 15. Unemployment Rates, 2022 (percent)
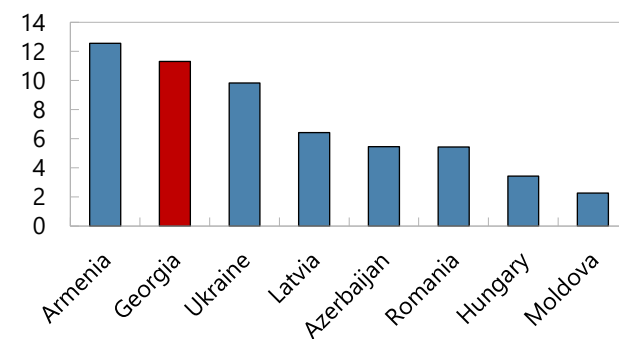
Source: ILO Modelled Estimates.

22.   A large component of unemployment is accounted for by the long-term unemployed.
In 2022 close to a fifth of unemployed workers reported having been out of work for over four years.
Relative to other unemployed workers, these long-term unemployed workers are in general older,
less educated, and more likely to live in rural areas. These workers report mainly being supported by
family members, though around a fifth also receive a state allowance. The recent recovery in the
economy, which has seen the unemployment rate fall from 20.6 percent in 2021 to 17.3 percent in
2022[8] has seen no drop in the number of these longer-term unemployed workers, suggesting these
individuals are to a degree disconnected from current labor market conditions and likely represent
structural unemployment.

**23.   Youth unemployment, linked in part to low educational attainment, is the other major
contributor to structural unemployment.** Twenty-nine percent of those aged 30 and under in the
labor market are unemployed representing about a third of unemployment in Georgia. Around two-
thirds of these individuals have no previous work experience. Educational achievement can explain
this to some degree. The quality of secondary education in Georgia is low, for example according to
the 2023 Programme for International Student Assessments (PISA) 67 percent of the country's 15-
year-old students are categorized as 'low performing' at reading, compared to the OECD average of
26 percent. For those 30 and under with either vocational or tertiary education, youth
unemployment falls from 35 percent (for those with secondary education or less) to 21 percent. The
fact that Georgia has a relatively small manufacturing sector, which in other countries has absorbed
large amounts of unskilled labor (Rodrik, 2016), likely compounds the impact of Georgia's low
educational outcomes on unemployment. This can be seen in Georgia's State Employment Support
Agency's (SESA) monitoring of labor market vacancies, where those trying to recruit for plant and
machine operators report almost no shortage of skills, whereas those recruiting services and sales
workers report substantial recruiting difficulties related to a lack of relevant skills. The role of
education in Georgia's high unemployment should not be overstated though—the unemployment
rate in Georgia in 2022 for those with a tertiary or vocational education was still 13 percent.

**24.   Philips curve-based estimates of equilibrium unemployment in Georgia are around 18
percent.** The rate of unemployment which is consistent with target inflation is sometimes referred
to as U* or the non-accelerating inflation rate of unemployment (NAIRU). This rate captures the level
to which unemployment can sustainably fall without structural reforms. To estimate this empirically,
staff use the model of Chan, Koop, and Potter (2016), which is a bounded bivariate model with latent
states, where both inflation and unemployment are specified as deviations from trends. These trends
are unobserved states to be estimated, which can be interpreted as trend inflation and the NAIRU.
The model is inspired by the Phillips curve in that inflation is driven by deviations of unemployment
from the NAIRU and inflation deviations from trend. It is flexible in that the corresponding
parameters are allowed to vary over time. The model is amended to focus on wage inflation rather
than price inflation.

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[8] Micro-data is not yet available for 2023, so this level of detailed analysis is only available up to 2022.

25.   Labor market flows however suggest unemployment could stabilize at the lower level of 15 percent. An alternative approach to analyzing unemployment is to use labor market flows to project future steady state unemployment as in Smith (2011). Labor market flows are the rates at which individuals in the economy flow between the different states of employment, unemployment, and inactivity. Arguably these flows capture the underlying dynamics of the labor market and by using them one can project the level at which unemployment will settle. Exploiting the repeated cross-section structure of the Georgian Labor Force Survey, staff constructed a longitudinal dataset which measures these various flow rates and found that the current momentum in the Georgian labor market would lead to a steady state unemployment rate of 15 percent.
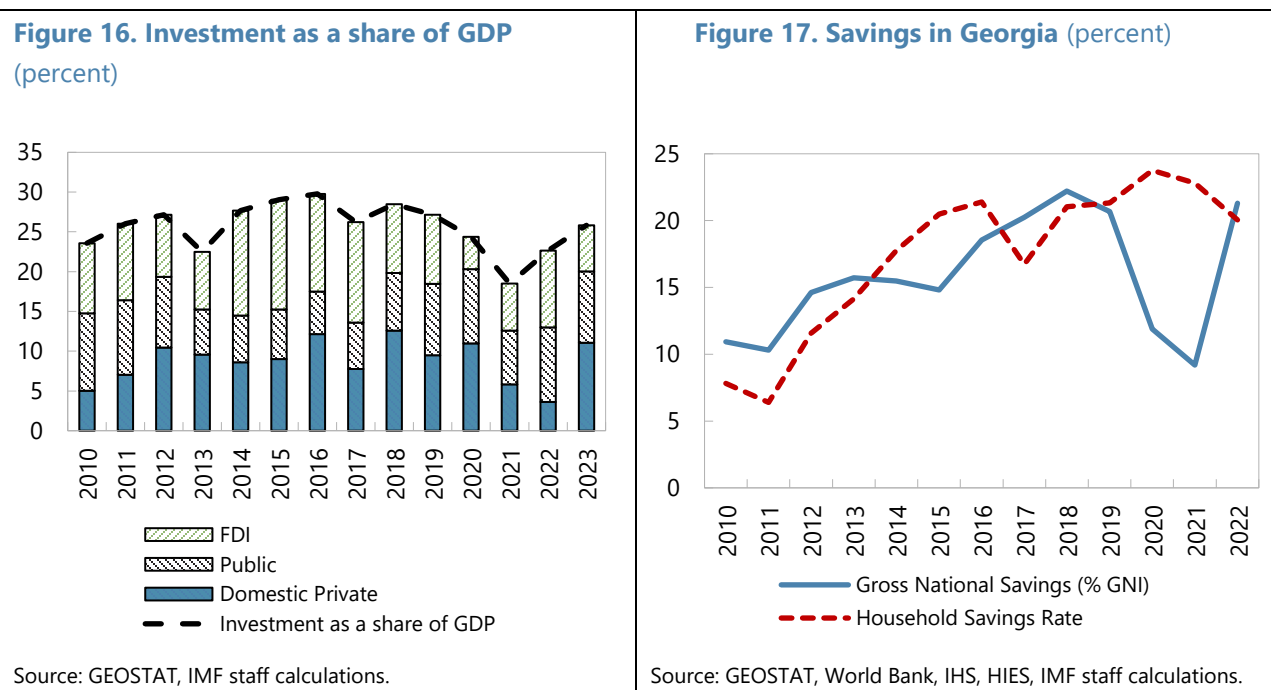
26.   Given the structural drivers of unemployment outlined above and our NAIRU and steady-state estimates, there appears little to no spare capacity in the labor market for further growth without policy intervention. Both the Philips curve model and flows-based approach to analyzing unemployment have shortcomings that should be noted. The Philips curve approach will be slow to detect structural changes in the NAIRU. However, the flows-based approach takes no account of the wage and inflation implications of the steady state unemployment which it implies (hence it being a steady state and not an estimate of the NAIRU). Given the strength of wage growth in the labor market currently, it is likely that tight monetary policy will be required to slow down the current labor market dynamics the 15 percent steady state is based on. On balance, there seems to be little spare capacity in the labor market currently, but both our equilibrium unemployment rate estimates are highly uncertain and so should be treated cautiously.

Capital

27.   Investment has been strong in Georgia, averaging 26 percent of GDP since 2010, and accounts for most of the growth over this period (Figures 2 and 16)**.** This level of investment is broadly in line with the average investment levels of other countries in Europe and Central Asia (World Bank 2022a). Investment fell however in 2021 to 19 percent of GDP and remained low in 2022. This was driven almost exclusively by domestic private investment, as foreign direct investment and public investment remained in line with their historical shares of GDP. On the back of continuing strong growth, investment recovered in 2023 to 25.8% of GDP, with private domestic investment estimated to have accounted for 11 percentage points of this.

28.   To sustain this high level of investment, Georgia must maintain a sufficient national savings rate. Domestic savings in low income and emerging economies are associated with a higher level of growth and FDI (Aghion and others, 2014). Georgia has consistently had higher investment than savings, sustained by a current account deficit which has averaged 9.4 percent of GDP since 2010. Prior to the pandemic this had closed to around 6 percent, a level staff currently estimate to be sustainable over the medium term (IMF first SBA review, 2022), due to gross national savings rising to an average of 21 percent from 2017-2019. The pandemic led to a large decline in savings, that have since only partially recovered (Figure 17); savings must fully recover to sustainably maintain investment. Household survey data suggests that the savings rate of households didn't fall over this period and so it is likely that the fall and subsequent recovery is in large part again a

function of firm balance sheets recovering. This is consistent with the low labor share in Georgia and the high share of income that goes to corporates.

Figure 16. Investment as a share of GDP (percent)

Figure 17. Savings in Georgia (percent)

Source: GEOSTAT, IMF staff calculations.

Source: GEOSTAT, World Bank, IHS, HIES, IMF staff calculations.

29.   While Georgia's high level of investment looks sustainable, there could also be risks from political factors. Investment can be sensitive to uncertainty and political instability (Julio and Yook 2012) and in Georgia political instability was ranked as the largest obstacle to the business environment in the WBES. Georgia faces several large uncertainties over the near future, with elections in 2024, and the possibility of continued pressures from maintaining economic ties with both the EU and Russia. It is possible that any of these could result in a deterioration of the economic climate and a hit to investment. A clear and predictable policy environment is also important for investment and there could be scope for improvement, as seen in the recent decision on short notice to reverse course on the opening of the electricity market in 2023.

C. Assessment of Growth and Policy Recommendations

30.   Pre-pandemic trend growth in Georgia was likely around 5 percent; however, demographic headwinds, in part fueled by outward migration, are likely to lower this to around 4.5 percent over the next ten years.[9] This growth will be driven by continued structural change and high levels of investment. However, unresolved policy issues, particularly around land registration and markets, could slow this process if unaddressed. And efforts will also be required to ensure dynamic competitive markets are supported in order to maintain productivity growth in the manufacturing and service sectors.

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[9] As noted above, these estimates exclude the potentially positive effect on potential growth from recent inward migration given uncertainty around the length of time migrants will stay and the scale of their impact.

31.   The greatest opportunities to raise growth above this level are focused on raising agricultural productivity. Completing land registration, promoting land consolidation, resolving issues around state management of land, and allowing foreign ownership of land are all policies which help to accelerate the process of structural transformation. Staff estimate that substantial policy reforms in this area could sustainably raise trend growth by 0.5 percentage points per year over the medium term.

32.   A focus on competitive markets will also be necessary to maintain growth outside of agriculture. The National Bank of Georgia (NBG) has already made the promotion of competition in finance part of its 2023-2025 supervisory strategy. Actions in this strategy, such as facilitating access to expensive infrastructure and data to support new market entrants will be helpful. It will also be important to limit any further concentration of the banking system which might further limit competition and access to finance, especially to young dynamic firms. Infrastructure investment, particularly in transport and logistics, will also have high returns and support productivity and competition. Policies such as these are broadly seen as a continuation of current government policy and so are necessary to maintain the expected 4.5-5 percent trend growth; raising government investment as a share of GDP would be required to go beyond these figures.

33.   In the longer run improved educational outcomes will be vital to raise growth, but the impact is only likely to be realized over time. Educational outcomes, particularly in a services-oriented economy such as Georgia, are key to driving growth in the long term. Higher quality education would reduce youth unemployment, increase rural participation, and allow an expansion of high productivity industries such as finance, professional services, and IT. Policies to raise educational outcomes by addressing current issues such as low teacher quality and the significant gap between rural and educational outcomes will need to be put in place. However, the time frame for these kinds of reforms to be (i) implemented, (ii) raise educational outcomes and then (iii) meaningfully affect the labor force enough impact macroeconomic statistics, is significant, and as such these policies are unlikely to raise growth within the short to medium term.

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