



Central Bank
of Armenia

2024 Q2

Monetary Policy Report

Monetary Policy Program

Published June 11, 2024

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In addition to the Monetary Policy Report, the CBA concurrently publishes additional materials on its website, which the reader is encouraged to reference. These include the [MPR Chart Pack](#) (containing statistical charts and tables for global and domestic economic developments as well as the illustrative scenario projections) and the [Transparency Report](#) (providing transparency into how the Board of the CBA arrived at its decision).

DISCLAIMER The data presented in this report is current as of June 7, 2024.

01 |

Executive Summary

A. Executive Monetary Policy Statement

The Board of the CBA today reduced the Refinancing Rate to 8.00%.

At its meeting today, the Board of the Central Bank of Armenia decided to decrease the key policy rate (refinancing rate) by 0.25 percentage points, setting it at 8.00 percent. The Board agrees that a lower refinancing rate is necessary to continue to meet its price stability objective of ensuring an inflation rate of 4 percent over the medium term.

Annual CPI inflation has continued to remain at low levels well below the target, registering 0.3% in May 2024. Core inflation continued to remain in negative territory, at -0.5% year-over-year in April.

In the second quarter of 2024, risks of slowing economic growth globally and in the key trading partner countries of Armenia continue to persist. Global inflation continues to decline, but sticky prices continue to remain relatively elevated in key trading partner economies. At the same time, overheated labor market conditions continue to contribute to sustained high demand conditions in key trading partner economies. Geopolitical tensions in the Middle East since the beginning of the year, as well as growing tensions in international trade relations, continue to create risks for future growth in global commodity prices and potential disruptions in global supply chains. In this context, it is likely that key trading partner central banks, and in particular the US Fed, would maintain tight monetary conditions for longer. Consequently, weak deflationary effects from the external sector on the Armenian economy would persist.

Economic activity in Armenia remained robust in the second quarter, continuing to be largely driven by meaningful growth in the construction, trade, and industry sectors. The latter continues to be impacted by certain short-term factors, posing significant uncertainty with respect to the sustainability of economic growth and its long-term outlook, as well as the strength of domestic demand and consumption conditions. External demand for domestic services continues to slow relative to 2023. At the same time, risks for modest demand pressures stemming from fiscal policy continue to persist. The inflationary environment in Armenia continues to remain low, driven by the monetary policy implemented by the CBA in recent years, weak deflationary pressures from the external sector, and somewhat weaker aggregate demand conditions. Further, labor market conditions continue to cool somewhat, reflected in cooling wage growth as well as declining non-traded sticky price inflation and inflation expectations.

In the face of high uncertainty, and given its commitment to achieving the price stability objective, the Board considers multiple scenarios during its deliberations. On the one hand, the Board discussed scenarios where possible underlying developments—including persistently tighter monetary conditions in key trading partner countries, as well as uncertainty related to the country risk premium and neutral interest rates—would require a higher path for the policy rate relative to current market expectations in order to manage risks that threaten the price stability objective. On the other hand, the Board discussed scenarios where potential economic developments—including the risk of weaker demand conditions emerging, given certain structural features of economic growth—would cause inflation to persistently remain at a low level. This would imply a more rapid and aggressive downward path for the policy rate than what is currently priced in markets in order to sustainably bring inflation back to target in the medium-term horizon.

In summary, balancing the aforementioned risks in both directions, the Board of the Central Bank of Armenia finds it appropriate to continue to gradually ease the policy stance. The Board will continue to monitor risk scenarios, and stands ready to take adequate actions to ensure that the price stability objective of 4 percent inflation over the medium-term horizon is met.

Approved by the Board of the Central Bank of Armenia
June 11, 2024

Governor
Martin Galstyan

Deputy Governors
Hovhannes Khachatryan
Armen Nurbekyan

Board Members
Hasmik Ghahramanyan
Davit Nahapetyan
Artak Manukyan
Levon Sahakyan
Narek Ghazaryan

B. Summary of Economic Conditions

Global Economy

In 2024Q2, economic activity among Armenia's main trading partners has been mixed; however, risks of weaker economic activity going forward continue to persist. Despite an elevated policy rate in recent quarters, the US continues to experience strong growth, spurred by persistently robust consumption and domestic demand conditions. Amid these conditions, headline inflation, sticky prices, and wage growth all remain meaningfully above their target levels, complicating monetary authorities' task of finding a sustainable path back to the inflation target. Moreover, the persistence of these excess demand conditions raises questions about a potentially higher underlying neutral rate in the US, with implications on both the future stance of Fed policy and capital flows to emerging markets. In the Eurozone, economic activity continued to rebound in Q2, driven primarily by services, though risks of economic slowdown still persist, particularly given the structurally weakened position of industry and manufacturing in key economies. These risks, as well as concerns related to the stability of the real estate market and financial system in China, continue to remain key sources of uncertainty driving a weaker global economic outlook. Meanwhile, the Russian economy continued to experience high growth and strong domestic demand conditions, despite the tight CBR policy stance. However, the sustained imposition of stricter and more targeted Western sanctions continues to pose risks to the medium-term Russian economic outlook.

The overall inflationary environment in the global economy continues to remain weak, though important upside risks exist. Heightened geopolitical tensions in the Middle East, which show few signs of easing, continue to threaten both higher and more volatile energy prices as well as potential disruptions to global supply chains. Food prices continue to remain below the high levels of the previous two years, though consecutive month-on-month upticks could suggest that further deflation in global food prices may be drawing to a close.

Domestic Demand Conditions

Economic growth in Armenia in Q1 2024 remained well above estimates of long-run sustainable growth (approximately 5%), comprising 9.2% Y-o-Y growth. However, growth in Q2 was primarily concentrated in trade (25.1% Y-o-Y growth), manufacturing (17.3%), and financial services (17.2%) sectors. Economic activity followed a similar pattern in April (Y-o-Y growth of 10.4%), though there was somewhat less sectoral concentration of economic activity than in the first four months of the year. The persistence of above-potential growth, as well as the non-widespread nature of recent growth, poses certain uncertainties regarding the relative position of

aggregate demand versus aggregate supply. On the one hand, growth remained strong and above long-run potential, which could suggest excess demand conditions. On the other hand, the concentrated and non-widespread nature of recent economic growth could speak to weak consumption and suggest a closed, or even negative, output gap.

The robust external demand observed since 2022 has gradually weakened by Q1 2024, as reflected in the stabilization of both real expenses per tourist and tourist arrivals. Meanwhile, considerable uncertainty continues to surround domestic demand conditions. On the one hand, the concentrated nature of recent economic growth would suggest a relatively limited overall income effect; in this context, the modest consumption growth seen in Q1 relative can be interpreted as an indicator of somewhat weaker domestic demand conditions emerging. This argument for weaker domestic consumption is further supported by continued declines in remittances. On the other hand, domestic demand could grow on the back of a reduced debt burden, subsequent potential for credit growth, and previously accumulated savings in the private sector. In this context, depending on how and in which directions savings are used, they could have different implications on the relationship between aggregate demand and aggregate supply in the economy. Additionally, risks for modest demand pressures stemming from fiscal policy continue to persist.

The funds attracted and provided by commercial banks continued to grow during Q1 2024, reflecting high economic activity. CBA surveys of commercial banks further attest to sustained high demand for loans. In recent years, the reduction in the debt burden (relative to incomes) serves as a source of uncertainty in terms of the potential for lending to accelerate and generate inflationary pressures.

Labor Market & Inflation

In the context of continued high economic growth, labor demand and wage growth both continued to persist at high levels, with private wage growth standing at 7.3% Y-o-Y in Q1 2024 and 4.5% in April. While the growth in productivity and labor supply observed in prior quarters continue to contribute to a weakening in inflationary pressures stemming from the labor market, overall wage growth still remains elevated relative to measures of headline and underlying inflation. This could serve as a source for sustained inflationary pressures to the broader economy. On the other hand, wage growth has been somewhat concentrated in certain sectors, while other sectors of the economy have seen slower or flat wage growth. This could be interpreted as reflecting a meaningful weakening or neutralization of inflationary pressures stemming from the labor market.

The potential for further increases in labor supply could help ease labor market conditions, moderating any potential inflationary pressures in the medium to long term. In this context, the primary uncertainties relate to the potential for a continued inflow of migrant workers to the Armenian labor market, the rapid integration of forcibly displaced persons from Nagorno-Karabakh in the Armenian labor market, as well as slowing flows of Armenian labor migrants to Russia and their greater participation in the domestic labor market.

The deflationary environment has persisted in Q1 2024, primarily driven by weakened pressures coming from the external sector, the impacts of the CBA's policy stance over the past several quarters, and somewhat weaker aggregate demand conditions. In this context, overall CPI inflation has remained below target since April 2023, standing at 0.3% Y-o-Y in May 2024. Non-Traded Sticky Price Inflation, which captures domestically driven demand dynamics, continued to stabilize, standing at 3.0% Y-o-Y in April 2024. At the same time, inflation for services that are highly exposed to external demand have also continued to soften, reflecting trends of slowing demand. Nevertheless, in this context, there is still considerable uncertainty surrounding household inflation expectations, which continue to remain relatively elevated.

Monetary Policy

Market expectations of the CBA policy rate path have not changed materially since the last decision and continue to reflect expectations of a gradual reduction in the policy rate over the next eight decisions. Since the CBA's previous policy rate decision, the yield curve has slightly shifted downward. However, the downward shift likely does not fully reflect market expectations about the policy rate path, suggesting the sustained presence of certain risk factors.

The country risk premium continues to remain at relatively low levels, partly following trends in emerging countries. However, some uncertainty persists regarding tensions on the state border, regional geopolitical developments, and other factors; in this context, an upward reappraisal of the country risk premium could pose inflationary risks. At the same time, macroeconomic stability in Armenia and high economic

growth can serve as important preconditions for a potential reassessment of the country risk profile.

Considering the persistence of numerous types of uncertainty, the CBA builds and evaluates several different scenarios for future economic developments in order to manage possible risks stemming from these key areas of uncertainty. The illustrative Case A scenario presented in the MPR, where the policy rate path would need to be higher than market expectations, is motivated by the risk of sustained inflationary pressures from the US economy, driven by high domestic demand there, as well as the threat of supply shocks amid global trade and geopolitical risks. Amid persistently elevated demand conditions, a potential upward revision to the neutral rate, and continued negative supply shocks, the Fed would need to maintain a tighter policy stance for longer. The implications on risk premiums in emerging markets, including Armenia, could create preconditions for capital outflows. To guard against the risk of nonlinearities emerging—such as allowing depreciatory or inflationary pressures to result in an upward ratcheting of inflation expectations—the CBA policy rate path would need to adopt a tighter stance relative to current market expectations.

The illustrative Case B scenario presented in the MPR, where the policy rate path would need to be lower than market expectations, is motivated by the risk of a negative demand environment emerging in the domestic economy. Specifically, specific structural features of recent growth poses risks of resulting in relatively weaker longer-term demand fundamentals. Over the medium term, these factors could pose risks of more persistent deflationary forces taking hold. In such a situation, the CBA policy rate would need to follow a sharper and more aggressive downward path than what markets presently expect, in order to stimulate demand and return inflation to the target over the medium horizon.

In the context of the latent risks and uncertainties in the current period, the CBA builds and discusses various scenarios, summarized in the Taxonomy of Scenarios, with the aim of managing possible risks and assessing sources of uncertainty. At the same time, the MPR includes a deeper dive into two illustrative scenarios, which reflect illustrative future paths of the economy that would require either a higher path for the policy rate (Case A) or a lower path of the policy rate (Case B) relative to current market expectations. These illustrative scenarios do not represent a most-likely future, assign weight or probability to outcomes, or include all possible risks and uncertainties.



Central Bank
of Armenia

02 |

Monetary Policy
Objectives &
Framework

Statement of Long-Run Monetary Policy Objectives

Adopted effective March 12, 2024

As enshrined in “The Law of the Republic of Armenia on the Central Bank of Armenia,” the primary objectives of the Central Bank of Armenia are to ensure price stability and financial stability. The Board of the CBA is committed to using its full suite of monetary policy instruments to achieve its price stability mandate and provide a nominal anchor for the economy.

We emphasize that the primary objectives of price stability and financial stability are a means to an end. The ultimate purpose of the CBA as an accountable public-sector institution is improving the welfare of our nation. By a commitment to achieving low and stable inflation provides a credible nominal anchor for the economy and thereby anchors inflation expectations, helps to avoid inefficient boom-bust cycles, stimulates investment, supports the economic development of the country, and improves living standards over time.

The CBA develops and implements monetary policy to achieve its price stability objective. The fundamental role of monetary policy is to provide an anchor for inflation and inflation expectations. The Board believes that a four percent inflation target is consistent with its price stability mandate. The inflation target is expressed in terms of the Consumer Price Index (CPI), since it is the best measure of the cost of living and final consumption expenditures, and is the primary reference point for market participants when making planning decisions and setting contracts. Nevertheless, the overall CPI basket of goods and services includes several items that are subject to seasonal fluctuations and global economic developments, which are not directly influenced by monetary policy. We therefore consider alternative measures of inflation, such as core and non-traded sticky prices, which can provide useful information on the underlying inflationary environment.

The CBA’s primary means of adjusting the stance and path of monetary policy is through changes in the expected path of short-term interest rates. If interest rates were to be constrained by the effective lower bound, the Bank would be prepared to use its full range of policy tools.

While emphasizing the primacy of achieving the price stability and financial stability mandates over the medium term, the CBA recognizes that it is also responsible for managing the short-run tradeoff between inflation and output. In an open market economy, periodic economic and financial shocks cause economic activity and inflation to fluctuate over time. In this context, the CBA does not target CPI inflation on a period-by-period basis and does not attempt to bring CPI inflation back to the target in the short term if it would result in undue economic and financial instability. In any economic situation, the CBA seeks to develop and implement monetary policy in a manner that brings inflation to the target in the medium-term (12 quarter) horizon, while minimizing associated social costs through a “least regrets” approach.

Effective monetary policy improves welfare by anchoring long-term inflation expectations and reducing the volatility of output and unemployment. Avoiding excessive volatility in the economy can result in substantial improvements in welfare by reducing average levels of unemployment and raising the productive capacity of the Armenian economy. The Bank emphasizes that placing weight on other near-term objectives must not be inconsistent with its primary responsibilities of achieving its four percent target in the medium term and maintaining price and financial stability.

The Board places great emphasis on the importance of communicating its policy and decision-making framework to the public in a clear and comprehensible manner. Clear and effective communication helps make policy more effective, and encourages financial markets, businesses, and the general public to better understand and manage risks and uncertainties. Moreover, this communications approach plays an important role in enhancing the transparency of monetary policy and central bank accountability, which is a key priority for the CBA as an independent public sector institution.

The Board will review and renew the Statement of Long-Run Monetary Policy Objectives during the first decision-making round of each year.

Framework for Monetary Policy as Risk Management

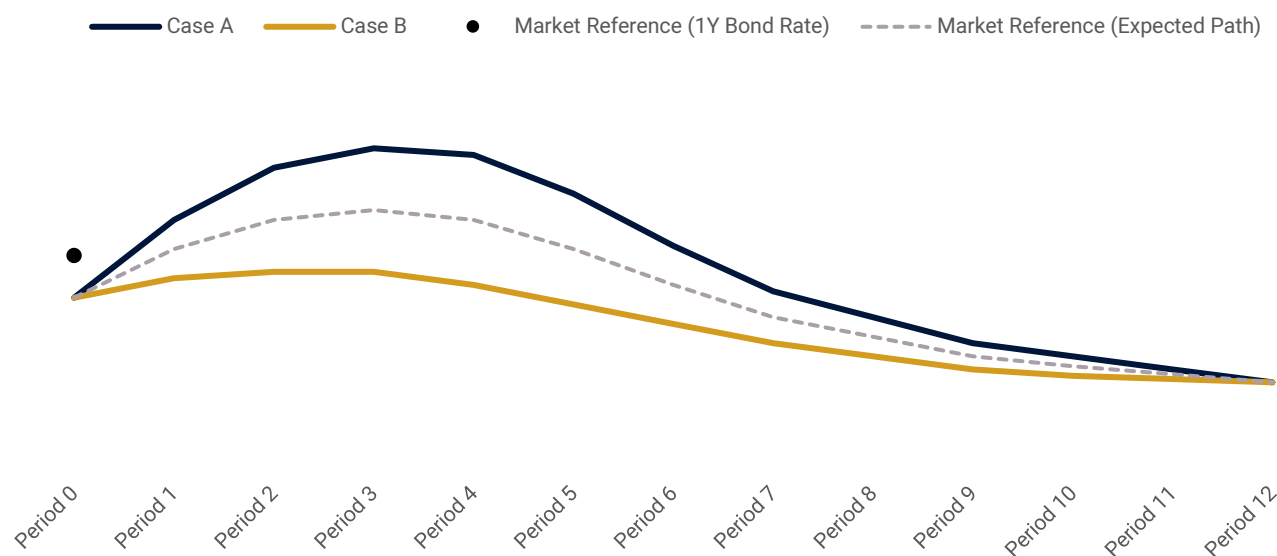
The CBA conducts monetary policy within a risk management framework to analyze and communicate the uncertainty surrounding the economic outlook more effectively. Our approach is to consider alternative scenarios for the evolution of the Armenian economy that have important implications for monetary policy. Elevated uncertainty is a reality that central banks must manage, and we do this by explicitly incorporating it into our framework and communication. We develop and analyze multiple scenarios that would imply a higher or lower path for interest rates than is currently priced in financial markets. At the same time, to steer the policy discussion and communication, we develop two or more illustrative scenarios. These scenarios should not be interpreted as pure risk scenarios, but are meant to represent plausible paths for the policy rate that could be consistent with managing monetary policy risks and concerns in an individual's economic scenario.

Market Reference is the expected path of the policy rate that is currently priced in financial markets. Ideally, if financial markets in Armenia were more developed, and there existed a derivative market for the policy rate, then we could construct an expected path based solely on market information. We therefore use the 1-year government bond yield, which should reflect the expected average policy rate over the next 12 months, plus some compensation for term premium. In addition, we conduct high-frequency surveys of market participants before, during, and following each decision-making cycle as another reference point for expectations of the policy rate.

Case A reflects a scenario that incorporates economic and financial developments that would require a higher interest rate path than what is currently priced in financial markets that is consistent with guiding the economy back to its long-run equilibrium and to achieve price stability objective.

Case B reflects a scenario that incorporates economic and financial developments that would require a lower interest rate path than what is currently priced in financial markets that is consistent with guiding the economy back to its long-run equilibrium and to achieve price stability objective.

Figure 2.1: Alternative Paths for the Policy Rate



Source: CBA

Note: For Illustrative Purposes Only

To learn more about the Central Bank of Armenia's approach to monetary policy, refer to the draft book, [Prudent Risk Management Approach to Monetary Policy: Theory and Practice of FPAS Mark II at the Central Bank of Armenia](#), edited by Douglas Laxton, Martin Galstyan, and Vahe Avagyan (2024).

Report Structure

The MPR begins with the Executive Summary, which provides the Statement by the Board of the CBA as well as a high-level assessment of economic conditions and underlying forces. The Executive Summary is also issued as a standalone document, known as the Executive Monetary Policy Statement.

Section III presents in greater detail the CBA's implementation of this policymaking framework. It begins with an assessment of the first two ingredients essential for economic analysis: where is the economy now, and what are the underlying forces driving the economy. This section also communicates how the CBA is managing current risks through a framework of "least regrets." This includes a taxonomy of different types of scenarios that may be relevant in the current policy round, reflecting a summary of the universe of major issues the Board and Staff of the CBA, as well as external stakeholders, are concerned about. Against this context, the MPR presents two or more illustrative case scenarios representing what the CBA will do with its policy instruments in order to reach its objectives.

The statistical appendix is published as a separate file, known as the MPR Chart Pack, which contains charts and tables for relevant economic variables, as well as key projections from the illustrative case scenarios.

Importantly, the MPR of the CBA is published on the same day as the policy decision is made by the Board of the CBA. This is intended to provide the public with sufficient detail and narratives that describe the framework and analysis that led to the decision in a near-real-time manner. Following the decision and press conference, a separate Transparency Report is released, containing more detailed information about how the Board came to the specific decision during the Board meeting.

Disclaimer

The information presented in this report is based on actual data available by June 7, 2024 as well as the results of the surveys conducted by the CBA and judgments made pursuant to the information on future developments of the macroeconomic environment.

The Monetary Policy Report serves as the chief monetary policy communications vehicle for the Central Bank of Armenia, and is published on a quarterly basis. The MPR has been designed to be a user-friendly document that covers key policy-relevant issues but remains accessible to technical and non-technical audiences alike. The report is structured to follow a narrative format that helps illustrate the key issues, risks, and uncertainties that drove the Board's thinking in the current decision-making round and how it arrived at its policy decision. Not all data, analysis, or issues can be reasonably included in the MPR in every quarter without overwhelming the reader or overshadowing key messages. For this reason, the MPR is supplemented with a Chart Pack that provides a complete and comprehensive overview of the current and underlying economic environment.

A decision made by the CBA Board today will affect inflation with a lag. The illustrative scenarios are chosen and designed by our Monetary Policy Department's economists to describe plausible paths of the economy under different risks. Importantly, the selected illustrative scenarios are two of many possible scenarios that the Board considers when making its decisions, which are represented in the Taxonomy of Scenarios in Section III. During each policymaking cycle, the Board is engaged in dynamic discussions and information-sharing with the Staff related to understanding the current position of the economy, its underlying drivers, and key sources of policy-relevant risk and uncertainty. These discussions, including the process through which the Taxonomy of Scenarios is developed and the illustrative scenarios are selected and quantified, are an important input for Board deliberations. The Taxonomy of Scenarios and the selected illustrative scenarios are produced four times a year and are a key, but not the only, input to the CBA Board's monetary policy decisions.

All monetary policy reports which have been published to date are available on the CBA's website (www.cba.am), which also contains all press releases, working papers, and other monetary policy-related publications.

03 |

Monetary Policy
Outlook

A. Global Economic Developments

United States Economy

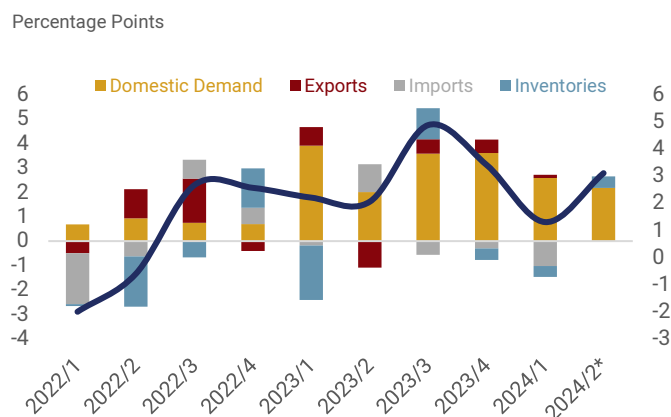
Following strong output growth in the U.S. during Q4 2023, growth in Q1 2024 slowed to 1.3% on an annualized basis, which is below most estimates of potential. However, consumption, and in particular services consumption, remains the biggest driver of this growth. Amid still-hot labor market conditions driving sustained wage growth, declining savings (which remain below pre-pandemic levels), and a somewhat expansionary fiscal stance, all the preconditions exist for consumption to continue to remain robust and drive above-potential growth in the near term despite elevated monetary conditions. At the same time, however, delinquency rates on credit card and auto loans—which are interest rate-sensitive segments—continue to rise, suggesting that tight financial conditions may be having a restrictive effect on some segments of the economy, particularly for lower-income households. Middle- and upper-income homeowners not burdened by high rent inflation still enjoy strong purchasing power, with impacts on overall demand conditions.

Despite considerable deceleration in the second half of 2023, inflation, especially for sticky prices, remains high. The longer sticky price inflation remains high, the greater the risks become of inflation expectations remaining de-anchored from the target and influencing the price-setting behavior of firms and workers. In this context, wage growth continues to remain elevated and has only slightly moderated, remaining at levels (4.7% 3M-o-3M in March) that are inconsistent with a sustainable path back to the inflation target. These developments suggest insufficient progress on inflation going into H1 2024. Alternatively, slowing hiring in April, as well as continued declines in the number of job openings per unemployed person and the job quits rate, may suggest that the labor market may be beginning to cool. This uncertainty about the state of the labor market and its trajectory continues to raise questions about the sustainability of the Fed entering a policy loosening cycle in a near term horizon.

Given these mixed developments, markets in the US have shown volatility in their expectations of future rate cuts (Figure 3.A.3). Coming into 2024, markets initially expected a total of six rate cuts (150 bps total) over 2024, with the first cut starting in March. However, Q1 developments and recent Fed communications have pushed markets to become much more conservative in their expectations of the timing and pace of the loosening cycle. One of the major risk factors additionally contributing to this uncertain environment, and to arguments for a “higher for longer” stance, continues to be expansionary fiscal policy. On the other hand, given financial system vulnerabilities, the Fed is weary of being unnecessarily restrictive, as bank valuations have not fully recovered yet since the failure of SVB Bank in early 2023, and high rates continue to impact smaller regional banks that mainly lend to vulnerable, smaller-sized, firms. These uncertainties also pose questions about the level of neutral interest rates in the US, where upward movements in market expectations of the long-term Fed Funds Rate suggest shifts in the neutral rate; this is explored in greater detail in the special topic in this chapter.

Despite Growth below Potential in Q1, Still-Robust Consumption Continues to Create Meaningful Upward Pressures Moving Forward

Figure 3.A.1: Contributions to US Real GDP Growth

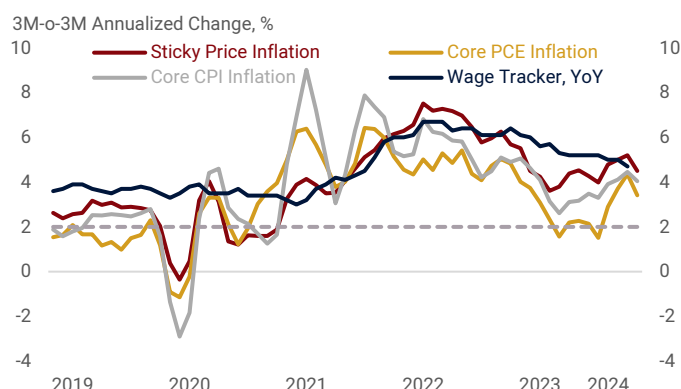


Source: US BEA; Atlanta Fed

Note: 2024 Q2 based on AtlantaFed's June 7, 2024 GDPNow Estimate

Slowing Progress in Tackling Inflation has Raised Risks of Inflation Expectations Climbing Upwards

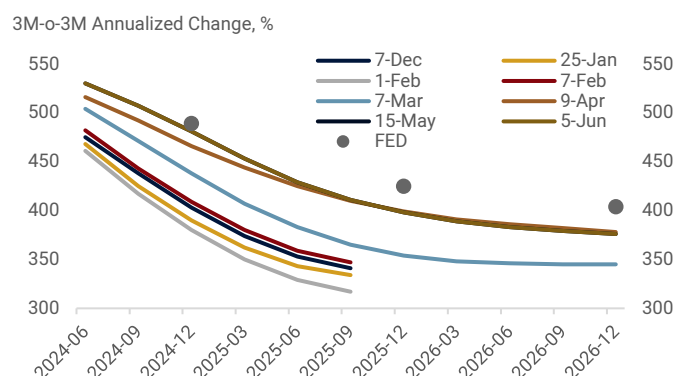
Figure 3.A.2: Underlying Inflation Measures, US



Source: BLS; BEA; Atlanta Fed

Amid Mixed Signals and Uncertainty about Key Fundamentals, Markets are Broadly more Conservative in their Expectations of the Timing and Pace of Future Rate Cuts

Figure 3.A.3: Market Expectations of FED Funds Rate Path



Source: Atlanta FED, Federal Reserve Board

Eurozone Economy

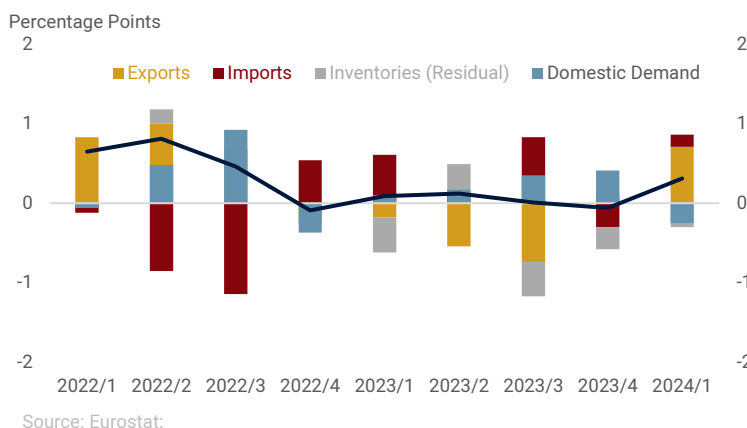
After periods of stagnant growth throughout 2023, the Eurozone's economy started to exhibit initial signs of recovery in 2024Q1. The economy recorded 0.3% Q-o-Q growth (Figure 3.A.4), but the slow recovery in the major industrial economies—mainly Germany and France—raise fears over near-stagnant growth. Eurozone PMI indicators, an informative gauge of the economic environment, suggest that growth was primarily driven by the resilient services sector. On the other hand, tight monetary conditions, sluggish recovery from the energy crisis, and the risk of loss of competitiveness in international markets in recent years have continued to pose a challenge amidst consecutive contraction in industrial production and, in particular, manufacturing since 2023 (Figure 3.A.5). Nevertheless, the combination of increasing real disposable income levels with still-high savings poses the possibility of growth in consumption, which could serve as a potential driver for services-driven growth moving forward.

These developments have been accompanied by persistently declining headline inflation numbers, driven by falling energy and food prices. Underlying inflationary measures, such as services inflation, prove to be persistent and remain elevated at around 4% for a few months already, potentially driven by labor market pressures (Figure 3.A.6). The labor market continues to remain tight, though some signs of cooling have emerged. The unemployment rate lingers at record lows (6.4% in April), while the job vacancy rate remains elevated at 2.7 in 2023Q4. Such persistent underlying inflationary pressures raise uncertainties related to a “higher for longer” interest rate environment, especially when considering the labor shortages and productivity loss that the bloc has been facing, which has limited the increase in production capacities. Thus, despite some expected economic recovery in 2024 and later (Table 3.A.2.), the Eurozone is in a much weaker position than the US, but faces a similar policy challenge, whereby tight credit conditions, which would normally be consistent with a significant recession, could still materialize and create a far stronger drag on the economy than what has been currently observed.

Uncertainties around the outlook remain high and could persist as long as potential recessionary forces persist. The latter is motivated by weak industrial production, risks of loss of competitiveness, labor shortages, and subdued confidence, which are further exacerbated by the potential for a “higher for longer” interest rate environment. Although the EU has made efforts to diversify its dependence on Russian-origin energy sources, it remains vulnerable to potential geopolitical escalations, particularly in the Middle East, which could exacerbate existing supply chain issues and potentially tip the economy in very different directions.

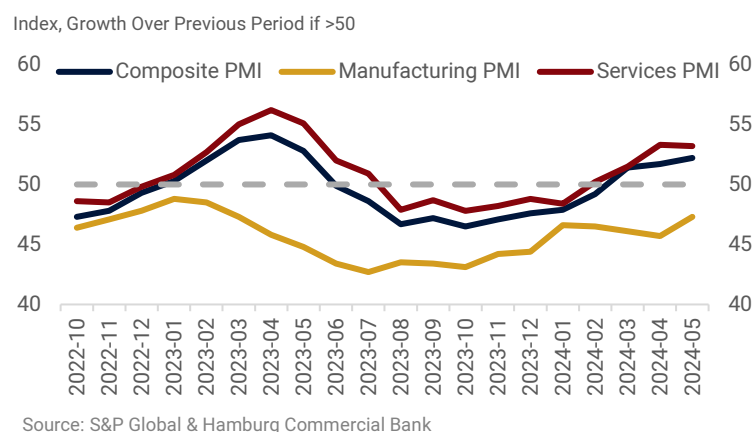
A Stagflationary Environment in the Eurozone Could Test the Resolve of the ECB to Bring Inflation on Target in a Timely Manner

Figure 3.A.4: Contributions to Euro Area Real GDP Growth



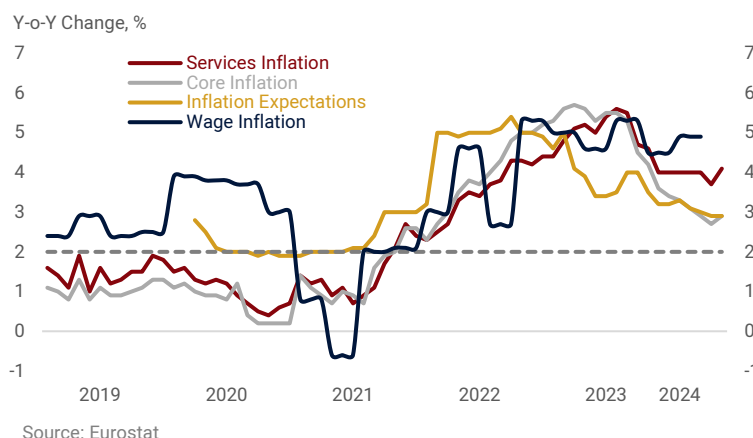
Despite a Slight Uptick in Economic Growth in the First Quarter, the Manufacturing Sector Still Grapples with Contractionary Pressures

Figure 3.A.5: Composite Purchasing Managers Index (PMI), Euro Area



Underlying Inflation Measures Differ Substantially from Each Other, Presenting Very Different Views about the Economy

Figure 3.A.6: Underlying Inflation Measures, Euro Area



Russian Economy

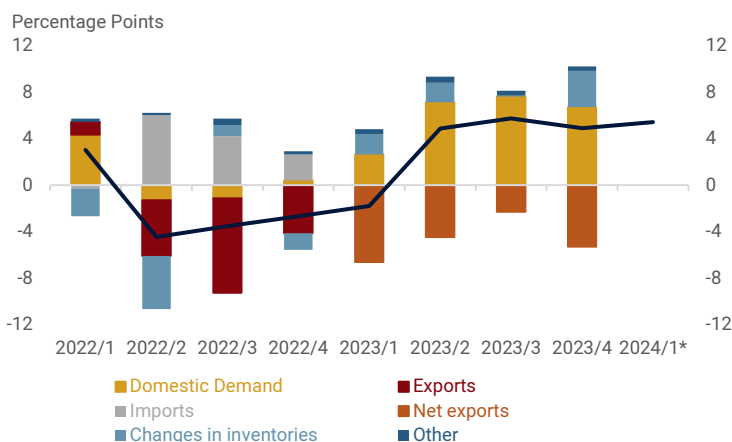
The Russian economy, despite ongoing sanctions, grew by 5.4% on an annual basis in 2024Q1 (Figure 3.A.7). Strong growth has been broadly observed in wholesale and retail trade, services, manufacturing (especially defense industries), and construction sectors. However, the main growth driver remains domestic demand. Such resilient demand conditions are underpinned by exceedingly hot labor market conditions, with the unemployment rate reaching record lows (2.6% in April) and real wage growth consequently rising rapidly. In this context, domestic demand continues to outstrip producers' capacity to meet demand for goods and services, but the expansion of production capacities is further exacerbated by perceived labor shortages. Thus, underlying inflationary pressures and inflation expectations, despite certain cooling observed in recent months, remain elevated (Figure 3.A.8), which could necessitate tighter monetary conditions even though the BoR decided to keep rates unchanged in June.

The Russian economy's heavy reliance on natural resources, especially oil and gas, poses several risks and uncertainties amidst ongoing sanctions since 2022. The start of 2024 was marked by significant efforts from sanctions-imposing countries to more strictly enforce existing sanctions (particularly the oil price cap), introduce additional sanctions for other strategic industries (gold, diamond, metals), and target third countries engaging in the trade of sanctioned products and sectors of strategic importance. Although Russia has thus far managed to efficiently mitigate the potential negative consequences derived from sanctions and sustain its budget revenue-generating ability (Figure 3.A.9), risks exist both for oil and gas and other budget revenues.

Moreover, uncertainties about elevated underlying inflation and inflation expectations relate to surges in defense spending and potential declines in budget revenues, the latter of which could pose inflationary risks in the context of a higher country risk premium. On the other hand, additional sanctions and the targeting of export-derived budget revenues could result in increased domestic tax collection to make up the difference, thus posing risks of dampening domestic demand. Lastly, limited access to international markets due to extended sanctions poses challenges to Russia's growth trajectory. Throughout 2023, the economy witnessed remarkable investment growth culminating in significant replacements of imported goods with domestically produced ones (particularly for dual-use products), as well as the expansion of industrial and manufacturing production capacities and technological advancements to cater to the defense industry's needs. In the context of more targeted sanctions, there are certain risks to Russia's ability to efficiently substitute imports of certain strategic products and ensure sufficient domestic technological advancements.

Bank of Russia Emphasizes that Domestic Demand Outstrips Capacities to Expand Production of Goods and Services

Figure 3.A.7: Contribution to Russia Real GDP Growth,

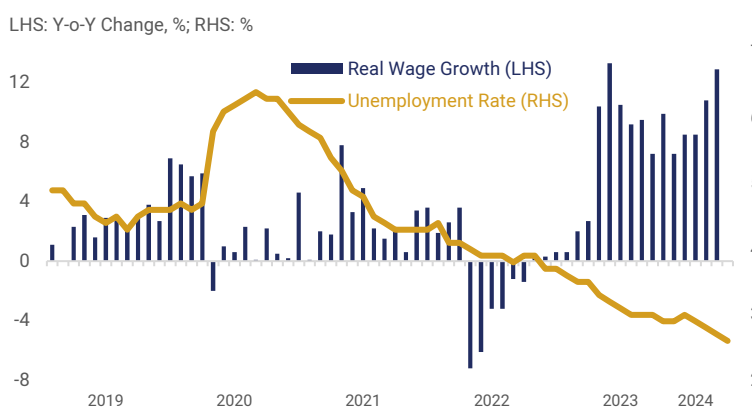


Source: Bank of Russia

Note: Data for 2024Q1 is a preliminary estimate.

A Low Unemployment Rate and High Real Wage Growth Lend Credence to Ongoing Labor Shortages that Are Constraining the Expansion of the Output of Goods and Services

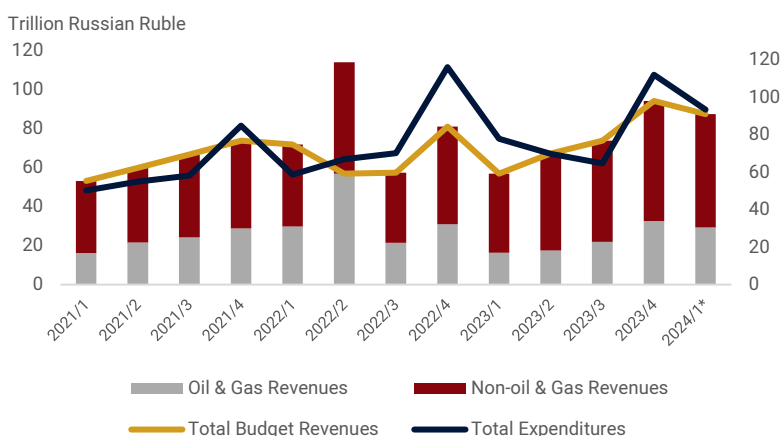
Figure 3.A.8: Unemployment Rate and Real Wage Growth, Russia



Source: Rosstat

Despite Ongoing Sanctions and Surges in Defense Spending, Russia has Broadly Avoided Deepening the Budget Deficit

Figure 3.A.9: Russian Budget Revenues and Expenditures



Source: Russian Ministry of Finance

Commodity Markets

Copper: Copper experienced a steady decline in prices in Q3 and Q4 2023 due to slowing global demand driven by slowing activity in the construction sector in China (the main buyer of copper) and economic slowdown in the Euro Area. However, copper prices in recent months have rebounded, and prices in May stand at two-year highs of approximately 10,120 dollars per metric ton. The continued rapid transition to green technologies, including solar panels, wind power turbines, and electric vehicles, serves as a major driver for copper demand. However, much of the recent price growth in this industry stems from the effects of supply disruptions/constraints in early 2024. The outlook for copper remains characterized by significant volatility, driven by both macroeconomic and industry/country specific dynamics. On the one hand, the global transition to green technologies continues to drive growth in demand. On the other hand, risks of increased regulations and trade barriers (including the recent US tariffs on Chinese-produced EVs, semiconductors, and solar panels) are an important source of risk and uncertainty moving forward.

Oil: Global oil supply is projected to increase by the International Energy Agency, with the supply increases of non-OPEC countries potentially outweighing sustained cuts by OPEC countries. In recent weeks, oil prices contracted on the back of weaker demand expectations globally, helping bring the average oil price in May down to 82 dollars per barrel. However, amid an uncertain geopolitical outlook in the Middle East (where approximately one quarter of global oil is produced), expectations of growing supply are tempered by risks of higher and more volatile oil prices. These risks, as well as questions about the trajectory of global demand conditions, continue to drive considerable uncertainty for global oil prices.

Food: The FAO Food Price Index (FFPI) reached 120.4 points in May 2024, representing a slight increase of 1.1 points from its revised April figure. This increase in May was driven by increases in cereal and dairy prices, offsetting decreases for sugar and vegetable oils. Despite remaining unchanged in May, meat prices have grown in recent months, given sustained high global demand and production challenges due animal health issues like the outbreak of avian influenza. While food prices generally remain well below the levels of the prior two years (FFPI contracted by 3.4% Y-o-Y in May), the consecutive month-on-month upticks point to the risk that the pattern of continued deflation in global food prices may be drawing to a close. Moreover, sustained risks of disruptions in supply chains, including those related to geopolitical tensions in the Middle East, continue to drive upside risk, with implications for imported food prices in Armenia.

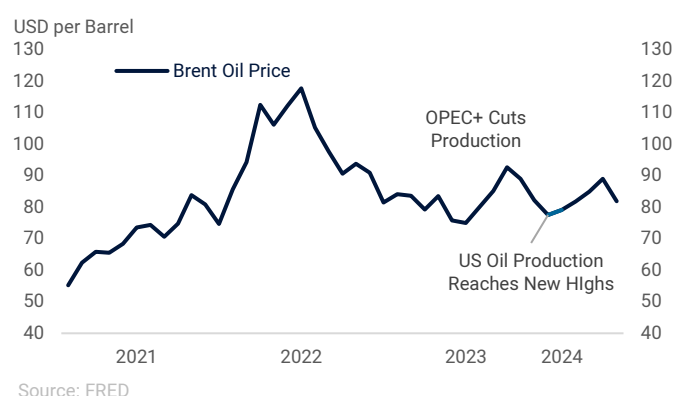
Copper Prices Rise, Given Steady and Growing Global Demand amid the Green Transition and Recent Supply Constraints

Figure 3.A.10: Copper Prices



Amid Sustained Geopolitical Tensions, Questions about Global Demand, and Potential Growth in Supply, Considerable Uncertainty Remains for the Global Oil Outlook

Figure 3.A.11: Brent Crude Oil Prices



Global Food Prices Have Significantly Moderated as Supply/ Demand Normalized Post-Covid, but Deflationary Trends May Not Persist

Figure 3.A.12: FAO Food Price Index

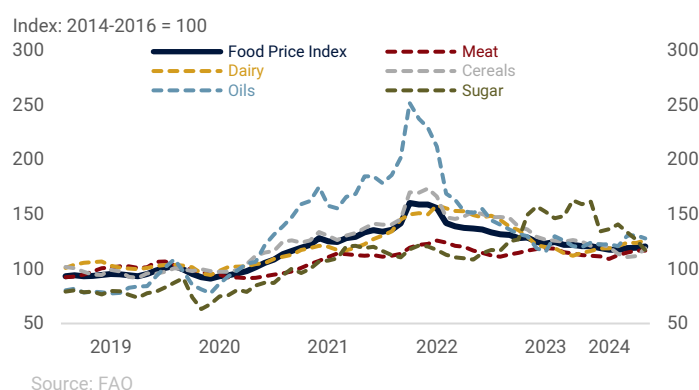


Table 3.A.1: Third-Party Projections for Commodity Prices

Source/ Topic	Oil (Brent, Dollars per Barrel)			Copper (LME \$/t)			World Bank Food Price Forecasts (Ann. Growth)		
	EIA	WB	Consensus	WB	REQ	Consensus	Oils and Meals	Grains	Other Food
Date	May 24	Apr 24	Jun 24	Apr 24	Mar 24	Jun 24	Apr 24	Apr 24	Apr 24
2024	88	84.0	83.6	8900	8340	8990	-7.3	-11.3	2.1
2025	85	79.0	80.0	8800	8830	9400	-4.9	-3.8	-2.8

Source: US Energy Information Administration; World Bank; Australia Resources and Energy Quarterly (REQ); Bloomberg

Box 1. Special Topic: Neutral Interest Rates in the United States

The neutral (or natural) rate of interest represents the level of the real interest rate that would prevail in the absence of business cycle fluctuations, with output at potential, saving equating investment, inflation being stable, and the economy operating at full employment. In other words, it is the level of the interest rate that would be consistent with aggregate demand and aggregate supply being in equilibrium. From the perspective of monetary policy, the policy stance is considered expansionary or contractionary when it is below or above the neutral rate, respectively, and is thus extremely important for policymakers to understand where the neutral rate is and what factors may underlie its potential movements. However, as an unobservable variable, the neutral rate is very challenging to measure. Assumptions about the state of the underlying economic factors that drive neutral rates vary widely and require a heavy dose of judgment and, as a result, measures of the neutral rate can vary considerably depending on the source (Figure XX). For example, the Federal Reserve's (FED's) long-run policy rate projections stand at 2.5%; netting out the 2% inflation target suggests a long-run real neutral rate of around 0.5 percent. The well-regarded Holston-Laubach-William measure, meanwhile, stands a little higher, at 0.7 percent. Alternatively, one can look to markets for insights, which suggest a range between 1.0 and 1.5 percent, depending on assumptions regarding the 5-year forward TIPS rate for liquidity premiums. The fact that markets, as well as some economists (Larry Summers and others), are estimating a higher neutral rate relative to where central banks and some of these R-star (neutral rate) measures stand suggest that careful attention should be paid to understanding the uncertainty about the fundamentals that drive neutral rates, in order to develop sensible estimates that mitigate the likelihood of policy errors stemming from incorrect judgments.

Several factors drive the level of the neutral rate, including productivity, demographics, global capital flows, regulations, and so on, and there is considerable uncertainty surrounding estimates for each of these factors. Over the past two decades, the US neutral rate has declined substantially from around 3.0-3.5% to somewhere between 0.5 and 1.0% by the late 2010s. This gradual decline in neutral rates was likely driven by a confluence of factors, including falling productivity; demographic factors such as aging, where higher life expectancy and slower productivity growth requires greater saving for retirement; as well as the global savings glut (particularly driven by China and other Asian countries). This slow and long-lasting slump in the neutral rate brought about a low neutral rate view of the world, where equilibrium real returns were largely assumed to remain low "forever." From the perspective of policy, the main risks and fears during this period were not about high or persistent inflation, but rather, the dangers of being stuck at the effective lower bound and lacking conventional policy tools to stimulate demand in periods of economic contraction. This also drove fears of being mired in a very low deflationary environment (deflation trap) and inflation expectations being anchored too low, further restricting growth.

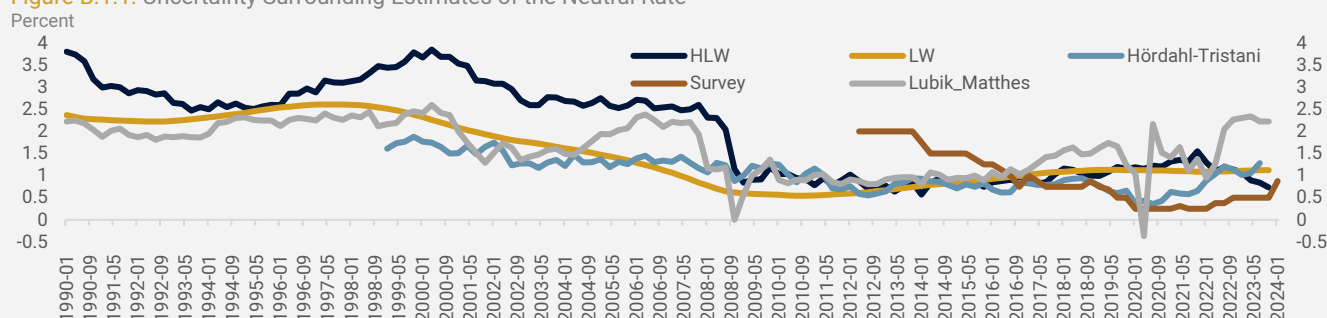
However, the Covid crisis shook many of these Great Moderation-era assumptions to their foundations, and once again brought discussions about higher neutral rates back to the center of public discourse. Successive supply shocks and bottlenecks, coupled with a faster-than-expected recovery of demand on the heels of an unprecedentedly expansionary fiscal policy and a loose monetary policy, brought about a period of high inflation and robust consumption that continues to persist. Despite the continued tightening of the policy stance by the Fed to levels not seen in decades, domestic demand, consumption, and labor market conditions in the US remain stubbornly high, driving persistently high inflation with no obvious, sustainable path back to the inflation target. This suggests that neutral rates may, in fact, be higher than what many advanced economy central banks and the Federal Reserve estimate it to be.

Today, both short- and long-term neutral rates have most likely risen, and risks exist that they could rise further. The persistence of very robust demand conditions (including sustained consumption-driven growth and tight labor market conditions)—despite a significantly elevated Fed policy stance—as well as persistent supply shocks likely suggest that short-term neutral rates may indeed be higher. Acknowledging this fact could result in a path for rates that is higher than what the market has priced in as of today. In addition to a higher level for short-term neutral rates, long-term rates have also likely shifted upwards. Growing public debt in the US, coupled with lower saving by Asian countries (which has also been reflected in lower demand for treasuries, with China outright selling), along with a continued expansionary fiscal stance and massive public investments in the United States and the EU, are also driving R-star up. The effects of these supply and demand dynamics in savings and investments are in many ways the opposite of the factors that drove neutral rates down during the Great Moderation.

While both short- and long-term neutral rates have most likely increased in the past two to three years, their future paths remain quite uncertain. Recent upward pressures coming from the factors mentioned above can prove to be significant enough to outweigh the factors that had been, and are likely to continue, pulling the neutral rate down for years. Moreover, risks around the factors that could push neutral rates up—including trade wars and trends in de-globalization (constant supply shocks), fewer savings (resulting in less demand for treasuries) and strong public/private investments in the US and the EU—are likely not fully priced in financial markets yet. These considerations point to the dominance of upside risks for the future trajectory of neutral rates. These risks are further compounded by uncertainty about the term structure, where upward shifts in the term premium could meaningfully drive up long-term rates.

Naturally, the uncertainty surrounding its proper measurement poses challenges for policymakers. As Fed Chair Powell noted, navigating by the stars is challenging, especially "under cloudy skies." While neutral rates can serve as a helpful tool to understand and illustrate key considerations about economic conditions, the key concern is not necessarily about finding the perfect estimate to dictate policy actions, but rather, about having sensible frameworks in place to think about and communicate the uncertainty around neutral rates and the fundamentals driving them. Paying insufficient attention to the policy implications of these uncertainties, and consequently resisting upward drifts in the neutral rate, could result in serious policy errors with important welfare implications.

Figure B.1.1: Uncertainty Surrounding Estimates of the Neutral Rate



Source: NY FED, Richmond FED, Hordahl and Tristani (2014), NY FED Survey of Primary Dealers (SPD)

Survey: Difference between the "long-run" expected level of policy rate and inflation from New York FED's Survey of Primary Dealers (SPD)

Table 3.A.2. Third-Party Projections for GDP Growth and Inflation in Key Trading Partner Countries

Source	United States					Euro Area						Russia				
	IMF	WB	OECD	Fed	Consensus	IMF	WB	OECD	EC	ECB	Consensus	IMF	WB	OECD	CBR	Consensus
Date	Apr 24	Jan 24	May 24	Mar 24	Jun 24	Apr 24	Jan 24	May 24	May 24	Jun 24	Jun 24	Apr 24	Apr 24	May 24	Apr 24	Jun 24
GDP Growth (Annual Rate, %)																
2023			2.5 (Actual)					0.5 (Actual)						3.6 (Actual)		
2024	2.7	1.6	2.6	2.1	2.4	0.8	0.7	0.7	0.8	0.9	0.7	3.2	2.2	2.6	3	2.6
2025	1.9	1.7	1.8	2.0	1.8	1.5	1.6	1.5	1.4	1.4	1.4	1.8	1.1	1.0	1.5	1.2
2026	2.0	-	-	2.0	2.0	1.4	-	-	-	1.6	1.4	1.2	-	-	2	1.2
Inflation (Annual Rate, %)																
2023			3.4 (Actual)					2.9 (Actual)						7.4 (Actual)		
2024	2.9	-	2.6	2.4	3.2	2.4	-	2.6	2.5	2.5	2.4	6.9	-	7.2	6.3	6.7
2025	2.0	-	2.1	2.2	2.4	2.1	-	2.1	2.1	2.2	2.1	4.5	-	5.3	4.0	4.7
2026	2.1	-	-	2.0	2.3	1.9	-	-	-	1.9	2.0	4.0	-	-	4.0	4.2

Source: IMF; World Bank (WB); OECD; Fed; ECB; CBR; European Commission (EC); Bloomberg

B. Domestic Demand Conditions

Gross Domestic Product

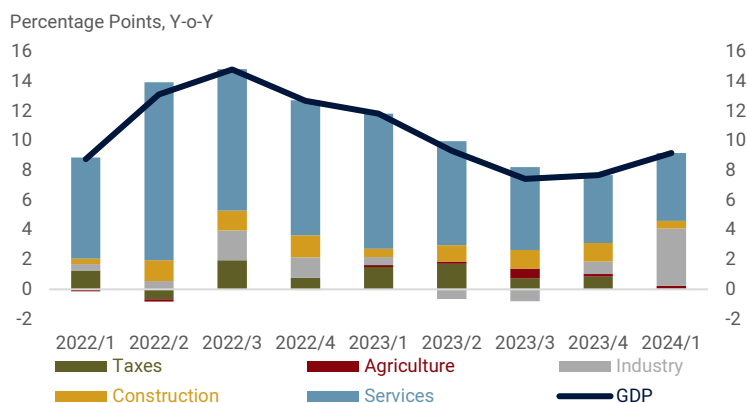
Economic growth in Q1 2024 remained at very strong levels at 9.2% Y-o-Y, largely concentrated in the trade (25.1% Y-o-Y), financial services (17.2% Y-o-Y), and manufacturing (17.3% Y-o-Y) sectors. Agriculture somewhat rebounded, with Y-o-Y growth of 4.4%, while construction continued to sustain high growth of 12.4%. However, several successive quarters of above-potential growth and the recent non-inclusive distribution of growth poses key uncertainties and risks related to assessing the relative state of aggregate demand versus aggregate supply. Following very high growth in recent years, information and communication services contracted for the second consecutive quarter in Q1 2024. Given its role in driving potential output and export capacities, an adverse adjustment to the IT outlook could have medium-term implications. However, there are no clear signs as of yet of a widespread contraction, since the recent decline in Armenia, which is still lower compared to the global tech slowdown of the past two years, may be the organic result of AI-related developments and more global trends (see Box 2). Further, trade has emerged as the main driver of services growth, suggesting that either demand-driven factors are outpacing supply, or that large shares of growth are concentrated in re-exporting activities. The manufacturing rebound does not imply a widespread income effect, since it is mostly concentrated in jewelry production, while other subsectors have somewhat contracted.

The robust external demand observed since 2022 has gradually weakened by Q1 2024, as reflected in the stabilization of both real expenses per tourist and tourist arrivals. Considering the source markets driving growth in tourism in recent years, economic developments in Russia and geopolitical developments regionally could pose further risks of slowing tourism through the medium-term horizon, with potentially cooling effects on economic activity and certain exports.

Considering the above, the output gap (Figure 3.B.3) is estimated to have been slightly positive in Q1. On the one hand, growth remained strong and above long-run potential, which could suggest excess demand conditions. On the other hand, the concentrated and non-widespread nature of recent economic growth could speak to weak consumption and suggest a closed, or even negative, output gap. Moreover, the cyclically appreciated real effective exchange rate (Figure 3.B.8) has also helped stem excess demand pressures from the external sector.

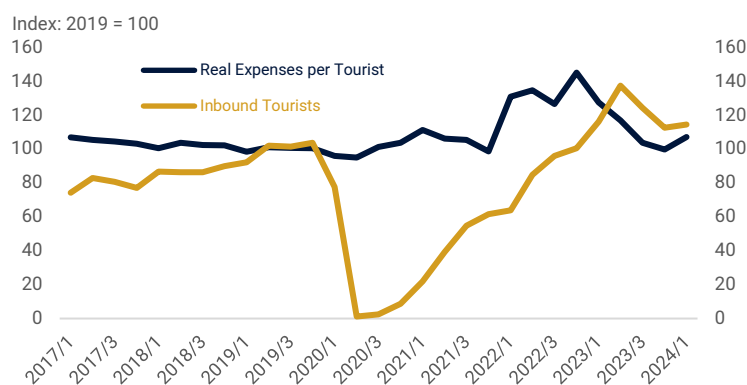
Uneven Economic Growth in Q1 2024, Concentrated in Trade and Industry, Raises Questions about the State of Domestic Demand

Figure 3.B.1: Contribution to Real GDP Growth by Production Approach, Armenia



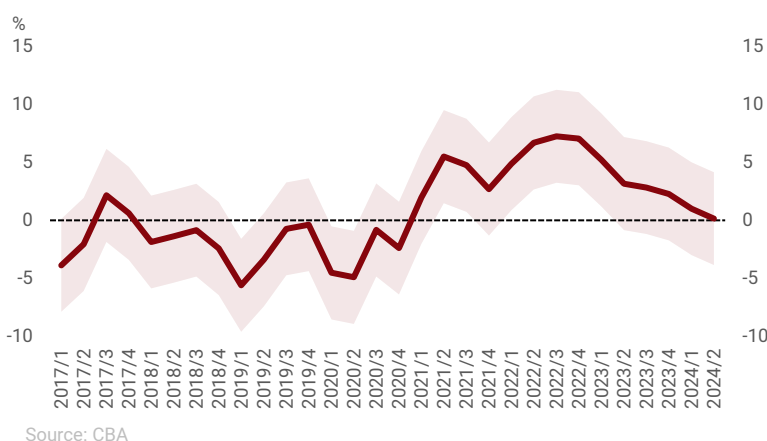
Both Inbound Tourism and Real Expenses per Tourist are Normalizing

Figure 3.B.2: Real Expenses per Tourist and Inbound Tourists, Armenia



Aggregate Demand Continues to Outstrip Supply

Figure 3.B.3: The Output Gap, Armenia



Consumption and Investment

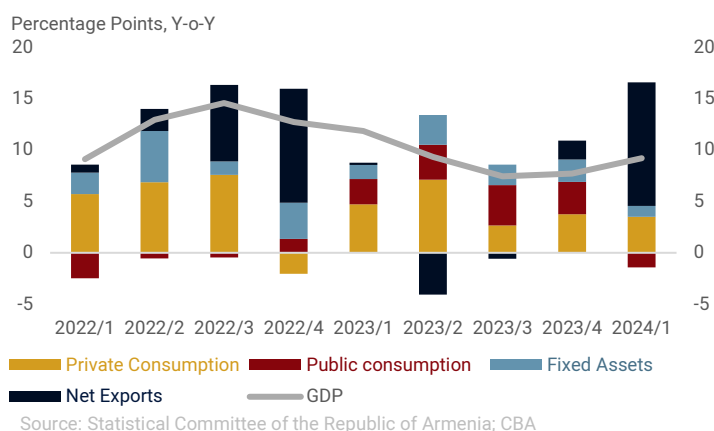
Overall consumption growth was relatively muted in Q1 2024, as reflected in modest growth in private consumption and declines in public expenditures (Figure 3.B.4). Private consumption, which had been accelerating in 2023, has since pulled back somewhat, registering growth of 4.6% Y-o-Y in Q1 2024. Aggregate investment growth remains strong, primarily supported by growth in public investments. At the same time, while private investments overall have somewhat weakened, private investments in the real estate sector continue to remain at high levels. High accumulated savings in recent years poses certain risks to acceleration in both private investments and private savings, which, depending on how these trends unfold, could have different implications on the relationship between aggregate demand and aggregate supply in the economy (Figure 3.B.3). In this context, the elevated level of construction suggests the potential for private investment growth to remain high going forward (Figure 3.B.6). On the other hand, slowing imports of investment goods in Q1 could signal more muted or delayed investment activity.

The main uncertainties and risks in the near term relate to the trajectory of domestic demand. On the one hand, domestic demand could grow on the back of previously accumulated savings in the private sector, a reduced debt burden, and subsequent potential for credit growth. Such a scenario could fuel further excess demand pressures (particularly if the economy is judged to be already operating at or slightly above potential) and prevent the downward adjustment of underlying inflationary pressures and inflation expectations. On the other hand, the fact that economic growth has not been widespread suggests risks of weaker demand, signals of which can be seen in modest relative consumption growth emerging in recent quarters. This scenario implies aggregate demand being below long-term potential. Another important consideration relates to the impacts of the inflow of forcibly displaced people from Nagorno-Karabakh on aggregate demand. Social assistance programs to support their socioeconomic integration are expected to have some positive effect on aggregate demand in the near term, though their integration into the labor market will continue to play a role in balancing these demand and supply forces in the economy.

Remittances of individuals continued to decline considerably in Q1 2024 compared to the previous two years (Figure 3.B.5), due to slowdown of economic activity in trade partner countries as well as the depreciation of the ruble relative to the US dollar since the beginning of the year. At the same, the narrowing wage gap between construction sector of Armenia and Russia (Figure 3.C.3), as well as potential taxation of migrant workers' incomes earned abroad could create risks of potential slowdown in seasonal migration and remittances, which would be expected to exert downward pressures on domestic consumption.

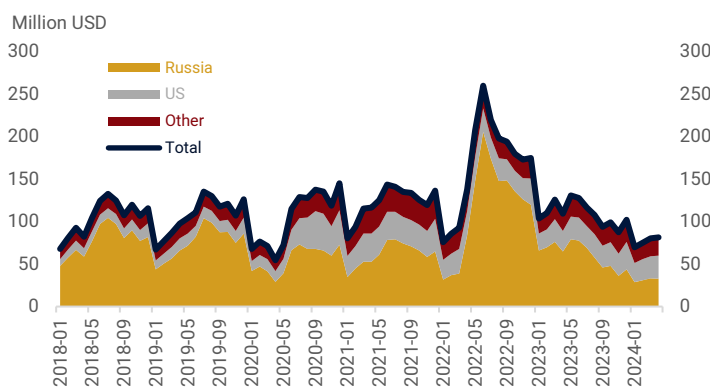
Recent Economic Growth is Not Broad-Based, Posing Downside Risks to Consumption and Demand Conditions

Figure 3.B.4: Contribution to Real GDP Growth by Expenditure Approach, Armenia



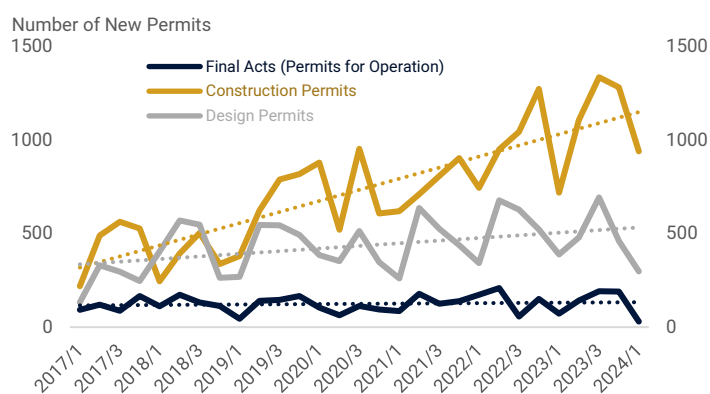
Remittances Continue to Decline Considerably from 2022 Peaks

Figure 3.B.5: Inflow of Non-Commercial Transfers to Armenia by Source Country



Construction Permit Growth Continues at a Record Pace, Supporting Investment Activity in the Construction Sector

Figure 3.B.6: Quarterly Permitting Activity, Yerevan



External Trade and Demand

Exports and imports grew at an unprecedented pace in Q1 2024, primarily driven by increased trading activity in certain sectors. At the same time, strong exports of domestically produced goods (in line with the robust levels observed in the past two years) reflect sustained strong external demand for Armenian goods, though adjustments have been observed for some products. Despite the strong level of savings accumulated in recent years and high economic growth, demand for imported goods has somewhat weakened, as reflected in declines in the dollar value of final consumption and capital goods, which could reflect overall weaker domestic demand conditions. On the other hand, it is also possible that the strong income growth in recent years could be generating shifts in consumption preferences from goods to services. With respect to declines in capital goods imports, possible reasons could include uncertainty related to regional developments, as well as the drawdown of certain investment projects. Overall, these developments further add to uncertainties about the current state and future trajectory of domestic demand conditions.

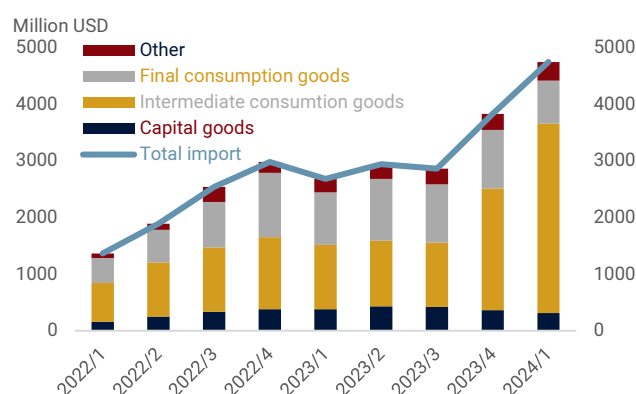
The real effective exchange rate (REER) appreciated somewhat in Q2 2024, following appreciation in the nominal exchange rate. The key uncertainties relate to the cyclically appreciated exchange rate in the context of stabilizing external imbalances and absorbing excess demand. Elevated external demand since 2022 amid geopolitical developments in Eurasia, capital and labor inflows, high tourist inflows and export of highly productive IT services have contributed to a significant appreciation of the REER in the economy (Figure 3.B.8), while weak inflation in the domestic economy versus partner countries since 2023 contributed to lowering REER appreciation. If REER appreciation were to prove to be cyclical, its parallel adjustment would inevitably be reflected in a sharp adjustment of the current account deficit following the aggregate demand correction process. On the other hand, it may be that current levels of external demand reflect new opportunities that would permanently support export potential (especially of services), driving fundamental (rather than cyclical) REER appreciation. This notion is supported by growth in supply and export capacities during this period.

Fiscal Policy

Given strong GDP growth and potential excess demand in the economy in recent quarters, countercyclical fiscal policy is desirable and was generally the case in 2023, where the fiscal impulse was negative due to improved tax-to-GDP ratio as well as modest expenditure growth (compared to nominal GDP). Taking the 2024 Budget and 2024-2026 Mid-Term Expenditures Framework as a basis, the impact of fiscal policy on aggregate demand in the medium run is estimated to be close to neutral (Figure 3.B.9). This would depend on expected growth in current and capital expenditures and a gradual increase in the tax-to-GDP ratio, given improved tax policy. However, there is a risk that potential revenue underperformance, coupled with the use of reserve funds for social assistance programs, can, in the near term, be expansionary and fuel domestic consumption, with slight inflationary impacts. Further, any underutilization of capital expenditures could pose risks to the economy's medium-term growth potential.

Demand for Consumption & Investment Goods Remains Strong

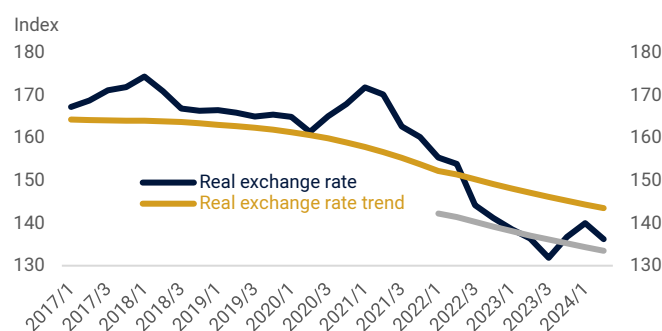
Figure 3.B.7: Value of Imports by Armenia by Broad Economic Category (BEC)



Source: Statistical Committee of the Republic of Armenia; CBA

Uncertainty Regarding the Cyclical Position of the Real Exchange Rate Persists

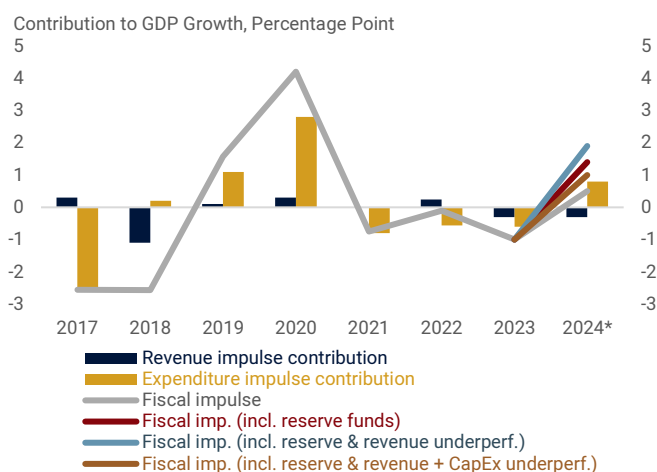
Figure 3.B.8: Real Effective Exchange Rate and Trend for AMD against USD, EUR and RUB (Lower Value means Stronger Dram)



Source: CBA

Inflationary Impacts of Fiscal Policy are Relatively Muted, though Risks Could Stem from Revenue Underperformance, Underspending of Capital Expenditures, and/or Reserve Fund Drawdown

Figure 3.B.9: Fiscal Impulse and Scenarios for 2024, Armenia



Source: Ministry of Finance; CBA calculations

Box 2. Outlook for the Armenian Tech Sector

The Information Technology (IT) sector represents one of the fastest growing sectors in the Armenian economy (with 5.5% share in GDP in 2023), and serves as an important pillar for strengthening the economy's productive capacities, enhancing knowledge-based sectors, and serving as an important driver of growth in potential GDP over the longer term. Over the past decade, global growth in the tech space, as well as foundations for rapid growth in Armenian tech have contributed meaningfully to the sector's expansion. The Armenian tech sector features a robust startup scene (with funding from foreign and domestic venture capital), and is home to offices of major global startups (including those founded by both diasporan Armenians and foreign startups) as well as major, well-established multinational tech giants. The sector also includes individual freelancers and small-scale businesses that primarily provide tech services to US and EU clients.

Building on these strong foundations and infrastructure, the tech sector has, since 2022, meaningfully benefitted from significant flows of financial and human capital in the context of the Russia-Ukraine conflict. From a macroeconomic perspective, this poses both risks and opportunities in the near, medium, and long term. In the short term, these effects related to capital inflows (foreign direct investments), labor force inflows, and the founding of new tech companies by foreign citizens, the latter of which primarily took place in March 2022, though this has since continued on a relatively modest scale (Figure B.2.1). Beginning in Q2 2022, and continuing through the end of 2023, the Armenian tech sector experienced continued, sustained growth in output, value added, productivity, and labor/capital flows, which, in the short-run, has positively impacted potential GDP in Armenia, and created a base for a positive medium- and long-term outlook. However, in the medium and long term, there are important uncertainties that are relevant for monetary policy. These uncertainties relate to the extent to which international visitors have integrated into the domestic economy and society; how much the domestic sector has been able to exploit this shock to cultivate its productive capacities, including labor skills and knowledge; how vulnerable the sector's productive capacities are to a potential outflow of international visitors; and the implications of these factors with respect to cyclical versus trend appreciation of the exchange rate. These uncertainties could have implications on medium-term potential output, given the role of tech in driving productivity and higher economic output.

To assess these implications for potential, it is important to understand the underlying drivers of the sector and how recent trends could impact future developments. While the tech sector has served as an important growth catalyst in recent years, since the second half of 2023, growth in the sector has gradually slowed (Figure B.2.2). In the context of uncertainty about the drivers of this slowdown as well as its macroeconomic implications, three main risks are particularly relevant. First, slowing economic activity in Armenian tech could simply be a mirroring of trends in global tech (Figure B.2.3), where venture capital deal flows have dried up considerably in recent quarters and waves of layoffs (following over-exuberant hiring practices post-Covid) have been observed in both major tech giants as well as small start-ups. This worsening of market sentiment, amid oversaturation of the market, has contributed to more cautious and risk-averse behavior among firms as well as a general slowdown in demand for some tech services. Whereas Armenian tech has largely been immune to these trends in the past two years, the recent contraction in both output and wage growth (Figure B.2.4) could in part reflect the effects of this broader global cooling. This would suggest a business cycle-related temporary slowdown, with implications on output and employment in the near term, but potentially fewer impacts on medium- and long-term fundamentals and potential in Armenia. Moreover, while larger and better-established startups and firms could be expected to weather the storm (given better capitalization and longer-term service contracts), less competitive small- and medium-sized firms could face greater challenges in the near term. Second, given the role of foreign financial and human capital inflows in 2022-23 in driving growth in the tech sector, one important risk going forward is that the sector remains somewhat vulnerable to their potential outflows reflecting their cyclical (temporarily beneficial macro environment) rather than long-term motives (beneficial business environment). Hence, a gradual adjustment of the positive cyclical factors toward a more equilibrium state might be accompanied with respective slowdown in the domestic IT sector. Finally, over a medium- and long-term horizon, perhaps the greatest risk to the sector's outlook stems from intra-sectoral restructuring driven by the development and growing adoption of artificial intelligence (AI). On the one hand, these trends could result in a restructuring of labor demand in the sector, with far less need for relatively lower-skilled service work that could, hypothetically, be replaced by AI, and greater demand for AI-related skills. At the same time, for innovative, cutting-edge startups that rely on AI technologies as an essential part of their business model (including several major Armenian startups) applied and generative AI could create new business opportunities going forward. One possible scenario for the sector's future development is that smaller, less innovative firms and employees could become obsolete and replaced by AI, while more innovative firms that embrace and adopt AI in their business models find new opportunities for growth and expansion.

Figure B.2.1: Labor and Capital Flows

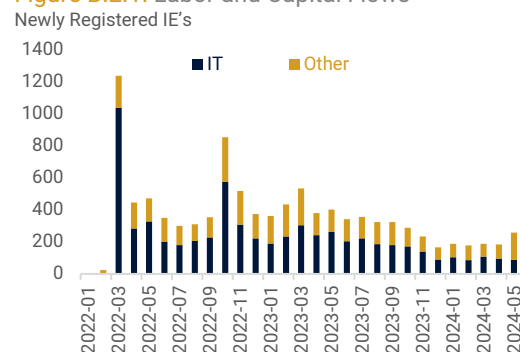


Figure B.2.2: Output and Real Growth of ITC sector

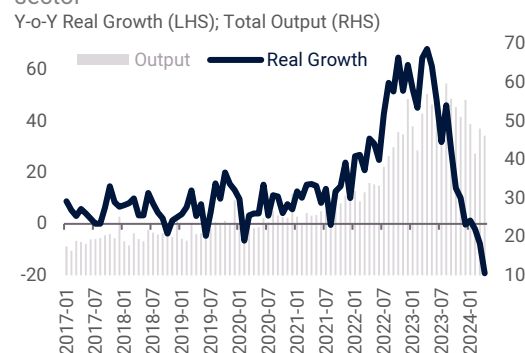


Figure B.2.3: Distribution of Armenian Tech Companies by Primary Service

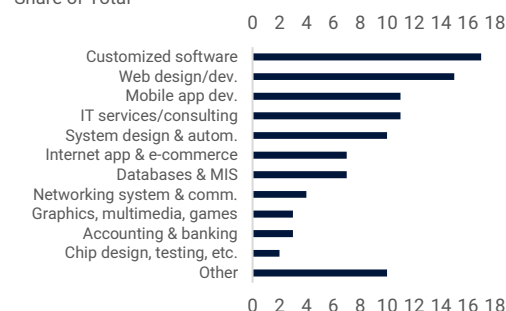
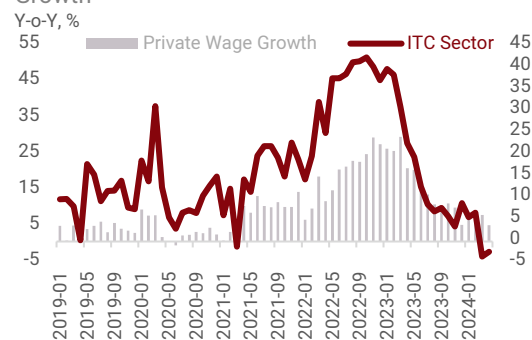


Figure B.2.4: Total Private and ITC Sector Wage Growth



Source: Statistical Committee of the Republic of Armenia; CBA; CBA staff estimates

C. Labor Market and Inflation

Unemployment

The unemployment rate (derived from SCRA household surveys) continues to remain at historically low levels, standing at 13.1% in 2023Q4 (figure 3.C.1), reflecting relatively hot labor market conditions. The number of registered employees (based on State Revenue Committee data), meanwhile, has continued to increase, which could be interpreted as reflecting sufficient labor supply in the market that could contribute to a softening of inflationary pressures from the labor market.

In this context, possible further increases in labor supply could continue to soften labor market conditions, gradually weakening inflationary forces stemming from the labor market over a medium and long term horizon. Against this background, questions surround the potential for a continued inflow of migrant workers to the Armenian labor market; the scale and pace of the integration of forcibly displaced persons from Nagorno-Karabakh in the Armenian labor market; as well as slowing flows of Armenian labor migrants to Russia and their greater participation in the domestic labor market. In particular, the continued inflow of migrant workers from India may have some sectoral impacts on the labor market (particularly in sectors facing understaffing, such as construction, services, textiles, etc.). Wage gaps between Armenia and India (which have widened considerably since 2021) are an important catalyst for further flows of migrant workers (Figure 3.C.2). At the same time, the net inflow of Indian migrant workers has somewhat slowed in Q1 2024, which could be interpreted either as a seasonal pattern, or as an early indicator of a trend deceleration in labor flows. The key uncertainty relates to whether these migration flows are permanent or cyclical, which has the risk of reversing if the positive domestic demand cycle ends, thus suggesting a lower impact on long-term potential output. Additionally, the continued narrowing wage gap between Armenia and Russia (especially in the construction sector) could cause flows of Armenian migrant workers to Russia to slow, which would have a positive effect on expanding labor supply domestically as well as improving potential output to some extent (Figure 3.C.3). One interpretation of the meaningful decline in remittances from Russia in recent months (Figure 3.B.5) could be that this already reflects slowing trends in flows of Armenian migrant workers. At the same time, the integration of displaced persons from Nagorno-Karabakh in the economy could have positive impacts on labor supply and potential growth. In the short term, this could lead to a modest increase in unemployment. However, in the medium to long term, positive impacts on potential GDP growth through increased labor supply and capital accumulation would be expected.¹ Such a scenario would result in a moderation of inflationary pressures stemming from the labor market. Here, the key uncertainty relates to the pace of their integration and their long-term plans for staying in Armenia.

¹ As of March 31, 2024, 13,400 forcibly displaced persons have obtained employment in Armenia.

Despite Historically Low Rate of Unemployment, Growth in Labor Supply Continues to Contribute to Some Softening in Wage Pressures

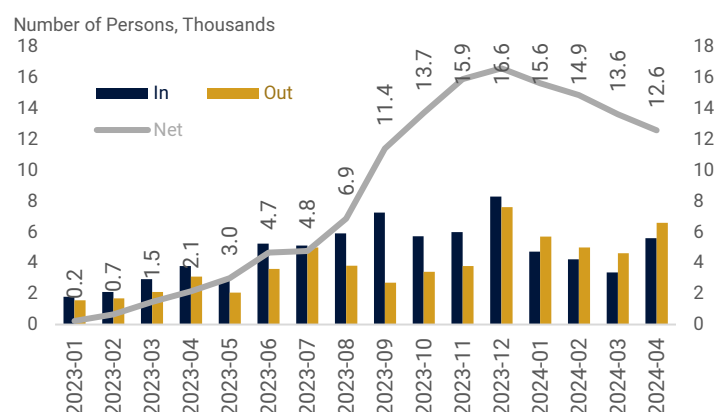
Figure 3.C.1: Unemployment Rate, Armenia



Source: Statistical Committee of the Republic of Armenia

Net Inflow of Indian Citizens Remains at High Levels, Despite Uncertainty Surrounding Future Trends

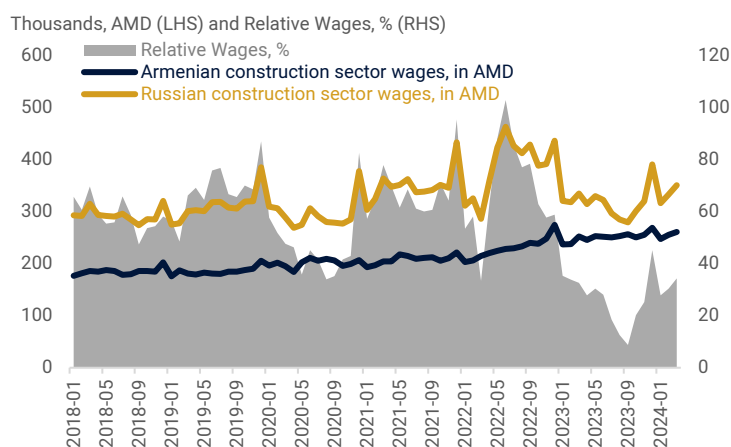
Figure 3.C.2: Armenian Border Crossings by Indian Residents



Source: Statistical Committee of the Republic of Armenia; CBA

Sustained Narrowing of Gap between Construction Wages in Armenia and Russia Could Impact Flows of Seasonal Migrant Workers from Armenia to Russia

Figure 3.C.3: Construction Wages in Russia and Armenia



Source: Rosstat; Statistical Committee of the Republic of Armenia; CB

Wage Growth

In the context of continued strong growth, labor demand and wage growth both continued to persist at high levels, with private wage growth standing at 7.3% Y-o-Y in Q1 2024 and 4.5% Y-o-Y in April 2024 (Figure 3.C.4). Nevertheless, the growth in productivity, labor supply, and employment in recent quarters has continued to contribute to weakening inflationary pressures from the labor market, though signals from the labor market are somewhat inconsistent. While wage growth in financial and insurance services was very robust (on the back of strong economic activity) and contributed meaningfully to overall private wage growth, wage growth in many other sectors has continued to adjust downward. Overall, while private wage growth has lost some momentum in the fourth quarter, wage growth still remains above other measures of inflation, which could serve as a source of additional underlying inflationary pressures.

Inflation

In Q1 2024, the inflationary environment continued to remain subdued (0.3% Y-o-Y in May 2024), primarily driven by weakened pressures coming from the external sector, the impact of the monetary policy implemented in recent years, and some deceleration of aggregate demand. External and domestic demand-driven services inflation also continued to soften. On the other hand, still higher domestic demand, coupled with pressures coming from the labor market, may continue to pose some demand-driven inflationary risks. A minor source of potential upward pressures includes revisions to the tax code (namely excise tax, taxi services tax, etc.) and increases in public transport fares in Yerevan in September 2024. However, their overall effect on inflation would be limited (max. one-time effect of 0.5 p.p.), given their relatively small share in the consumer basket. Upward risks to oil prices, as well as slight M-o-M upward movements in food prices in recent months, could cause imported deflationary trends to weaken considerably or reverse.

Core inflation, which excludes seasonal food and regulated services, has stayed in negative territory, at -0.5%, Y-o-Y in April 2024. This largely reflects declines in imported food products (e.g. bread, oils & fats, sugar, etc.). Meanwhile, Non-Traded Sticky Price Inflation (NTSPI) remained relatively stable in April 2024, at 3.0% Y-o-Y. The uptick in momentum observed in Q4 2023, driven by high demand for residential rent and other non-tradeable sticky services, has gradually faded away in Q1 2024, suggesting that upward pressures on sticky prices have largely dissipated. At the same time, inflation for services that are highly exposed to external demand, such as air transport, restaurants, hotels, and recreation and culture, has meaningfully softened. These developments could give credence to arguments that excess demand pressures have largely dissipated. Against this background, third-party projections of inflation through the rest of 2024, including the IMF and surveys of market participants, suggest headline inflation in the near-term is likely to remain at or below target (Table 3.C.1).

Increases in Labor Supply and Employment Continue to Contribute to Weakening Inflationary Pressures, though Signals from the Labor Market are Somewhat Incongruous

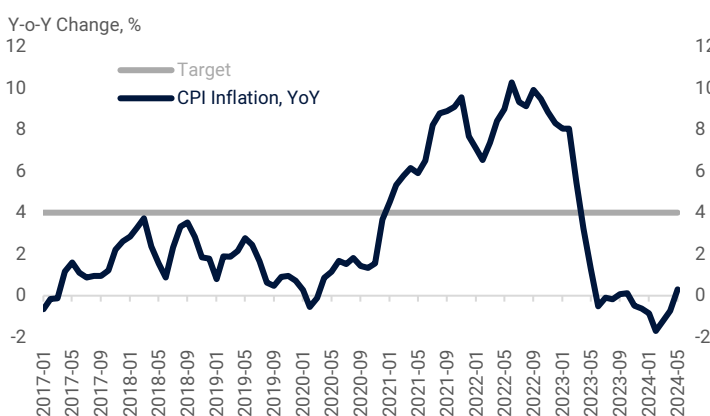
Figure 3.C.4: Nominal Private Wage Growth, Armenia



Source: Statistical Committee of the Republic of Armenia

Deflationary Environment in Armenia Persists, Given Deflationary Impacts from the External Sector as well as Softening in Domestic and External Demand-Driven Services Inflation

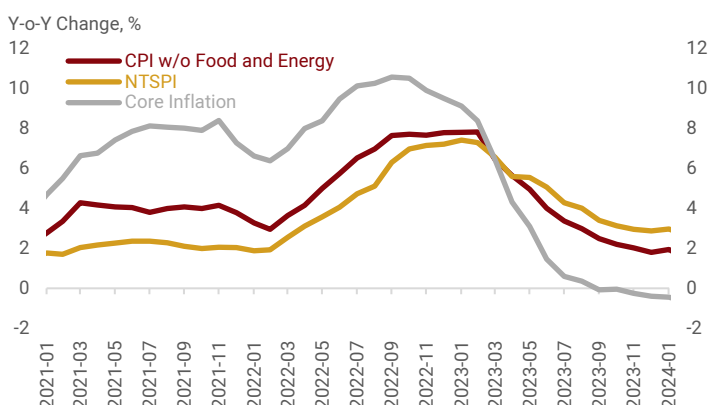
Figure 3.C.5: Y-o-Y CPI Inflation and the Target, Armenia



Source: Statistical Committee of the Republic of Armenia, CBA

Non-Traded Sticky Prices have Largely Stabilized

Figure 3.C.6: Underlying Inflation Measures, Armenia



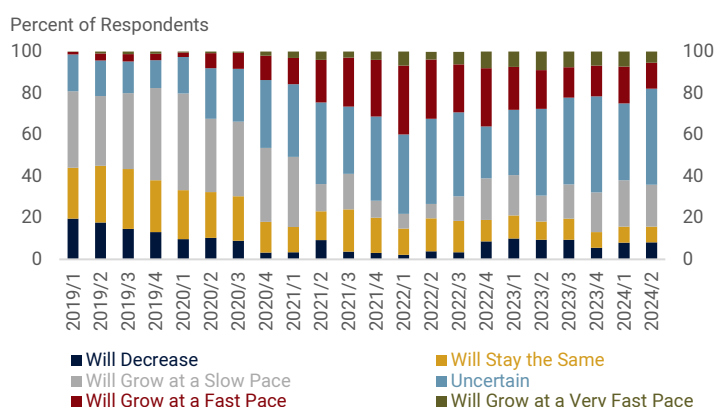
Source: Statistical Committee of the Republic of Armenia, CBA

Inflation Expectations

The household survey on inflation expectations, conducted by the CBA, suggests that relative to prior quarters, fewer households in Q2 2024 expect inflation to grow at a fast or very fast pace, which is in line with the broader disinflationary trend expressed in headline CPI numbers. Similarly, compared to the prior quarter, a roughly even share of households expects inflation to remain stable or grow at a slow pace. However, uncertainty about inflation remains broadly elevated. This could reflect public perceptions of inflation staying elevated for certain products even as overall headline inflation is well below target. Moreover, while the overall trend in the Q2 survey shows high inflation expectations continuing to recede, inflation expectations as a whole still remain broadly elevated relative to where they stood before the 2021-2022 inflationary period, suggesting that expectations of future inflation have been much slower to adjust to persistently low falling headline inflation numbers.

Fewer Respondents Expect Higher Inflation than in the Past, but Uncertainty Remains Elevated

Figure 3.C.7: Survey on Households' Inflation Expectations, Armenia



Source: CBA

D. Financial Markets

Market Expectations of Policy Rates

According to the latest survey conducted by the CBA among financial market participants (including commercial banks, institutional investors, asset managers, and others) as of June 7, 2024, market participants on average expect the CBA to continue gradually decreasing the policy rate over the course of the next eight decisions in line with the expected macroeconomic outlook. The key risks and issues that respondents emphasized as possible uncertainties related to these projections have served as an important input into the taxonomy of scenarios presented in Section E.

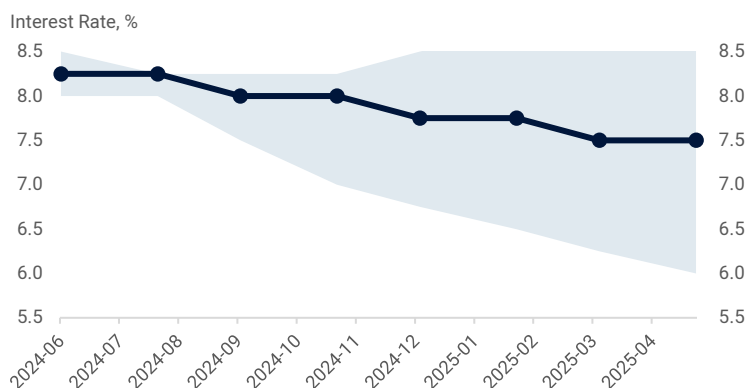
According to market expectations derived from the yield curve, bond markets reflect slightly higher interest rate expectations compared to surveys over the one-year horizon. Overall, since the January policy rate decision, the longer-term edge of the yield curve (particularly one-year and longer) has shifted downward considerably, while in recent months, the shorter-term portion of the curve has also commensurately adjusted downwards. The downward movement in the yield curve may reflect expectations about the gradual normalization and decline of the policy rate towards the long-run neutral level (see Figure 3.D.3), gradually declining inflation expectations (see Figure 3.C.7), and a potentially lower country risk premium (see Figure 3.D.6).

Neutral Interest Rate

Uncertainty persists around equilibrium rates, prompting questions about the distance of the policy rate from the level at which it is neither contractionary nor expansionary. Based on recent months' downward shifts in the yield curve (Figure 3.D.2), one interpretation could center on a possibly lower country risk premium, which could be reflected in lower medium-term neutral real rates. On the other hand, elevated long term interest rates globally suggest that underlying equilibrium interest rates in the world might be higher, thus necessitating a revision in neutral rates in emerging market economies. There is considerable diversity in views and uncertainty surrounding neutral rates globally and particularly in the United States (see Box 2). At the same time, growth of potential and export capacities in Armenia in recent years and appreciation of real effective exchange rate might suggest a lower underlying interest rate in domestic economy, as investors also consider long-term domestic currency dynamics when making cross-border investment decisions. For a further discussion about the Neutral Interest Rate in Armenia, refer to Box 3 on the following page.

Most Market Participants Expect Gradual Declines in Policy Rate over the Next Year

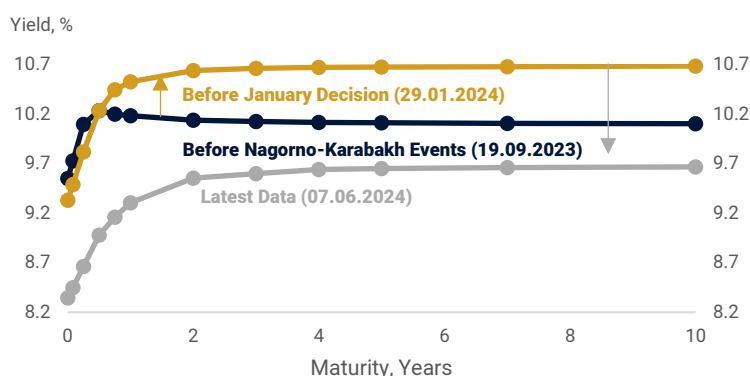
Figure 3.D.1: Financial Market Participants' Expectations of the CBA Policy Rate According to June 7, 2024 CBA Survey



Source: CBA

Both Short- and Long-Term Bond Yields Continue to Decline

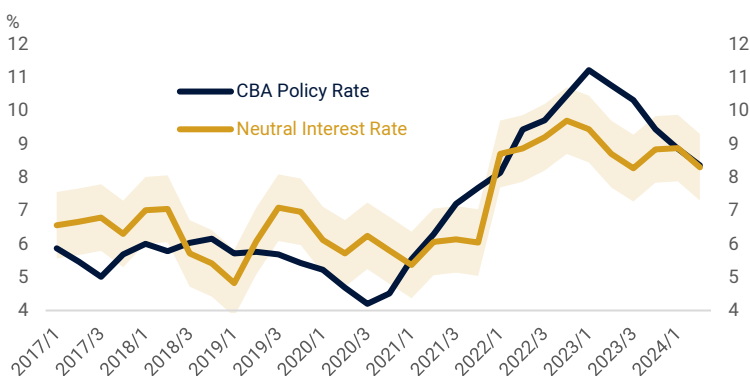
Figure 3.D.2: Yield Curve Dynamics, Armenia



Source: CBA

How Tight are Monetary Conditions?

Figure 3.D.3: CBA Policy Rate and Underlying Equilibrium Rate



Source: CBA

Box 3. Neutral Interest Rate in Armenia

Box 2 introduced the considerable uncertainty that surrounds the neutral interest rate (also referred to as the equilibrium interest rate) in the United States, and its implications for economies globally. The neutral interest rate refers to the level of the interest rate that, in the absence of shocks, is consistent with a closed output gap and the target level of inflation, such that aggregate demand and aggregate supply conditions are in equilibrium. In the context of monetary policy, the policy stance is generally considered contractionary (expansionary) when the key policy rate is above (below) the neutral rate. Just as with variables like potential output and the natural rate of unemployment, the neutral interest rate is an unobservable variable—meaning that policymakers cannot directly observe or quantify it with a degree of certainty—and as a result, there is always fundamental uncertainty surrounding estimates of the neutral rate at any point in time. Further complicating this uncertainty are the nonlinearities that can arise from policy errors associated with incorrectly estimating the neutral rate. While a slight over- or under-estimation of the neutral rate may not have significant policy implications, vast misjudgments in the level of the neutral rate may have significant and nonlinear policy implications, steering the economy toward “dark corners” of de-anchored inflation expectations or a low inflation trap.

In Armenia, as with other small, open, emerging economies, the neutral interest rate can be affected by a number of factors driven by domestic and global economic fundamentals, which are both short and long term in nature, and around which there also exists considerable uncertainty. Moreover, due to the difficulty associated with quantifying each of these factors with a degree of certain exactitude, it becomes particularly important to understand the dynamics impacting their movement and the factors that underlie them.

- **Global Neutral Real Interest Rate:** One of the most important factors influencing the neutral rate in Armenia is the neutral rate globally, and specifically in the United States, considering its central role in the global economy in terms of financial flows, capital markets, and the impact and role of the US dollar in global markets. Box 2 explored the key issues and uncertainties related to the US equilibrium interest rate, and some of the factors that could inform a reappraisal of its level. Since Covid, there have been considerable debates and differing interpretations about the level of the neutral rate in the US, with many suggesting that it may be materially higher than what is included in the Fed’s recent dot plots. Considering capital mobility and Armenia’s orientation as a small open economy, upward reassessments of the US neutral rate would therefore be likely to require similar movements in the neutral rate in Armenia and other countries, reflecting the underlying forces for global capital flows into these countries.
- **Real Exchange Rate Trend Appreciation:** As an open economy, in Armenia, the neutral interest rate is also affected by real exchange rate trend appreciation, which reflects developments in economic fundamentals, including growth in export capacities. The key uncertainty on this front relates to the extent to which the appreciation of the dram in recent years reflects trend (growth in long-term productive capacities) versus cyclical (demand-related factors) appreciation. Higher trend appreciation in the exchange rate would support a lower neutral rate, as investors would require lower compensation for domestic interest rates.
- **Productivity Growth:** Conceptually, growth in productivity results in higher marginal returns on capital, thereby driving greater investment demand and increases in the equilibrium rate. In Armenia, developments in recent years (including the emergence of highly productive sectors such as tech, described in Box 2; structural shifts in the economy from less productive sectors such as agriculture to more productive sectors such as manufacturing and some services; as well as greater fiscal performance with respect to capital expenditures that can increase the marginal return on capital) attest to growth in productivity that could result in relatively higher neutral rates. However, considering how exportable these sectors are, this could be compensated by appreciation in real exchange rate trend expectations, as discussed in the previous point.
- **Country Risk Premium:** Any changes to the country risk premium would impact the equilibrium interest rate in Armenia, as investors would require higher (lower) compensation for higher (lower) risk. As discussed in this chapter (see Figure 3.D.6), the country risk premium increased following the September 2023 events in Nagorno-Karabakh, but has since continued to steadily adjust downward. Of course, the country risk premium remains particularly sensitive to geopolitical developments, both locally and regionally, and worsening or easing tensions in this regard may thus have implications on neutral interest rates. At the same time, gradually declining government debt (as a share of GDP) has helped soften the country risk premium, thus exerting downward pressure on the neutral rate.
- **Longer-Term Trends and Developments:** Over a long term horizon, a number of other factors may also impact the equilibrium interest rate. These include factors such as demographic shifts, where an increasingly aging population with higher life expectancy may motivate a higher savings rate prompting downward pressure on the neutral rate. Additionally, longer-term changes in patterns of consumption—known as the propensity for intertemporal substitution of consumption, where people prefer to consume less and save more today—particularly considering growing incomes and wealth, may similarly push longer-term decreases in the neutral rate.
- **Inflation Expectations:** The nominal neutral interest rate represents the real neutral interest rate (influenced by the above factors) plus expectations of future inflation. In recent years, long-term inflation expectations have become better anchored to the inflation target, reflecting greater macroeconomic stability and stronger credibility to withstand shocks. Lower inflation expectations would naturally contribute to lower nominal real rates.

Using this conceptual framework, the real neutral interest rate in Armenia is estimated to be between 7.3 and 9.3%, with a modal estimate of 8.3%. The range represents plausible interpretations of the uncertainties noted above, particularly with respect to the level of global equilibrium rates, the extent of trend versus cyclical appreciation in the exchange rate, the strength of productivity growth, and continued questions about the country risk premium.

Bank Lending Conditions

CBA surveys show that the index of commercial bank lending conditions continued to follow a net easing trend across all types of loans, while interest rates remain relatively stable, not yet showing signs of easing: The funds attracted and provided by commercial banks continued to grow in Q1 2024, likely reflecting high economic activity in the real sector. The structure of lending has somewhat shifted, with growth concentrated in household loans, while the stock of business loans remained unchanged versus the prior quarter. The latter could be driven by delays in investment activity due to regional geopolitical uncertainty. On the other hand, taking into account growth in businesses' deposits, weaker demand for business loans could be indicative of a positive businesses environment and high profits and liquidity. Interest rates for household loans have persisted at relatively high levels, reflecting strong demand for consumer loans and mortgages. Additionally, considering income growth and a relatively lower debt burden (relative to incomes) in the private sector could serve to drive additional consumer confidence, which could motivate further growth in credit.

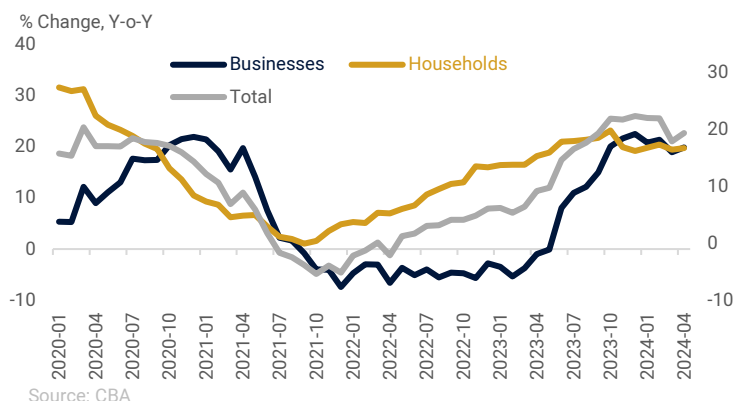
Nominal Exchange Rate

In the first half of 2024, the dram has held relatively steady versus the US dollar, Euro, and Ruble (Figure 3.D.5). However, very modest appreciation of the dram has been observed relative to key trading partner country currencies in recent weeks (e.g. appreciation of approx. 4% versus USD since mid-March). The recent slight appreciation may be driven by a number of factors, which could include robust growth in exports and strong trade activity in Q2, continued downward movements in the country risk premium (Figure 3.D.6), as well as less significant, temporary factors. The key risks and uncertainties include the possibility of sustained growth in exports and trade, weaker imports of consumption goods, as well as stronger external demand for domestic services (which, though softened, are still at high levels), to generate appreciation pressures. On the other hand, these trends could be offset by the possibility of domestic demand proving to be stronger, with greater domestic consumption (driven by accumulated savings and room for growth in consumer lending) driving higher imports.

The country risk premium (Figure 3.D.6; estimated as the difference between the yield on Armenian Eurobonds maturing in 2029 and a benchmark risk-free interest rate with the same maturity) continued to steadily decline in Q2 2024, following the increases observed in September and October of 2023 in response to the events in Nagorno-Karabakh. The stabilization and gradual reduction in the risk premium partly mirrors overall trends in emerging markets, but also reflects factors specific to the Armenian economy, including solid macroeconomic and fiscal fundamentals. At the same time, sustained geopolitical uncertainty both locally and regionally poses upside risks to the country risk premium, with potential implications on financial markets and capital flows.

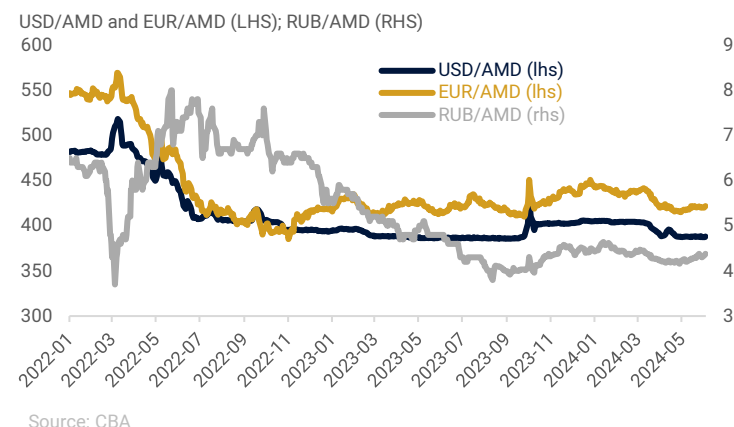
Demand for Consumer Loans Continue to Grow

Figure 3.D.4: Change in Total Loans Provided by Commercial Banks to Households and Businesses, Armenia



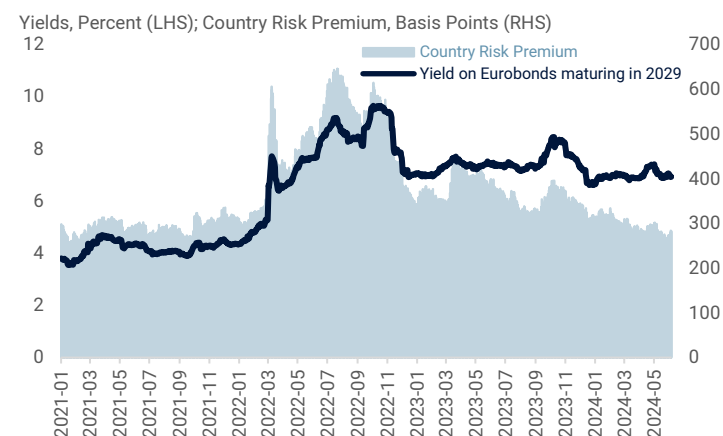
Significant Appreciation of AMD since mid-2022

Figure 3.D.5: Nominal Exchange Rate for AMD against USD, EUR and RUB (Lower Value means Stronger Dram)



While the Country Risk Premium Continues to Decline, Uncertainty Regarding the Outlook for Regional Geopolitical Tensions Still Poses Upside Risks, with Implications on Financial Markets

Figure 3.D.6: Yield on Armenian Eurobonds Maturing in 2029 and Estimated Country Risk Premium



Box 4. Scenarios-Based Forward Guidance: The Role of Market Expectations

Approaching monetary policy through the lens of risk management under FPAS Mark II requires a different approach to the scenario-building process. Rather than treating its own central projections as the best piece of information and forcing market participants to coalesce around this singular view of unfolding economic conditions, the CBA instead utilizes market expectations for the central bank policy rate as a starting point for policy deliberations. Market expectations, by design, contain significant information about market views on current economic developments and possible behavior of monetary policy in the future economic environment.

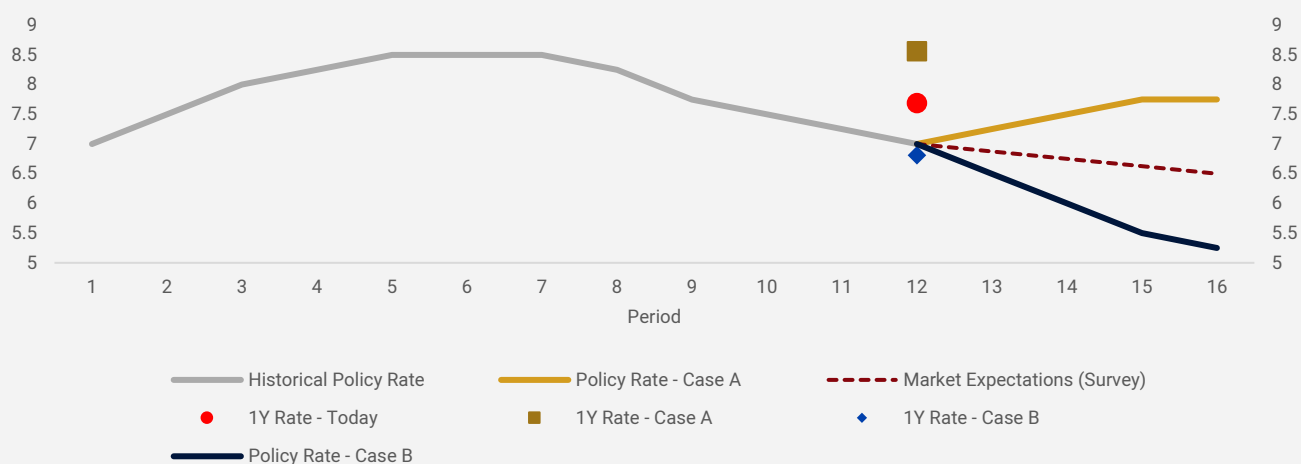
Before the development of flexible-inflation-targeting approaches, monetary policy communication predominantly focused on direct actions like the setting of short-term policy rates. However, short-term rates are not particularly relevant for most people; longer-term interest rates tend to hold greater significance as these are the types of maturities at which households and businesses typically borrow and lend. The two principal components that make up longer-term rates are the term and risk premiums and the expected path of the policy rate. Of these two components, the expected path of the policy rate is most significant. As inflation targeting regimes were adopted, transparency in communicating a central bank's perspective and rationale became a necessary precondition for the regime's efficacy. With greater central bank clarity, financial markets gain the agility to recalibrate efficiently between policy decisions. Importantly, on decision dates, policymakers do not merely set the current policy rate; they also provide insights into their monetary policy decisions, including how the policy rate may change in the future based on different narratives, scenarios, and assumptions.

In advanced economies with well-developed financial markets (including secondary bond markets), gleaned market expectations of the future path of the policy rate is a relatively straightforward task. For countries with less developed financial markets that lack options markets, such as Armenia, the task is less straightforward. It requires synthesizing multiple approaches, without resorting to "over-modeling" and attempting to ascribe a false degree of precision that is based on unreliable or incomplete information.

Market Expectations of the Policy Rate: We synthesize two approaches. First, we take as a starting point information from the spot market for shorter-term bonds (one year and less) and perfect foresight-based inferences about the term structure of the yield curve. We recognize that data from the spot market is imperfect and cannot paint a complete (or always accurate) picture about market expectations of the policy rate. For example, bond markets experience high term premium volatility, face frequent liquidity and other shocks, and so on, making it difficult to perfectly assess which price movements result from changes in expectations versus other factors. Therefore, we dovetail this approach with a high-frequency survey of policy rate expectations among financial markets (including commercial banks, institutional investors, asset managers, and others). Of course, when considered in isolation, survey results are also imperfect, in the sense that they do not always align with what is actually priced in markets. Therefore, as a rule, we evaluate both survey- and bond market-based measures in order to develop a rich and sensible understanding of market expectations for the future path of the policy rate, without underselling the fundamental uncertainty and room for a range of interpretations.

Scenarios-Based Forward Guidance: To graphically illustrate our case scenarios relative to market expectations, we rely on a simplified approach using the one-year bond rate (see Figure B.4.1). The black line represents the CBA's refinancing rate historically. The one-year bond rate at the time of the decision is depicted with a red dot, representing the market's assessment of the most probable trajectory of the average policy rate over the course of the coming 12 months, plus some compensation for uncertainty regarding inflation and policy rates over this horizon (term premium). This provides a reference point around which the illustrative Case A (orange line) and Case B (blue line) scenarios for the policy rate are constructed. Additionally, we show the corresponding one-year bond rates that would be consistent with the Case A scenario (light orange dot) and Case B scenario (light blue dot) materializing. Finally, the average of the financial market survey responses is shown with the dotted gray line.

Figure B.3.1: Hypothetical Example of Case Scenarios and Market Expectations under FPAS Mark II
Interest Rate, %



Source: CBA

E. Taxonomy of Scenarios

Purpose and Structure of the Taxonomy

The purpose of this taxonomy is to provide a structured assessment of the different types of risks and shocks that can affect the Armenian economy and describe their impact on inflation and economic environment in Armenia, as well as loosely illustrate implied monetary policy reactions by the CBA. Having a structured framework for classifying these risks allows the reader to more effectively understand the wide range of information, ideas, and opinions that are held by various stakeholders, from the Board and Staff of the CBA to financial markets and the public. To allow the diversity of viewpoints among these various groups to flourish and to facilitate the development and communication of better policy decisions, it is imperative to structure these views within a cohesive structure. The taxonomy is intended to provide a concise summary of the Staff's views about the totality of all the policy-relevant risks held by various stakeholders, which are most policy-relevant for Armenia.

Table E.1: Taxonomy Structure

Case A-Type Considerations	Case B-Type Considerations
Expansionary Demand: Shocks result in aggregate demand rising more than aggregate supply, increasing underlying inflation. This requires an increase in the policy rate path that is sufficiently aggressive to anchor inflation and inflation expectations. Complications: credibility is fragile Output + Inflation +	Contractionary Demand: Shocks result in aggregate demand rising less than aggregate supply, decreasing underlying inflation. This requires a decrease in the policy rate path that is sufficiently aggressive to anchor inflation and inflation expectations. Complications: ELB, stuck in low inflation trap Output - Inflation -
Contractionary Supply: Nasty stagflationary shocks that require an aggressive upward adjustment in the expected path of the policy rate, resulting in a significant short-run tradeoff between inflation and other real objectives (e.g., unemployment) Complications: Hard to hit the wounded economy Output - Inflation +	Expansionary Supply: Favorable supply shock(s) reduce inflation toward the target and results in higher growth as well as lower interest rates; is a policymaker's dream. Complications: can be risky if this environment is extrapolated into the future Output + Inflation -

The taxonomy is classified into those that can have Case A-type (expansionary demand, contractionary supply) and Case B-type (contractionary demand, expansionary supply) considerations. Although the classification of shocks can be done in different ways across different features, the one presented here is based on a typical distinction between supply and demand side forces and is particularly useful from policymakers' point of view as it provides a framework for analyzing the source of inflationary pressures and potential risks to the economy. By understanding the nature and magnitude of different types of shocks, policymakers can then design appropriate monetary policy responses to mitigate the negative impact of adverse shocks and leverage the benefits of positive shocks.

Taxonomy of Scenarios: Q2 2024

Table E.2: Taxonomy of Scenarios: Q2 2024

Case A-Type Considerations	Case B-Type Considerations
Expansionary Demand - Amid sustained and robust demand-driven growth; an overheated labor market; and the potential for sustained supply shocks in the context of geopolitical uncertainties and risks of de-globalization, the Fed would maintain a much tighter (than what is currently priced in markets) policy stance for a longer period of time in order to bring inflation sustainably back to target. This would result in tighter global financial conditions, with implications for financial flows to emerging countries, including Armenia. - Continued conflict between Russia and Ukraine and sustained sanctions against Russia poses risks for further flows of international visitors to Armenia, representing new waves of external demand for Armenian goods and services that could generate excess demand and inflationary pressures in the Armenian economy. - Sustained border tensions, growth in regional geopolitical tensions, and uncertainty regarding future geopolitical developments in the region serve as a source of upside risk, with potential implications including the upward reassessment of the country premium, greater volatility in financial markets, de-anchoring of inflation expectations, and potential capital and labor outflows. While the latter would primarily have inflationary impacts, declines in aggregate demand could serve as a counterweight. - Sustained excess demand scenarios: - Above-potential economic growth suggests that generalized excess demand conditions persist and may be growing. - Private consumption (and resulting inflationary pressures) could accelerate on the back of accumulated private savings, the continued high growth of consumer loans, strong wage growth, and income growth driven by positive developments in the export sector. The potential for a more expansionary fiscal policy stance, driven by risks of revenue underperformance and increases in current expenditures to finance social support programs. <i>(Continued on the following page)</i>	Contractionary Demand - Concerns about a weak economic outlook translating to risks of a serious contraction persist in the global economy, especially in the European Union and China. If existing problems in the Chinese real estate sector were to cascade into broader financial problems and a deep economic recession, it would result in a sharp contraction in global demand, seriously hurting demand for oil and commodities. Considering China's position in the global economy, this could result in a substantial drop in oil and commodity prices and sharply impact global demand (Case Y-type scenario). - While growth in Russia remains at high levels, new Western sanctions nevertheless pose concerns to the sustainability of future growth. In this context, any potential sharp slowdown in economic activity could have negative implications on Armenia, including slowdowns in inflows of remittances to Armenia as well as general contractionary impacts on external demand for goods and services in the Armenian economy. - Political developments in Georgia, as well as overall regional geopolitical uncertainty, could lead to sharp slowdowns in tourists' inflow to the region and to Armenia. - Continued overheating in the real estate market poses risks to the growth outlook in the construction sector as well as real estate prices, with the potential for deceleration in the construction sector to have negative spillovers on other sectors of the economy, leading to deceleration and domestic demand-driven disinflation. - Non-widespread and non-inclusive economic growth—reflected in highly-concentrated income in specific sectors—in parallel with relatively muted private consumption and a low inflationary environment, drive uncertainty about domestic demand conditions in Armenia and pose risks that a negative demand environment could emerge, with implications for sustained deflationary pressures in the medium term - Headline inflation remains persistently below the target, which could lead to a sustained decline in long-term inflation expectations and contribute to restrained consumption patterns. - Enhanced tax revenue collection in the face of relative increase of capital expenditures share in the total government expenditure could result in fiscal policy having much more restrictive impacts on aggregate demand. <i>(Continued on the following page)</i>

Case A-Type Considerations (continued)	Case B-Type Considerations (continued)
	Contractionary Demand (continued) • Uncertainty about the structure of economic growth raises questions about the long-term outlook of the Armenian economy. In particular, recent high growth has been largely concentrated in a few specific sectors, but there is uncertainty about the potential development in sectors that contribute to the overall productive capacity of the economy. If these types of trends persist into the future, this would testify to the tightness of financial conditions in the economy and the relatively restrained state of long-term demand factors, which is rife with deflationary risks over the medium-term. • Uncertainty about a potentially lower domestic neutral rate, resulting in relatively tight domestic monetary and fiscal conditions (including an appreciated real exchange rate) could potentially be having a restrictive effect on the domestic economy in terms of investments, labor inflows, external demand for goods and services, as well as the medium-term outlook for export-oriented sectors. This could contribute to more muted demand and a low inflationary environment persisting for longer.
Contractionary Supply • The potential for further escalation and worsening of the Middle East and Red Sea crises creates risk in terms of disrupting global supply chains (including oil extraction and shipping) that can feed through to higher global inflation. This could result in, on the one hand, a tighter-than-expected policy stance in advanced economies, and on the other hand, higher prices being transmitted to the domestic economy through the imported goods channel. • External trade-driven growth contributes to the sustained appreciation pressure on the dram. Any sharp reversal of such trends and slowdown in growth could generate inflationary risks stemming from the potential for significant financial outflows and increased volatility in financial markets. • Adverse weather conditions in Armenia may have been exceedingly costly for the agricultural sector, which poses inflationary risks for seasonal food items. If, as a starting point, the inflation expectations environment proves to be fragile, this food price shock could create upward drifts in overall inflation expectations. • Risks of outflows of foreign migrant workers (primarily citizens of India), which could result in a tightening of labor market conditions in relevant sectors, which could result in new inflationary pressures from the labor market that could ripple throughout the economy.	Expansionary Supply • Growth in labor supply could bring the labor market back to equilibrium, generate excess supply, and contribute to declines in wages, meaningfully weakening inflationary pressures in the economy. This could be driven by a number of factors, including: ◦ a sharp reduction in Armenian migrant workers going abroad to Russia (given narrowing wage gaps between the two countries in key sectors, as well as the impacts of potential taxes on income earned abroad, which could push seasonal workers to participate in the Armenian labor market), ◦ a faster integration of forcibly-displaced persons from Nagorno-Karabakh, ◦ the sharp acceleration in wages in recent years, the reduction in the role of remittances, as well as the structure of economic growth (which has enabled the absorption of workers of all types of skill levels into the labor market) could facilitate those outside of the labor force to quickly integrate into the labor force, thus easing inflationary pressures. • Deflationary impacts from seasonal food would persist, driven by growing aggregate output due to the rising share of greenhouses; if accompanied by potential difficulties in exporting certain agricultural goods, this could have further deflationary impacts on the economy and complicate the inflation management problem.

Box 5. Market Reference Scenario

Under the CBA Monetary Policy Framework (FPAS Mark II), the CBA does not prepare baseline projections. Instead, we rely on information from financial market participants (including commercial banks, fund managers, institutional investors, and so on)—compiled through quarterly surveys—to develop a macro-consistent “market reference scenario (MRS).” This MRS, in many ways, serves a similar purpose as a traditional baseline projection, in the sense that it represents the market’s rough estimation of the “most likely future,” given the information available to market participants at a particular point in time. The MRS can serve as a substitute for the baseline for those external stakeholders (e.g. IFIs, fiscal authorities, and others) who rely on exogenously-provided projections when making their own planning decisions. Through the use of the MRS, the CBA provides the opportunity to markets to not only understand third-party forecasts of the “most likely” future, but also pay attention to those types of risks, uncertainties, and scenarios that can pose risks from the perspective of monetary policy and price stability (which are presented in the preceding Taxonomy). At the same time, this provides an opportunity to effectively communicate the logic and rationale behind CBA’s policy decisions under the prudent risk management approach.

Note: The CBA Macro Survey is conducted on a quarterly basis by the CBA. For the purposes of informing the Market Reference Scenario, participants are each asked to provide a macro-consistent scenario, including a qualitative description of the narrative underlying the scenario and associated Case A- and B-type risks, as well as accompanying quantitative 12-quarter-ahead projections for CPI inflation, real GDP growth, the CBA policy rate, and the nominal AMD/USD exchange rate. The Q1 2024 survey was carried out in March-April 2024 and featured responses from 18 commercial banks, 35 credit organizations, 8 insurance companies, 19 investment companies, and 1 fund manager.

Figure B.5.1: CPI Inflation

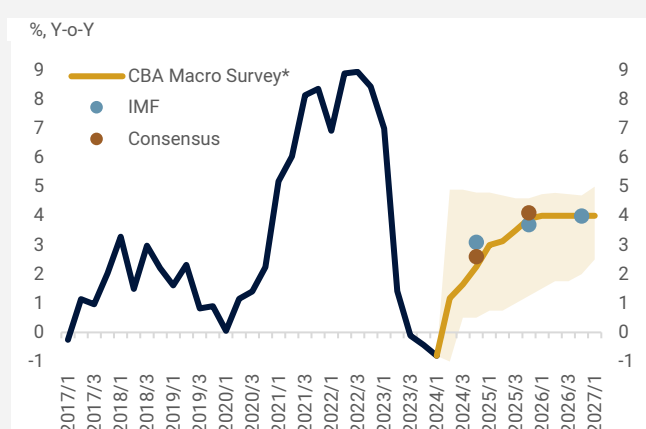


Figure B.5.3: Real GDP Growth Rate

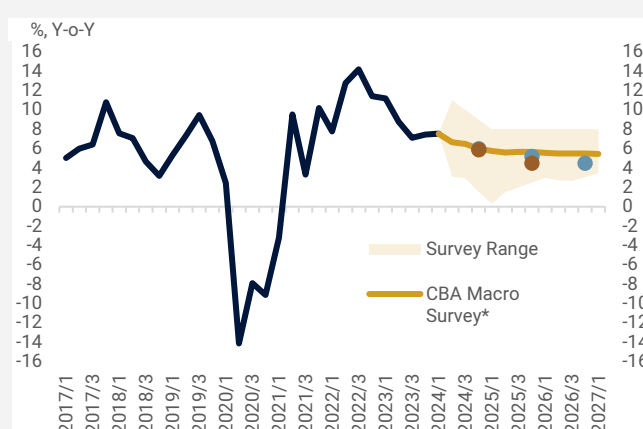


Figure B.5.2: CBA Policy Rate

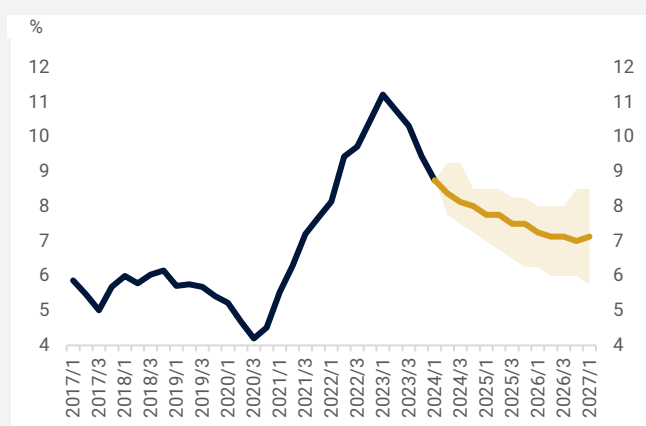
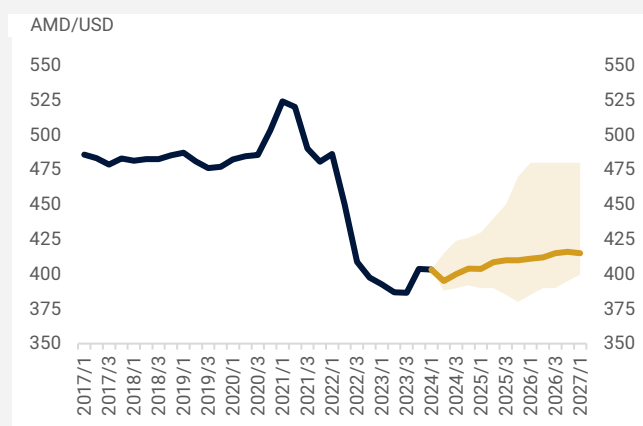


Figure B.5.4: Nominal AMD/USD Exchange Rate



* Note: CBA Macro Survey shown as average of survey responses (line) and range between min and max responses (shaded area).

Table B.5.1: Summary of Third-Party Projections

Source Date	IMF Apr-24	CBA Macro Survey Q1 24	Consensus May-24
GDP Growth (Annual Rate, %)			
2023 (Actual)		8.7	
2024	6.0	6.6	5.9
2025	5.2	5.7	4.5
2026	4.5	5.5	4.7
Inflation (Annual Rate, %)			
2023 (Actual)		-0.6	
2024	3.1	2.3	2.6
2025	3.7	3.9	4.1
2026	4.0	4.0	4.0

F. Monetary Policy Outlook

Case A: Interest Rates above Market Expectations

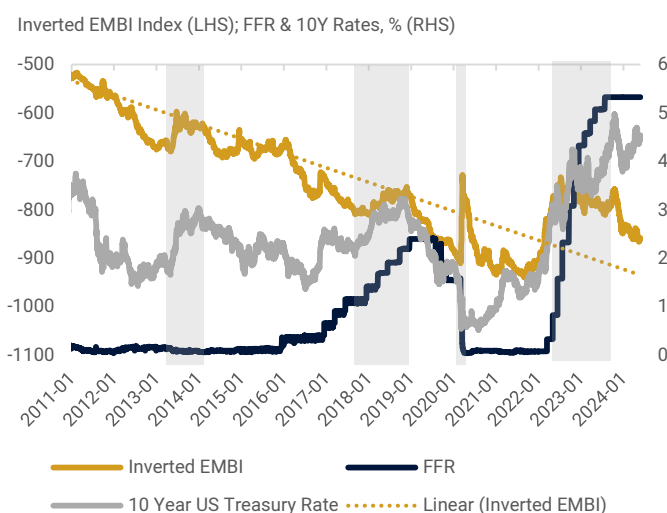
Sustained Inflationary Pressures from Advanced Economies, Driven by High Domestic Demand in the US and Potential Supply Disruptions in the Global Economy

The illustrative Case A scenario is partially motivated by the persistence of elevated demand conditions in the United States, which meaningfully complicate monetary authorities' efforts to find a sustainable path to the inflation target in the medium term. Despite the Fed's rate increases in recent quarters, which have been intended to moderate growth and curb inflation, the anticipated tightening in monetary conditions has not fully materialized in terms of its impact on financial conditions or the broader economy. Consumption continues to remain robust and serve as the major driver of above-potential growth. Labor market conditions are persistently tight, and despite mixed signals (such as somewhat slowing hiring and decreases in job openings), the still-elevated level of job openings, a stubbornly high job participation rate, and obstinate wage growth suggest that the labor market continues to generate meaningful upward pressures. In this context, inflation, particularly in sticky prices, has stayed persistently elevated and above target, complicating the Federal Reserve's task of sustainably achieving its price stability mandate in the medium term. Furthermore, equity and property markets continue to thrive, fueling robust consumption and domestic demand, contrary to what might be expected following monetary tightening. The persistently low BAA rate spread (reflecting the difference between the yield on BAA bonds and the 10-year Treasury bond) suggests an abundance of liquidity, which in turn may indicate that financial conditions remain looser than anticipated. These dynamics highlight the potential discrepancy between monetary policy intentions and actual financial conditions. Moreover, as discussed in Box 1, these complexities highlight the very real possibility that neutral rates in the US may be significantly higher than what the FOMC had initially estimated, and indeed, higher than even what financial market participants have priced into their expectations. The latter point is illustrated by the fact that the long portion of market expectations of the policy rate have shown volatility in recent months and have tended to shift downward in response to slightly positive, but still inconclusive, data releases.

Against this background of stubbornly elevated demand conditions and a potentially higher neutral rate, the illustrative Case A scenario is additionally motivated by concerns of persistent and worsening global supply shocks. Trends toward greater regionalization in the context of worsening global geopolitical tensions, which emerged post-GFC and have deepened since Covid, threaten a trajectory of sustained trade wars and supply shocks. The extensive package of tariffs on Chinese green technologies implemented by the US—and the potential for retaliatory actions to generate a deeper trade war—offers one example of these trends. Additionally, political uncertainty in the US points to the possibility of not only a worsening of these trends, but also, more expansionary fiscal policies and uncertainty about future immigration flows, with implications on the trajectory of labor market conditions.

This type of scenario would have Case A-type implications for emerging market economies, including Armenia, necessitating a cautiously higher medium-term path for the CBA policy rate than what market participants presently expect. First, persistently strong US demand and greater supply-side volatility (including the likelihood of greater volatility and higher prices for commodities) would result in greater external inflationary pressures for Armenia. Second, higher policy rates in the US (driven by strong aggregate demand conditions, increased term premium on long term interest rates or reappraisal of neutral interest rate assumptions there) could pose some risks to capital flows for EMEs including Armenia, though the extent of worst-case outcomes are mitigated by both the drivers of higher US policy rates as well as the relative strength in Armenian macroeconomic fundamentals. The primary risk is that a higher Fed Funds Rate could result in upward reappraisals in the risk premium for EMEs (Figure 3.F.1) and, absent strong policy responses, create preconditions for capital outflows from emerging economies. At the same time, the lack of significant accumulated imbalances in Armenia (whether in terms of debt levels/ratios, dollarization, MP credibility, etc.) would be expected to dampen the most adverse risks for Armenia in such a scenario. Nonetheless, the CBA policy rate path would likely still need to adopt a more conservative stance relative to current market expectations to ensure that the more dangerous types of nonlinearities—such as allowing depreciatory or inflationary pressures to result in an upward ratcheting of inflation expectations—do not materialize. In this context, a higher interest rate path compared to market expectations would reflect policymakers' strategy to be better prepared for potential shocks to the country risk premium. This approach aims to maintain favorable underlying economic conditions when facing these types of shocks and mitigate economic volatility by anchoring inflation expectations.

Figure 3.F.1: Yields for 10-Year US Treasury vs. EMBI



Source: FRED; Bloomberg

Case B: Interest Rates below Market Expectations

Emergence of a Negative Demand Environment in the Armenian Economy

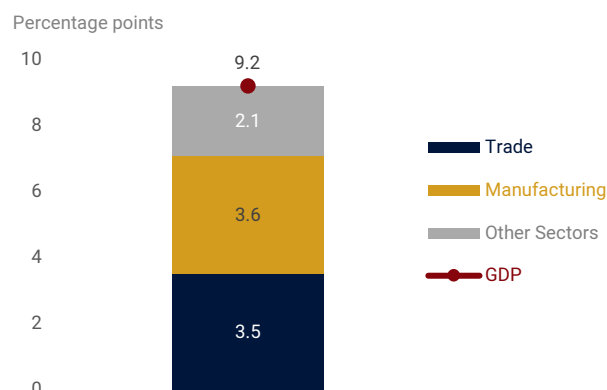
Economic growth in Armenia continues to remain above most estimates of long-term potential. At first glance, this may indicate signs of excess demand and growing inflationary pressures in the economy. However, a closer examination reveals that recent economic growth is not widespread and is strictly concentrated in a few sectors—namely, manufacturing and trade (Figure 3.F.2). Growth in trade has primarily been driven by high external trade turnover, reflecting new trade opportunities that emerged following the introduction of significant sanctions on Russia. Manufacturing growth, meanwhile, has mainly been due to sharp increases in jewelry production and exports. Excluding jewelry production and raw gold imports/exports, GDP growth in Q1 2024 would have comprised 3.8% rather than 9.2%, based on CBA estimates (Figure 3.F.3). The non-widespread nature of this recent economic growth raises questions about the state of the fundamentals that feed domestic demand conditions—including overall employment, wage growth, and widespread and equitable income growth—and about the overall strength of aggregate demand itself. At the same time, uncertainty persists regarding the relative position of sectors that reflect long-term potential, while certain specific industries, such as IT services and more traditional types of manufacturing, have experienced some declines in recent months. The persistence of such trends could point to a deepening of the uneven distribution of incomes in the economy, contributing to or reflecting relatively weak demand fundamentals. Over the medium term, these factors could pose risks of more persistent deflationary forces taking hold.

The illustrative Case B scenario is built upon the assumption that the deflationary environment in Armenia (Figure 3.C.5) could actually be reflective of constrained demand conditions, which have been masked by very high, albeit hyper-concentrated, overall economic growth. Further supporting this hypothesis is the muted level of private consumption growth (Figure 3.B.4) relative to overall growth; slowing growth in the services sector (Figure 3.F.4), where a majority of labor resources are concentrated; as well as continued slowing in financial transfers, which had been primarily oriented toward private consumption. Under this scenario, these initial economic conditions would be reflective of a negative output gap. Over the medium-term policy horizon, these negative demand conditions would have somewhat limited impacts in terms of continued deflation, taking into account downward rigidities for both wages and prices in the economy. Nevertheless, considering the long period of below-target inflation, the emergence of weak demand conditions creates significant risks that inflation expectations could adjust downward and remain persistently low, further resulting in muted consumption behavior over the medium term.

In this scenario, driven by the objective of achieving price stability, the CBA policy rate would need to follow a sharper and more aggressive downward path than what markets presently expect, in order to stimulate demand and return inflation to the target over the medium horizon.

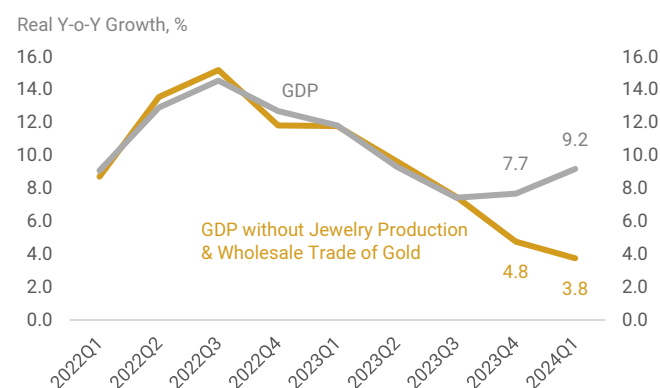
Figure 3.F.2:

Panel A: Contributions to GDP Growth, Q1 2024



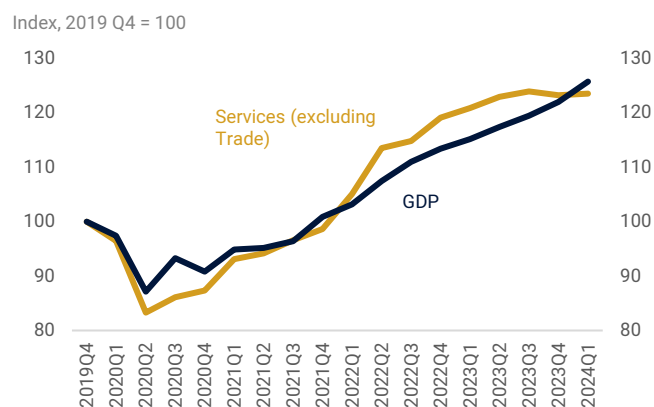
Source: Statistical Committee of the Republic of Armenia; CBA staff calculations

Panel B: GDP Growth without Jewelry Production and Wholesale Trade of Gold



Source: Statistical Committee of the Republic of Armenia; CBA staff calculations

Panel C: Index of GDP and Services



Source: Statistical Committee of the Republic of Armenia; CBA staff calculations

Summary of Illustrative Case A & Case B Macroeconomic Projections

Figure 3.F.3: Endogenous Interest Rate Path, %

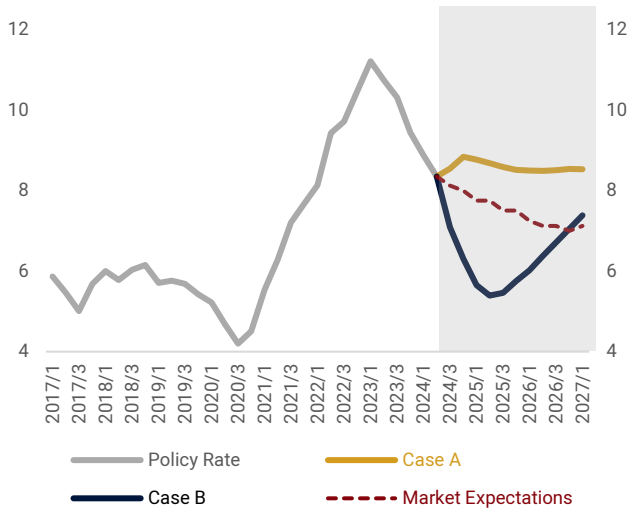


Figure 3.F.6: Non-Traded Sticky Price Inflation, Y-o-Y %

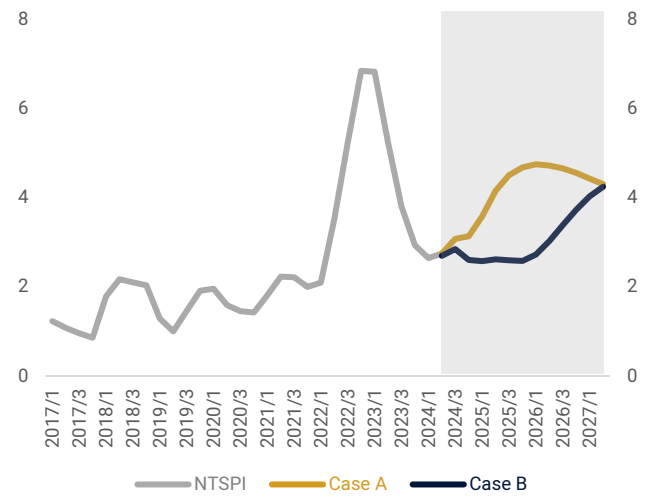


Figure 3.F.4: Real GDP Growth, Y-o-Y %

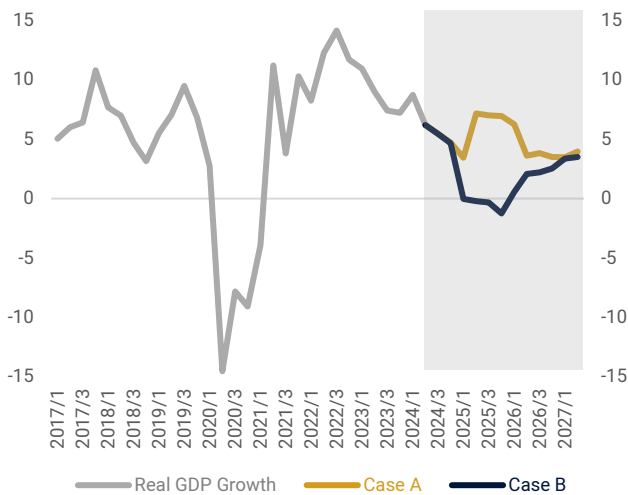


Figure 3.F.7: Output Gap, %

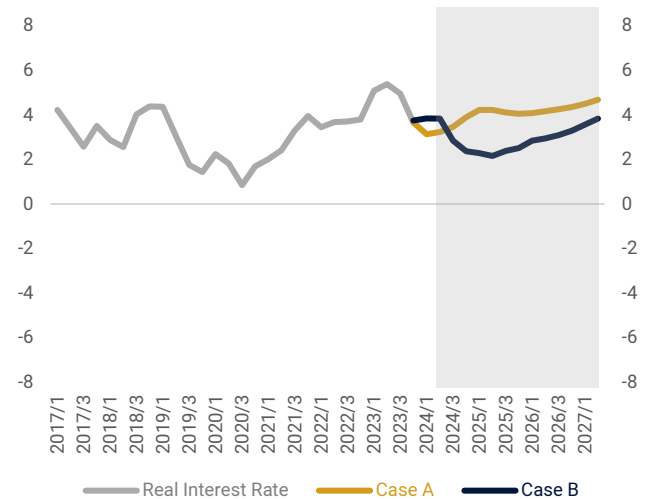


Figure 3.F.5: Headline CPI Inflation, Y-o-Y %

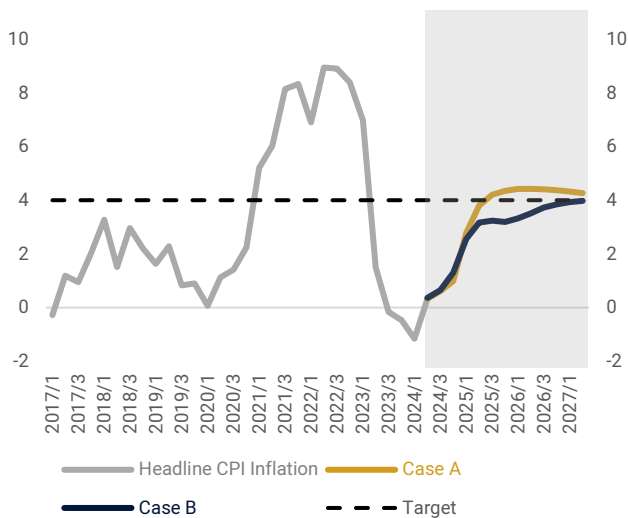


Figure 3.F.8: Real Interest Rate, %

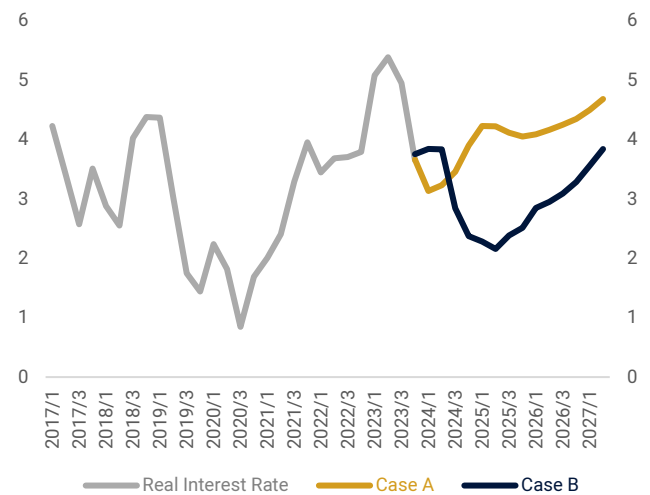


Figure 3.F.10: Nominal Effective Exchange Rate, Index

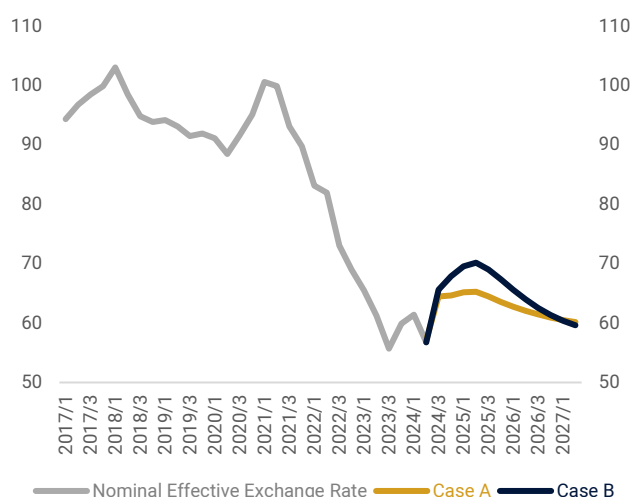


Figure 3.F.12: Model-Based 1-Year Ahead Inflation Expectations, Y-o-Y %

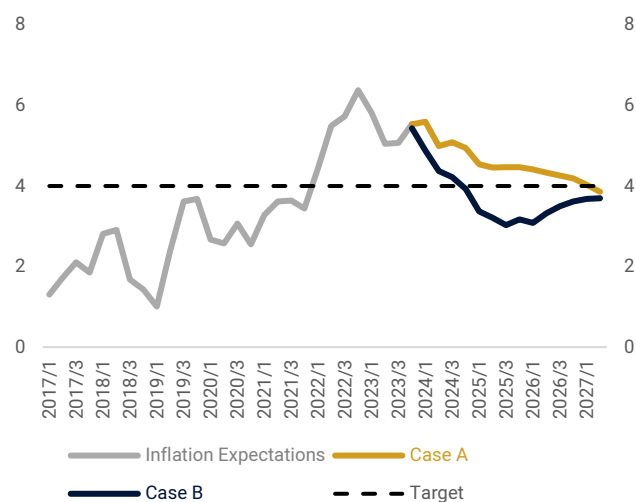


Figure 3.F.11: Real Effective Exchange Rate, Index

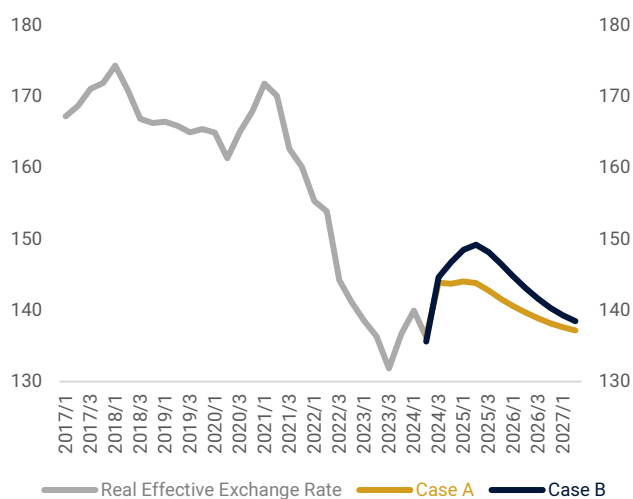


Table 3.F.1: Summary of Illustrative Macroeconomic Projections
Historical Data and Illustrative Case A & B Scenario Projections

		2021	2022	2023	2024		2025		2026	
		Actual	Actual	Actual	Case A	Case B	Case A	Case B	Case A	Case B
Global Economy										
USA economic growth	real growth, %	5.8	2	2.6	2.3	2.7	0.5	2.1	1.5	2.6
Eurozone economic growth	real growth, %	5.2	3.2	0.4	0.0	0.2	-0.4	0.3	1.2	1.1
Russia economic growth	real growth, %	5.5	-2	3	3.8	2.5	0.8	0.3	0.4	0.7
USA inflation	average, %	4.6	7.7	4	3.4	3.4	3.4	3.0	2.5	2.5
EU inflation	average, %	2.5	8	5.4	2.4	2.4	2.7	2.5	2.2	2.0
Russia inflation	average, %	6.5	12.9	5.5	6.9	7.1	4.7	5.3	5.0	4.5
Oil price	dollar/barrel	71	99.5	82.6	84.8	84.2	86.6	86.0	81.9	86.8
Copper price	dollar/metric ton	9288.1	8956	8472.1	8670.0	8482.6	9006.0	8798.9	8602.3	9159.4
FAO food price index	index	125.7	143.5	124.1	121.8	121.2	128.0	126.5	130.6	128.6
Domestic Economy										
Inflation										
Inflation	Y-o-Y, %, end of period	7.7	8.3	-0.6	0.9	1.3	3.8	3.2	3.7	4.0
CPI inflation	Y-o-Y, %, average	6.9	8.3	2	0.2	0.3	3.8	3.0	4.4	3.7
Non-traded sticky price inflation	Y-o-Y, %, average	2.1	4.5	4.8	2.9	2.7	4.2	2.8	4.7	3.3
Gross Income										
GDP	billion dram	6983	8496.8	9502.8	10401.5	10268.5	11481.3	11085.1	12597.3	12001.2
GDP	real growth, %	5.7	12.6	8.7	6.8	6.1	6.1	3.8	5.5	4.1
Supply										
Industry	real growth, %	3.5	6.3	1.7	8.3	7.5	5.6	3.5	4.9	4.0
Agriculture	real growth, %	-0.6	-0.7	0.2	3.3	2.8	2.9	2.0	2.7	2.3
Construction	real growth, %	3.1	19.1	15.7	12.7	12.7	9.0	7.7	8.0	5.5
Services	real growth, %	7.9	18.1	11.4	6.5	5.8	6.2	3.5	5.5	4.0
Net taxes	real growth, %	7.4	8.2	11	4.7	4.2	6.3	3.9	5.5	4.1

Table continued on the following page.

Historical Data and Illustrative Case A & B Scenario Projections (continued from previous page)

		2021	2022	2023	2024		2025		2026	
		Actual	Actual	Actual	Case A	Case B	Case A	Case B	Case A	Case B
Demand										
Consumption	real growth, %	4.2	7.7	8.3	5.5	4.0	6.2	4.3	5	3.7
Public consumption	real growth, %	8.4	6.5	17.9	1	1.0	7.7	7.7	5	5
Private consumption	real growth, %	3.4	8	6.4	6.3	4.5	6	3.8	5	3.5
Gross accum. of fixed assets*	real growth, %	6.3	9.5	14	6.6	5.2	6.2	3.4	10.2	7.7
Public investment**	real growth, %	-9.9	41.1	28.9	11.1	11.1	6.7	6.7	15.7	15.7
Gross accumulation of private fixed assets	real growth, %	11.2	1.9	10.1	4.7	2.7	6	2.0	6.9	3
Export of goods and services	real growth, %	16.6	54.4	28.7	29.6	29.6	-34.4	-33.8	3.2	2.7
Import of goods and services	real growth, %	12.9	33.8	28.3	28.6	27.2	-28.6	-30.6	3.7	3.7
Current Account										
Balance of trade	million USD	-1504.8	-1859.2	-2340.6	-1927.4	-1767.4	-2856	-2336	-2958.3	-2476.1
Balance of services	million USD	396.9	1711	2167.9	1702.2	1742.2	1626.4	1818.4	1603.4	1708.4
Money transfers	million USD	1274	1538.3	988.5	696.4	696.4	731.2	731.2	751.1	751.1
Current account	million USD	-483	151	-476.7	-334.8	-134.8	-1264.3	-552.3	-1369.9	-782.7
Balance of trade	share of GDP, %	-7.9	-0.8	-0.7	-0.9	-0.1	-4.3	-2	-4.4	-2.9
Balance of services	share of GDP, %	2.8	8.7	8.8	6.6	7.1	5.7	7.2	5.2	6.4
Money transfers	share of GDP, %	9.1	7.9	4	2.7	2.8	2.6	2.9	2.5	2.8
Current account	share of GDP, %	-3.5	0.8	-1.9	-1.3	-0.6	-4.5	-2.2	-4.5	-2.9
Public sector***										
Revenues and grants	billion dram	1683.8	2046	2358.6	2651.6	-1727.4	3033.7	-2176.0	3461.0	-2235.5
Tax revenue	billion dram	1586.9	1926	2221.9	2541.6	1742.2	2944.2	1818.4	3374.8	1708.4
Expenditures	billion dram	2004.3	2243.5	2550.2	3134.5	696.4	3353.4	731.2	3795.5	751.1
Deficit	billion dram	-320.5	-197.5	-191.6	-482.9	-94.8	-319.7	-392.3	-334.5	-542.1
Revenues and grants	share of GDP, %	24.1	24.1	24.8	25.5	0.1	26.4	-1.4	27.5	-2.0
Tax revenue	share of GDP, %	22.7	22.7	23.4	24.4	7.1	25.6	7.2	26.8	6.4
Expenditures	share of GDP, %	28.7	26.4	26.8	30.1	2.8	29.2	2.9	30.1	2.8
Deficit	share of GDP, %	-4.6	-2.3	-2	-4.6	-0.4	-2.8	-1.5	-2.7	-2.0

* The Central Bank only presents the indicator of gross fixed asset accumulation instead of gross accumulation, since the change in tangible working capital inventories is calculated by Armenia's Statistics Committee as a balancing item and it does not show the true level of gross accumulation. See https://www.armstat.am/file/article/sv_04_19a_112.pdf.

** Actual indicators of public investment are the capital expenditures of the consolidated budget, and the estimates are based on a revised macro-framework, 2024-2026, available at the time.

*** The 2023 budget indicators are the Central Bank of Armenia estimate. The 2024-2026 indicators are presented from the state Mid-Term Expenditures



Central Bank
of Armenia

