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# Scenario Analysis for the Czech Republic – Using the Integrated Policy Framework (IPF)

Thomas Gade, Jesper Lindé, and Lukas Boer

SIP/2026/034

IMF Selected Issues Papers are prepared by IMF staff as background documentation for periodic consultations with member countries. It is based on the information available at the time it was completed on March 4, 2026. This paper is also published separately as IMF Country Report No 26/71.

**2026**  
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**IMF Selected Issues Paper**  
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**Prepared by Thomas Gade, Jesper Lindé, and Lukas Boer**

Authorized for distribution by Vincenzo Guzzo  
April 2026

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**ABSTRACT:** This paper applies the IMF's Integrated Policy Framework (IPF) to the Czech Republic with the aim of contributing to the use of scenario analysis at the Czech National Bank (CNB). The paper identifies some shallowness of FX markets as the main relevant friction under the IPF. Moreover, while inflation expectations are generally well anchored, they can nevertheless deviate from the inflation target for extended periods. Using an extended version of the QIPF model, the paper broadens the scope of analysis beyond traditional external shock scenarios, to also include domestic fiscal policy shocks and central bank balance sheet normalization. The paper finds that (i) in the event of a global risk-off outflow shock, the CNB can improve macro stabilization through a combined use of reserves and interest rate policy, (ii) refocusing fiscal stimulus towards more productive uses greatly reduces the degree of monetary policy tightening needed to stabilize inflation at target, and (iii) balance sheet normalization is optimally implemented in a preannounced and gradual manner, in which potential currency appreciation in principle can be mitigated through a slightly lower policy rate.

**RECOMMENDED CITATION:** Gade, T., Lindé, J. and L. Boer, 2026. "Scenario Analysis for the Czech Republic – Using the Integrated Policy Framework (IPF)." IMF Selected Issues Papers 2026/34.

JEL Classification Numbers:	E44, E52, E62, F31, F41, G15
Keywords:	Scenario analysis, Integrated policy framework, Currency markets, Financial markets, Foreign exchange intervention, Capital flows, Inflation, Monetary policy, Fiscal Policy, Czech Republic
Author's E-Mail Address:	tgade@imf.org, jlinde@imf.org, lboer@imf.org

SELECTED ISSUES PAPERS

# Scenario Analysis for the Czech Republic – Using the Integrated Policy Framework (IPF)

Czech Republic

Thomas Gade, Jesper Lindé, and Lukas Boer<sup>1</sup>

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<sup>1</sup> The authors would like to thank Vincenzo Guzzo for valuable guidance, Suman Basu, Sonali Das, and the IPF secretariat for helpful comments, Rebecca Huang for excellent research assistance, and members of the Czech National Bank for helpful discussions. Petra Mitchell provided excellent technical assistance.



# CZECH REPUBLIC

## SELECTED ISSUES

March 4, 2026

Approved By  
European Department

Prepared By Thomas Gade and Lukas Boer (both EUR),  
and Jesper Linde (MCM)

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# SCENARIO ANALYSIS FOR THE CZECH REPUBLIC – USING THE INTEGRATED POLICY FRAMEWORK (IPF)

*This paper applies the IMF's Integrated Policy Framework (IPF) to the Czech Republic with the aim of contributing to the use of scenario analysis at the Czech National Bank (CNB). The paper identifies some shallowness of FX markets as the main relevant friction under the IPF. Moreover, while inflation expectations are generally well anchored, they can nevertheless deviate from the inflation target for extended periods. Using an extended version of the QIPF model, the paper broadens the scope of analysis beyond traditional external shock scenarios, to also include domestic fiscal policy shocks and central bank balance sheet normalization. The paper finds that (i) in the event of a global risk-off outflow shock, the CNB can improve macro stabilization through a combined use of reserves and interest rate policy, (ii) refocusing fiscal stimulus towards more productive uses greatly reduces the degree of monetary policy tightening needed to stabilize inflation at target, and (iii) balance sheet normalization is optimally implemented in a preannounced and gradual manner, in which potential currency appreciation in principle can be mitigated through a slightly lower policy rate.*

## A. Introduction

**1. Scenario analysis has become an integral part of central banks' assessment of risks around the baseline.** Over the years, major central banks have increasingly incorporated scenario analysis into monetary policy decision-making frameworks to assess risks around the baseline.<sup>1</sup> The frequent shocks (including the pandemic, swings in food and energy prices, and disruptions to global trade) in recent years have underscored the benefits of applying scenario analysis to assess the robustness of baseline monetary policy decisions.<sup>2</sup> Scenario analysis can also be taken a step further to analyze tail-risks, or materialization of vulnerabilities in the medium-term, helping assess whether the legislative framework, monetary instruments, and decision-making processes remain adequate, and ensure that the monetary policy framework remains fit for purpose.

**2. The Czech National Bank is updating its monetary policy analytical and forecasting framework, further strengthening its long-standing use of scenario analysis.** The CNB regularly uses both baseline and alternative scenarios to inform its monetary policy decisions. These scenarios range from simple simulations, e.g., holding selected variables constant, to more complex alternative scenarios involving full parallel forecasts.<sup>3</sup> In response to the economic turbulence of recent years, the CNB commissioned a review of its modelling framework in 2024 and is currently developing a new alternative forecasting model to complement its existing DSGE model. The aim is to enhance forecasting robustness against unexpected shocks.<sup>4</sup> Improved robustness around baseline

<sup>1</sup> For example, the Bank of England moved to a broader range of "what-if" scenarios following the Ben Bernanke review in 2024 of forecasting for monetary policy making and communication at the Bank of England.

<sup>2</sup> The 2025 review of the ECB's monetary policy strategy acknowledges that ongoing structural shifts (geopolitical, technological, demographic, environmental) increase uncertainty, making scenario analysis more important.

<sup>3</sup> See [CNB's Forecasting and Policy Analyses System: Forecasting Tools](#), October 2024.

<sup>4</sup> See [External review of the CNB's monetary policy analytical and modelling framework](#).

projections, together with more advanced scenario analysis, is expected to play a critical role in this multi-model development process.

**3. Using the IMF’s Integrated Policy Framework (IPF), this paper explores the policy tradeoffs - and the adequacy of available policy instruments - under certain tail-risk scenarios.**

Section B outlines the IPF in the context of the Czech economy. Section C provides an empirical assessment of the potential frictions under the IPF that are relevant for the IPF analyses. Section D introduces an extended version of the Quantitative Model for the Integrated Policy Framework (QIPF) and applies it to three types of simulations to the economy. Section E concludes.

## B. The IPF Framework in the Context of the Czech Republic

**4. The IMF’s Integrated Policy Framework (IPF) supports both the Fund’s and the authorities’ analysis of policy responses to shocks.** The IPF jointly considers the role of monetary, exchange rate, macroprudential, and capital flow management policies, and their interactions with each other and other policies, including fiscal policy. It clarifies the conditions under which each instrument is appropriate and guides the coordinated use of multiple tools to achieve macroeconomic and financial stability objectives. The conceptual foundations of the IPF are set out in a series of papers, and the framework has been applied in around 30 Article IV consultations.<sup>5</sup>

**5. The IPF incorporates a set of potential frictions that may amplify shocks and alter policy tradeoffs.** Under the IPF, several “frictions” may heighten countries’ exposure to shocks, including shallow FX markets, balance-sheet FX mismatches, and weakly-anchored inflation expectations. These challenges are particularly pronounced in emerging and developing economies but can also affect small open advanced economies. Ex-ante policies, such as structural policies or macroprudential measures (MPMs) can play an important role in mitigating these frictions, reducing macroeconomic imbalances, and limiting the impact of economic and financial shocks. Ex-post, the availability of adequate policy space and tools to respond to shocks is a critical element in mitigating shocks. In some cases, complementary policies, such as foreign exchange intervention (FXI), can alleviate the costs from relying solely on conventional monetary policy tools.

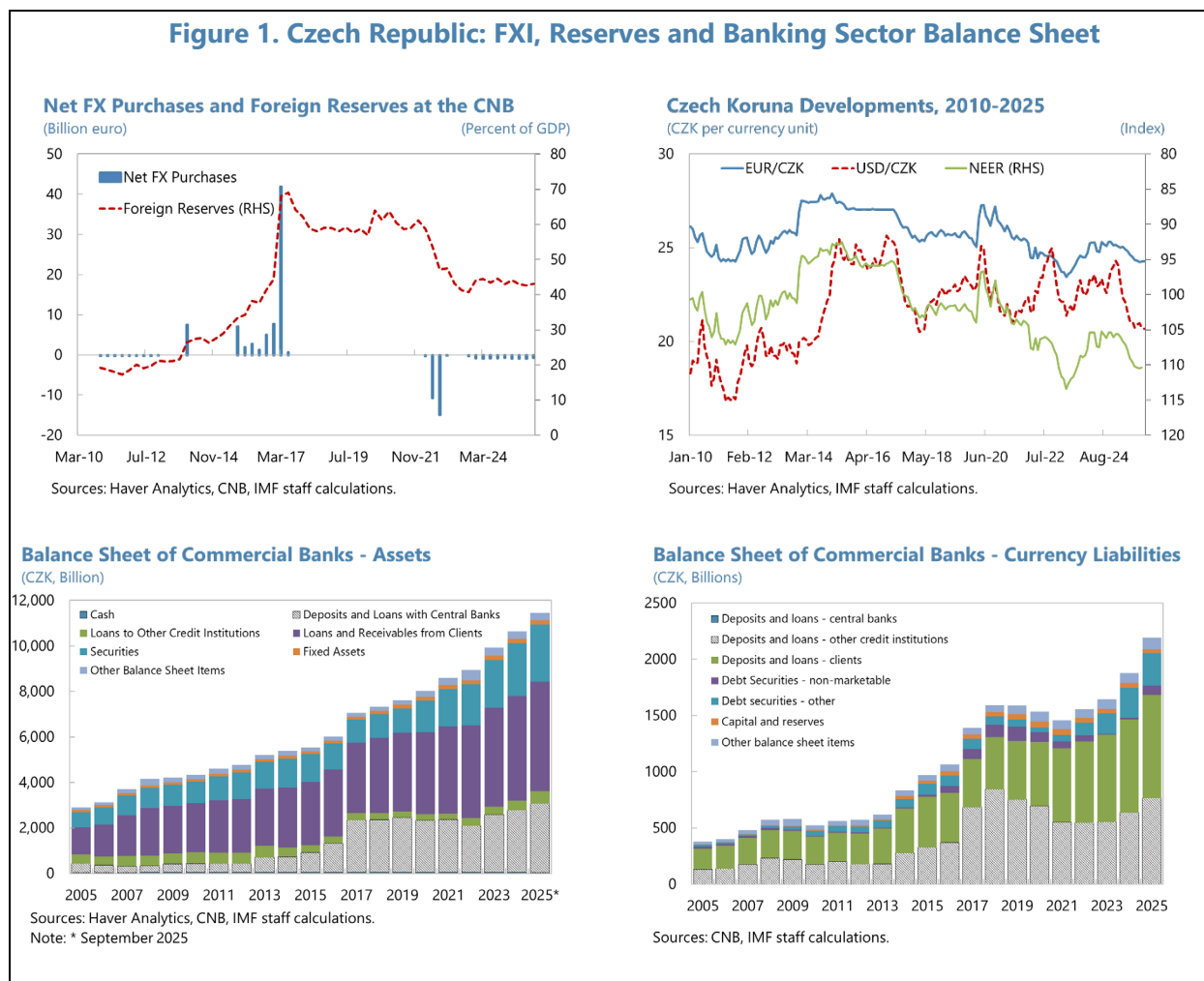
**6. The Czech Republic is a small open advanced economy with no major imbalances, sound institutions and strong policy frameworks.** It operates under a floating exchange rate regime and an inflation targeting monetary policy framework. Financial supervision is aligned with European Union (EU) standards. The economy exhibits no major external imbalances, faces no restrictions on capital movements, and it benefits from fiscal policy anchored in the EU fiscal framework, which contributes to debt sustainability. These features distinguish the Czech Republic from many emerging market economies and make it more resilient to capital flow volatility. However, as a small open economy with a flexible exchange rate, it can still exhibit some of the “frictions” highlighted in the IPF. The framework can therefore provide useful insights both for evaluating ex-ante policies, and for assessing ex-post policy tradeoffs in response to shocks.

<sup>5</sup> See (IMF 2020a), which lays out the key concepts, and (Basu et al, 2020, Adrian et al, 2020, Adrian et al, 2021, Chen et al, 2023, Basu et al 2023, and Basu and Gopinath, 2024) providing the main conceptual and quantitative modelling frameworks for assessing policies under the IPF. (IMF 2023c) provides principles for the use of FXI under the IPF.

## C. An Empirical Assessment of IPF Frictions for the Czech Republic

### Institutional Setup

**7. The CNB operates a traditional inflation targeting framework.** Its primary objective is to maintain price stability, supported by an inflation target of 2 percent. The main instrument is the monetary policy interest rate, implemented primarily through two-week repo operations. The CNB also retains the option to intervene in the foreign exchange market to address excessive volatility or disorderly market conditions. These interventions are guided by internal operational procedures and are used only when necessary to preserve monetary and financial stability.

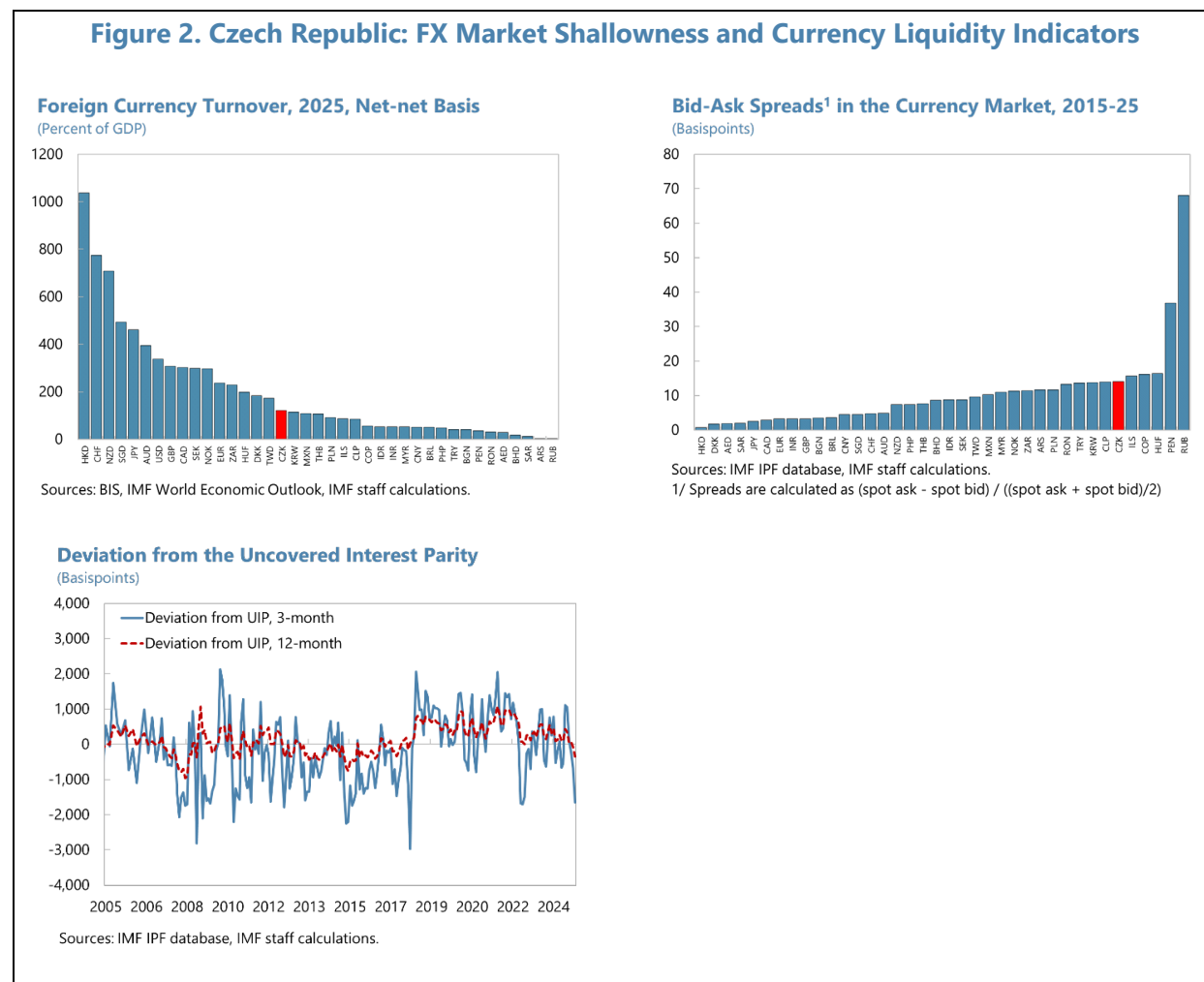


**8. The CNB rarely intervenes in the FX market.** Over the past decade, larger scale FX interventions have occurred only on two occasions: during the implementation of a depreciated koruna floor vis-a-vis the euro in 2013-2017 and during the energy crisis in 2022 (see Figure 1). While the former was an active policy decision motivated by below-target inflation and limited room for conventional easing at the zero lower bound, the latter episode was in response to large FX liquidity demand at times of heightened market stress. The return to a standard policy regime after

the FX floor involved resumption of a long-term program of partial sales of the returns generated by the FX reserves, executed in such a way as to minimize their impact on the FX market.

**FX Market Depth**

**9. The Czech banking sector is predominantly foreign owned.** Nine of the ten largest banks in the Czech Republic are held by foreign banking groups, and more than 90 percent of total banking assets are under foreign ownership. Subsidiaries or branches of foreign banks typically obtain their currency funding by swapping their CZK liquidity, via loans from their parent banks, by market-based funding through debt issuance, and complemented by client currency deposits.



**10. Non-financial companies use domestic banks for currency liquidity and hedging needs.** Large Czech non-financial corporations often obtain FX funding through revenues, or via intercompany loans with their parent company abroad, or by issuing corporate bonds in foreign currency. Smaller firms rely more heavily on foreign currency bank loans provided by domestic financial institutions. Companies commonly involve domestic banks in their short-term FX liquidity management, both for cash transactions and for FX forwards and swaps for hedging purposes.

**11. Trading in CZK includes both spot transactions and a range of derivative instruments used primarily for hedging purposes.** The CZK market is part of the global over-the-counter FX market and is traded across multiple electronic platforms rather than a centralized exchange. Liquidity is provided primarily by large international banks and domestic banks, both of which act as market makers. Trading activity is heavily concentrated in EUR/CZK reflecting strong trade and financial linkages with the euro area. FX swaps account for the highest turnover, followed by spot transactions and forwards. Forwards are used primarily by non-financial corporates and, to a lesser extent, by institutional investors, reflecting companies' substantial demand for hedging instruments.

**12. Indicators of FX market depth point to some shallowness in the FX market.** FX turnover in CZK compared to the size of the Czech economy is broadly comparable to that of some other small open advanced economies as well as several emerging economies (see Figure 2). However, the bid-ask spread on CZK - around 10 basis points - is wider than for comparable currencies, suggesting lower liquidity. Over the last two decades, the CZK has also exhibited deviations from uncovered interest rate parity, although the magnitude of these deviations is in line with those observed in comparable economies. Overall, empirical indicators on FX market depth present a mixed picture, but when combined with anecdotal information from domestic banks and the authorities, there is some indication of lack of depth in the FX market. Market depth can become even more limited during periods of financial or economic stress, as is the case in many countries.

### ***Foreign Currency Balance Sheet Mismatches***

**13. The Czech economy has a positive balance in net foreign currency assets.** The net foreign currency asset position is driven primarily by the CNB's exceptionally large reserve holdings, which amount to about 43 percent of GDP.<sup>6</sup> Excluding these reserve assets, foreign currency assets are held mainly by non-financial corporations, investment funds, and banks, while foreign currency liabilities – though smaller in scale – are concentrated among non-financial companies and banks (see Figure 3). Excluding the central bank, foreign currency liabilities consist mainly of debt instruments, roughly one-third to one-half of which are short-term, while foreign currency assets are both debt and equities. Except for banks, foreign currency assets are generally higher than foreign currency liabilities.<sup>7</sup> Most foreign currency assets and liabilities are denominated in euros.

**14. Strong supervisory guidance ensures that domestic banks extend foreign-currency loans only to companies with a natural hedge.** Although banks have a net negative external foreign currency asset-liability position, foreign parent institutions support a stable and reliable funding base. These foreign-currency liabilities are then used to finance foreign currency loans to the non-financial corporate sector. The share of foreign currency loans to non-financial corporations has risen to nearly 50 percent of total corporate lending, equivalent to around 10 percent of GDP (see Figure 3). However, strict supervisory expectations require banks to verify that borrowers have

<sup>6</sup> The overall Net International Investment Position (IIP) of the Czech Republic is negative (10 percent of GDP) given external liabilities denominated in CZK. The external liabilities denominated in CZK are less important from an IPF perspective as they do not pose a direct financial stability risk as a result of movements in the exchange rate.

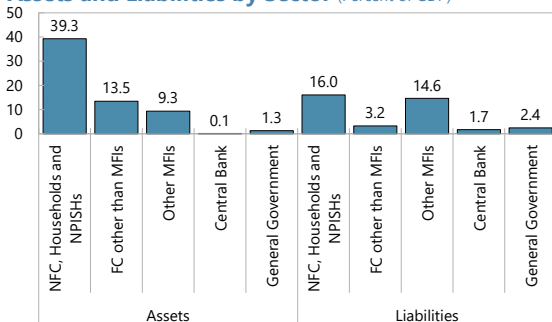
<sup>7</sup> The general government (excluding the central bank) has a small negative foreign currency asset-liability balance.

foreign currency income or other natural hedges, thereby mitigating the risk that exchange rate movements could generate adverse financial stability implications.

**15. The Czech non-financial sector has a positive net foreign currency position.** External foreign currency assets amount to approximately 40 percent of GDP, while foreign currency liabilities account for 16 percent of GDP. This reflects that households may hold some foreign currency assets but engage in very limited foreign currency borrowing. Non-financial corporations have foreign currency assets through direct investment and portfolio holdings, while inward direct investment into the Czech Republic typically takes the form of equity or debt denominated in local currency. Intercompany loans with parent groups play an important stabilizing role. Taken together, these patterns indicate the absence of significant foreign currency balance sheet mismatches.

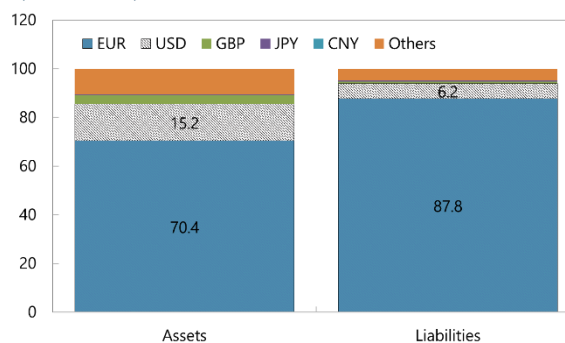
**Figure 3. Czech Republic: Foreign Currency Assets and Liabilities, 2024**

**Foreign Currency International Investment Position Assets and Liabilities by Sector (Percent of GDP)**



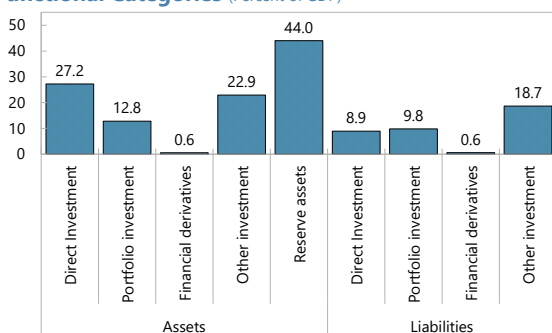
Sources: CNB, Haver Analytics, IMF staff calculations.  
Note: The chart excludes central bank reserve assets. Preliminary data.

**Foreign Currency Assets and Liabilities by Currency (Percent of total)**



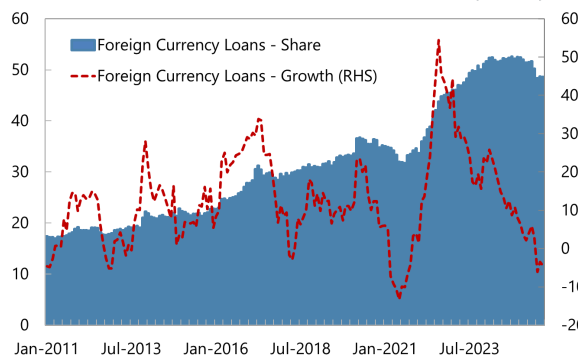
Sources: CNB, IMF staff calculations.  
Note: The chart excludes foreign reserve assets.

**Foreign Currency International Investment Position by Functional Categories (Percent of GDP)**



Sources: CNB, Haver Analytics, IMF staff calculations.

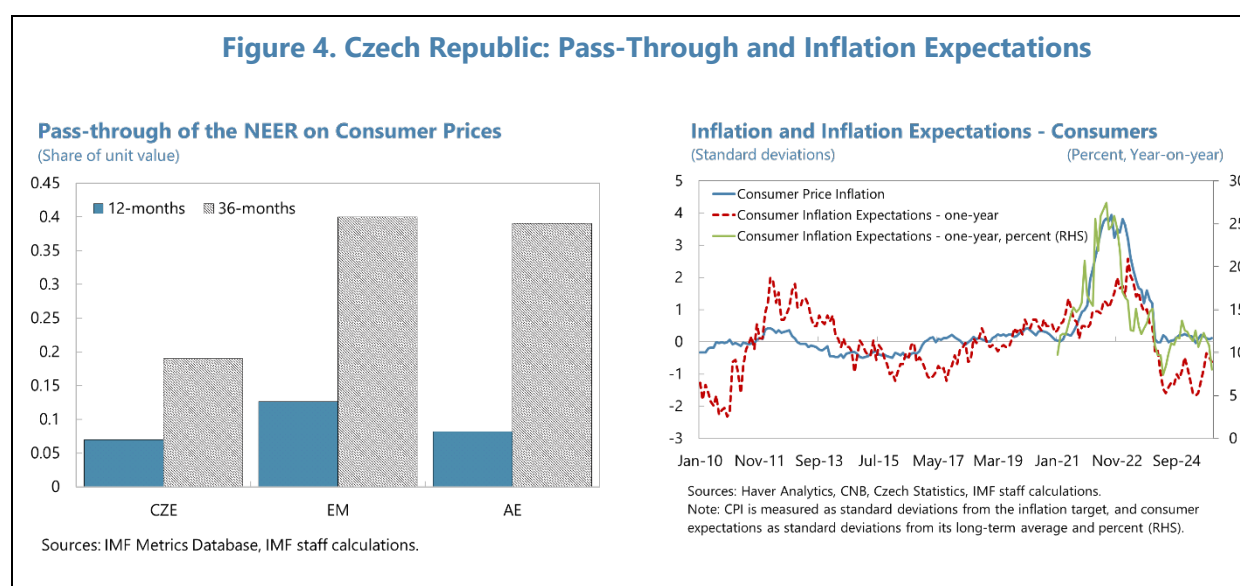
**Commercial Bank Loans to Non-Financial Companies (Percent of total loans) (Percent, year-on-year)**



Sources: Haver Analytics, CNB, IMF staff calculations.

## Inflation Expectations – Pass-Through and Anchoring

**16. Empirical studies consistently find that exchange rate pass-through to consumer prices in the Czech Republic is low, incomplete, and has declined over time.** Empirical literature provides broadly converging evidence on this point. Kucharčuková (2017) estimates that the exchange rate pass-through (ERPT) to CPI is under 0.1, with most of the effect materializing within the first three months. Baxa and Šestořád (2019) confirm this trend using a time-varying parameter VAR model. Hájek and Horváth (2015), using data from 1998–2013, find a somewhat higher long-run pass-through of approximately 0.5, with peak effects occurring 9–13 months after the shock. Cross-country estimates from the ECB (2020) further corroborate a low ERPT for the Czech Republic. Our own empirical estimates, based on a local projections’ framework, point to a pass-through of roughly 0.06 after 12 months and 0.2 after 36 months, further supporting the conclusion that ERPT is muted (see Figure 4). Factors commonly cited in the literature for this low pass-through include strong monetary policy credibility, pricing-to-market behavior by firms, and the large share of non-tradable items in the consumer price basket.



**17. Inflation expectations are generally well anchored, but they can nevertheless deviate from the inflation target for extended periods.** The CNB monitors expectations through survey-based measures, polling analysts from major banks and brokerage firms active in the Czech Republic as well as households’ and companies’ price expectations in monthly surveys (see Figure 4).<sup>8</sup> Households’ expectations are likely most important for wage-setting dynamics. They tend to be backward-looking and adaptive. Granger causality tests indicate that inflation leads inflation expectations and not vice versa, while inflation expectations are significantly impacted by previous inflation and its own history. Statistical tests find evidence of significant persistence in inflation expectations, with a half-life of about eight months, although with a faster decay rate than for actual

<sup>8</sup> The Czech Republic has not issued inflation-linked public debt.

inflation. Overall, the indication is that inflation expectations are reasonably well-anchored from a level- and dynamic perspective with a moderate sensitivity to the exchange rate only.

## D. Policy Tradeoffs Using the IMF’s QIPF Model

### *The IMF’s QIPF—Estimated for the Czech Republic*

**18. The model—key characteristics.** The QIPF model is a New Keynesian open economy model tailored to capture key features common to both AE and EMEs (see also Adrian et al. 2020, 2021). The estimated model for the Czech Republic is a linearized version of the Adrian et al. (2021) IPF model, following the implementation of Chen et al. (2023), and is extended to include a more elaborate supply side of the economy. In addition, the model has been augmented to include hand-to-mouth and Ricardian households (Two-Agent New Keynesian (TANK)-type households) to enhance the transmission of fiscal policy shocks by allowing for heterogeneity in consumption responses. A central feature of the model is the assumption that FX traders have limited risk-bearing capacity (Gabaix and Maggiori, 2015). This helps generate realistic exchange rate volatility and implies that sterilized FX interventions can have real economic effects, which creates a role for policy to offset inefficient fluctuations in the Uncovered Interest Parity (UIP) risk premium.

**19. Estimation for the Czech Republic—model properties.** The model is estimated using quarterly data for 2000–2025 with Bayesian likelihood techniques. The estimated parameters suggest that the FX market is moderately shallow, exchange-rate pass through is gradual (and modest in the near-term), and medium-term inflation expectations are reasonably well-anchored, consistent with the CNB’s active interest rate policy. The model’s impulse responses (IRFs) to major shocks and policy instruments align well with empirical evidence for the Czech Republic and have been discussed with CNB staff.

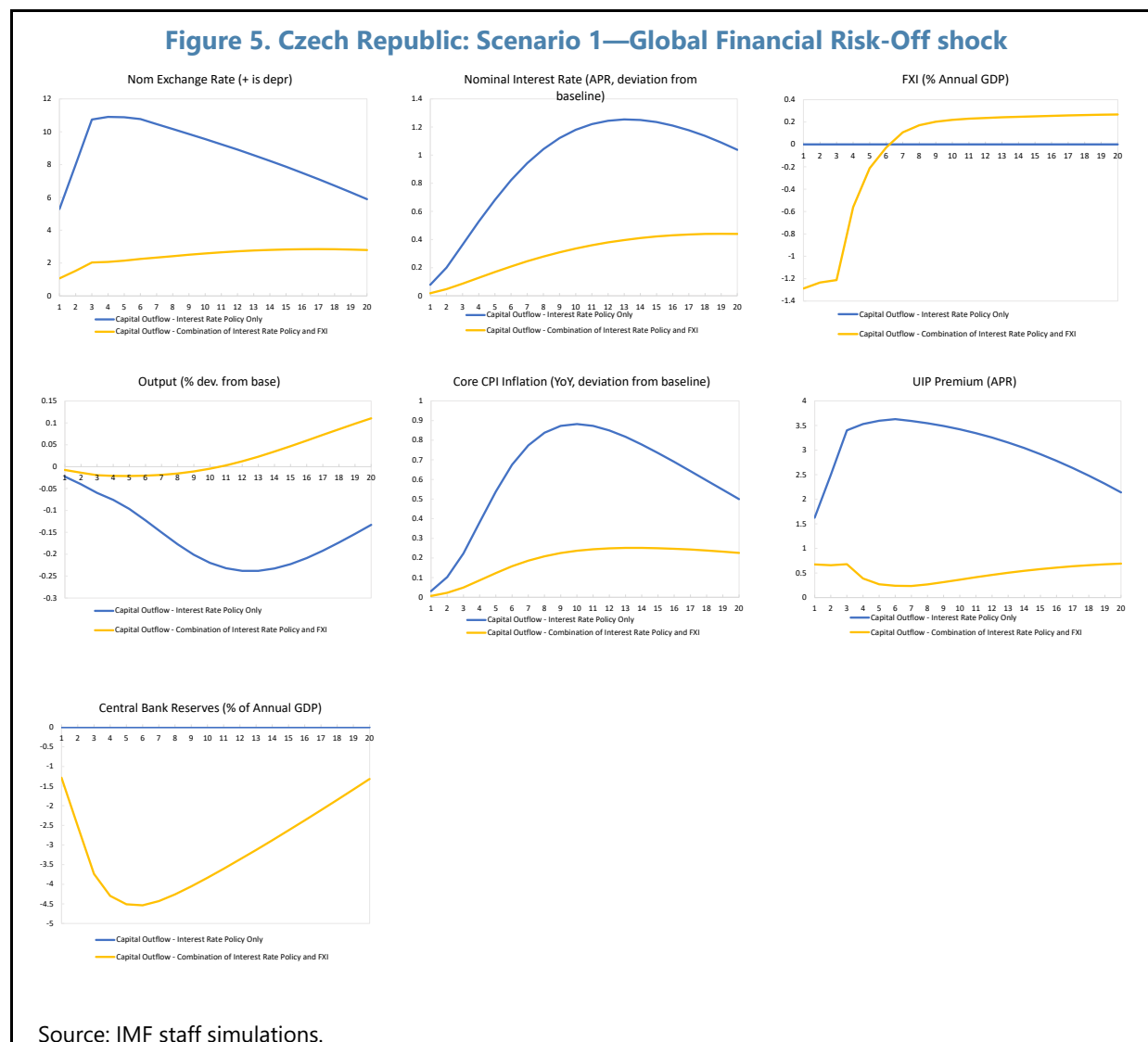
### *Simulation of Shocks*

**20. External risks and policy relevant questions guide the simulation of shocks under the IPF.** The global financial risk off shock is informed by the global risk matrix in the October 2025 World Economic Outlook, while domestic policy simulations draw on key policy risks identified in the Staff Report for the 2026 Article IV consultation with the Czech Republic.

- **Scenario 1— Global financial risk-off shock (non-fundamental).** Stretched asset valuations, easy global financial conditions, and subdued volatility could make global markets vulnerable to a sudden and disruptive shift in investor sentiment or policy stance. Such a reassessment could trigger broad market corrections, exchange rate turbulence, spikes in sovereign bond yields, and heightened capital flow volatility. For the Czech Republic, this scenario generates a capital outflow, CZK depreciation, and a sharp increase in the UIP premium.
- **Scenario 2—Expansionary fiscal policy shock (fundamental).** Fiscal policy is gradually loosened. Two variants are considered: (i) a fiscal expansion driven mainly by current expenditure, with limited effects on productivity and potential output, and (ii) a fiscal expansion driven primarily by capital expenditure, yielding positive effects on productivity and potential output.

- **Scenario 3—CNB balance sheet reduction.** The scenario explores the macro-financial implications of a reduction in the CNB’s FX reserves under different assumptions regarding the pace of balance-sheet unwinding and the depth of the FX market.

### Results of Shock Simulations Using QIPF



**21. Under adverse scenario 1, the CZK depreciates (rise in UIP premium) due to shallow FX markets, and this depreciation spills over into a spike in inflation and the risk of above-target inflation expectations.** The global shock is of non-fundamental nature, driven by a broad repricing of global financial assets, which triggers capital outflows from the Czech Republic and CZK depreciation. Although the Czech economy has become more resilient to global shocks over the last two decades, episodes of capital outflows and currency depreciation have been observed in the Czech Republic, most recently as a result of the US tariff announcements in early April 2025. The simulation also assumes that FX market depth temporarily declines as a direct consequence of the global shock, in line with evidence of moderately shallow FX markets. CZK depreciation raises

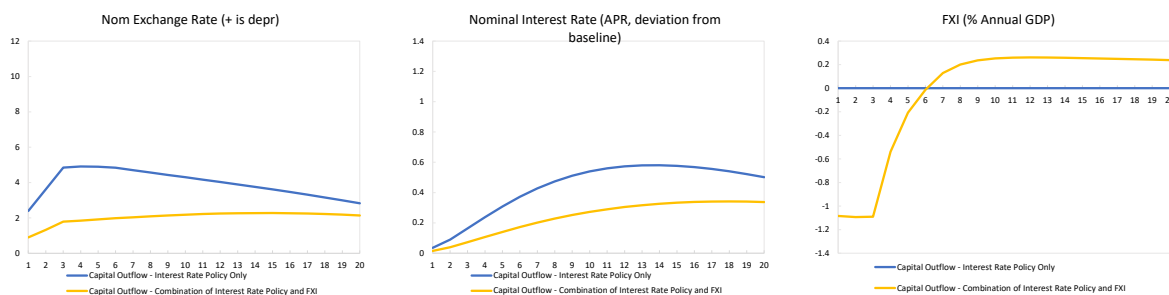
inflation, prompting the CNB to tighten the policy rate, especially if there are signs that inflation expectations become de-anchored and rise persistently above the CNB's inflation target. Because of the inherent challenge of transmission lags between high-frequency movements in financial market variables and lower-frequency availability of inflation and expectations data, the simulation is used to assess policy tradeoffs and illustrate real-time policy reactions to evolving market conditions.

**22. Under the given set of assumptions, the QIPF model suggests that a combination of policy rate tightening and selling of foreign currency (FXI) delivers the most effective macroeconomic stabilization.** The joint use of these instruments reduces both the rise in inflation and output loss compared to relying on policy rate tightening alone, because the required interest rate increase is smaller when complemented by FXI to offset the surge in the UIP premium (see Figure 5). Some policy rate tightening is useful if there is a risk of de-anchoring of inflation expectations. Financial stability risks related to CZK depreciation remain contained, given the absence of significant FX balance sheet mismatches in the economy. However, while not part of a key propagation channel in the model, tighter monetary policy itself could in principle heighten financial stability risks in the domestic economy, such as mortgages or consumer lending, which can be mitigated *ex-post* through FXI, resulting in less policy rate tightening, or *ex-ante* through macro-prudential policy tools such as DTI and DSTI limits. The CNB holds ample FX reserves to withstand such a global external shock. Using FXI in response to a non-fundamental global shock that generates disorderly market conditions would be consistent with the IPF and with the CNB's mandate.

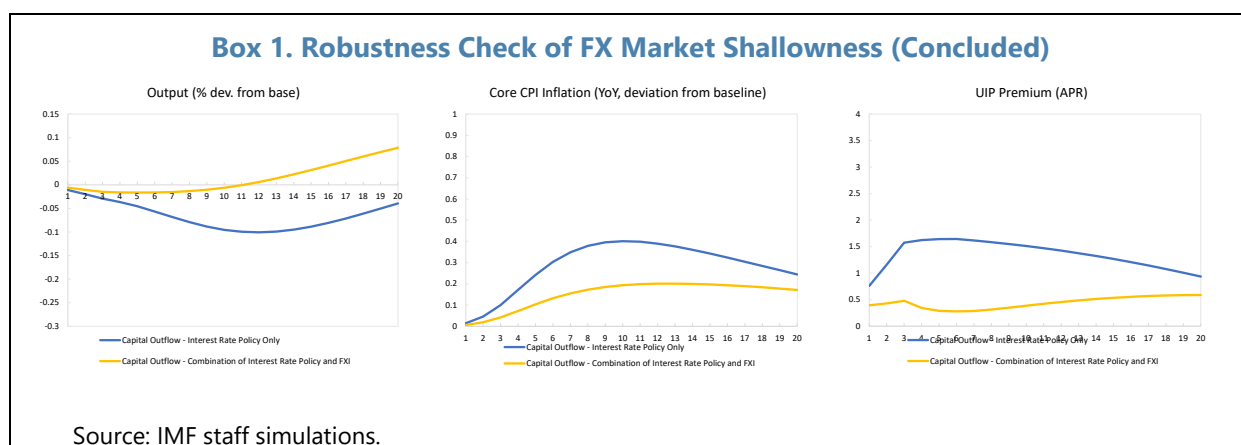
### Box 1. Robustness Check of FX Market Shallowness

The baseline assumption for the simulations in scenario 1 uses a measure of FX market shallowness, between the lower liquidity typically estimated for small emerging economies in Central and Eastern European Countries (CEEC) and the higher liquidity generally estimated for Small Open Advanced Economies. This is in line with the empirical findings for the Czech Republic as well as in line with an assumption that FX markets may temporarily become increasingly illiquid during a global risk-off shock.

If scenario 1 was instead implemented using an assumption of deeper FX markets, a combination of policy rate tightening and selling of foreign currency (FXI) would still deliver the most effective macroeconomic stabilization. However, the impact on the exchange rate, the UIP premium, and inflation would be less and FXI itself would be less effective, suggesting a more limited case for using FXI (see charts below).



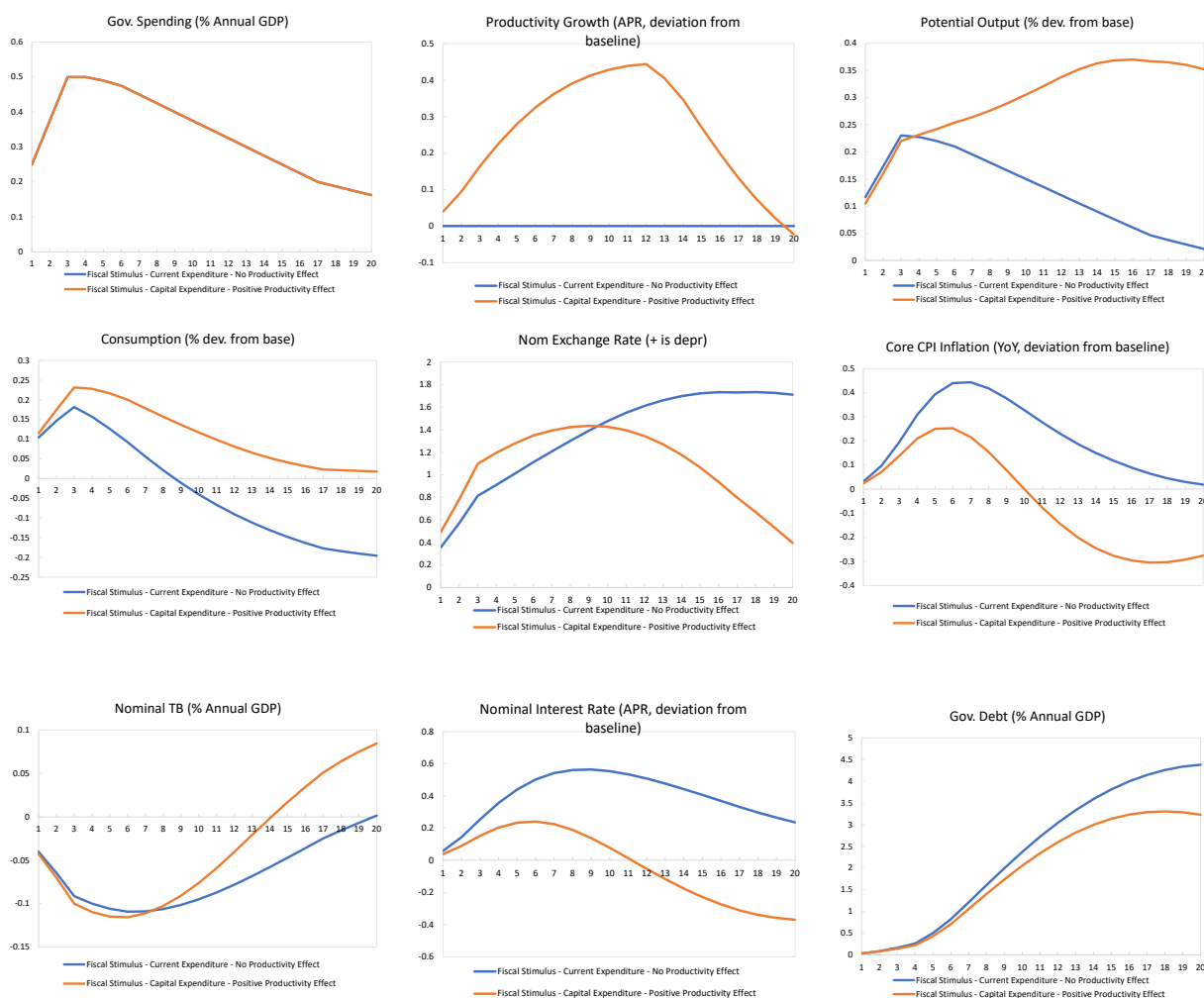
Source: IMF staff simulations.



**23. Under Scenario 2, the macroeconomic impact of fiscal expansion and the estimated policy response depend on the composition of the expansion and its effects on productivity and potential output.** In the simulation, government expenditure increases by 1.5 percent of GDP over one year, raising consumption, output and inflation, along with modest CZK depreciation in the near-term. Government debt rises in the medium-term. The magnitude of the impact and the estimated policy response depend on the composition of fiscal stimulus and the impact on productivity and potential output (see Figure 6). The UIP premium moves very little, and FXI is not used to counteract domestic fiscal expansion, especially when the fiscal expansion contributes to macroeconomic imbalances. As a result, the two variants generate different macro-financial outcomes and policy responses:

- **Current expenditure expansion, no productivity effects.** A fiscal expansion based on higher current spending that does not raise productivity boosts output immediately and crowds in consumption, as liquidity constrained households raise spending initially. The trade balance deteriorates modestly, and the CZK weakens marginally. Potential output rises briefly due to higher labor supply, but this effect fades quickly, while inflation increases. The estimated CNB policy response is to tighten policy rates sufficiently to bring inflation back to target.
- **Capital expenditure expansion with productivity and potential output gains.** A fiscal expansion concentrated in capital spending or budgetary measures supporting structural reforms increases productivity and potential output. With these supply-side improvements, monetary policy needs to tighten less in the near-term and may even ease in the medium-term, as higher productivity may eventually lower inflation and strengthen the trade balance. Consumption and output rise above the baseline on a sustained basis. The resulting increase in government debt would be less than that observed in scenarios without productivity gains.

Figure 6. Czech Republic: Scenario 2—Expansionary Fiscal Policy



Source: IMF staff simulations

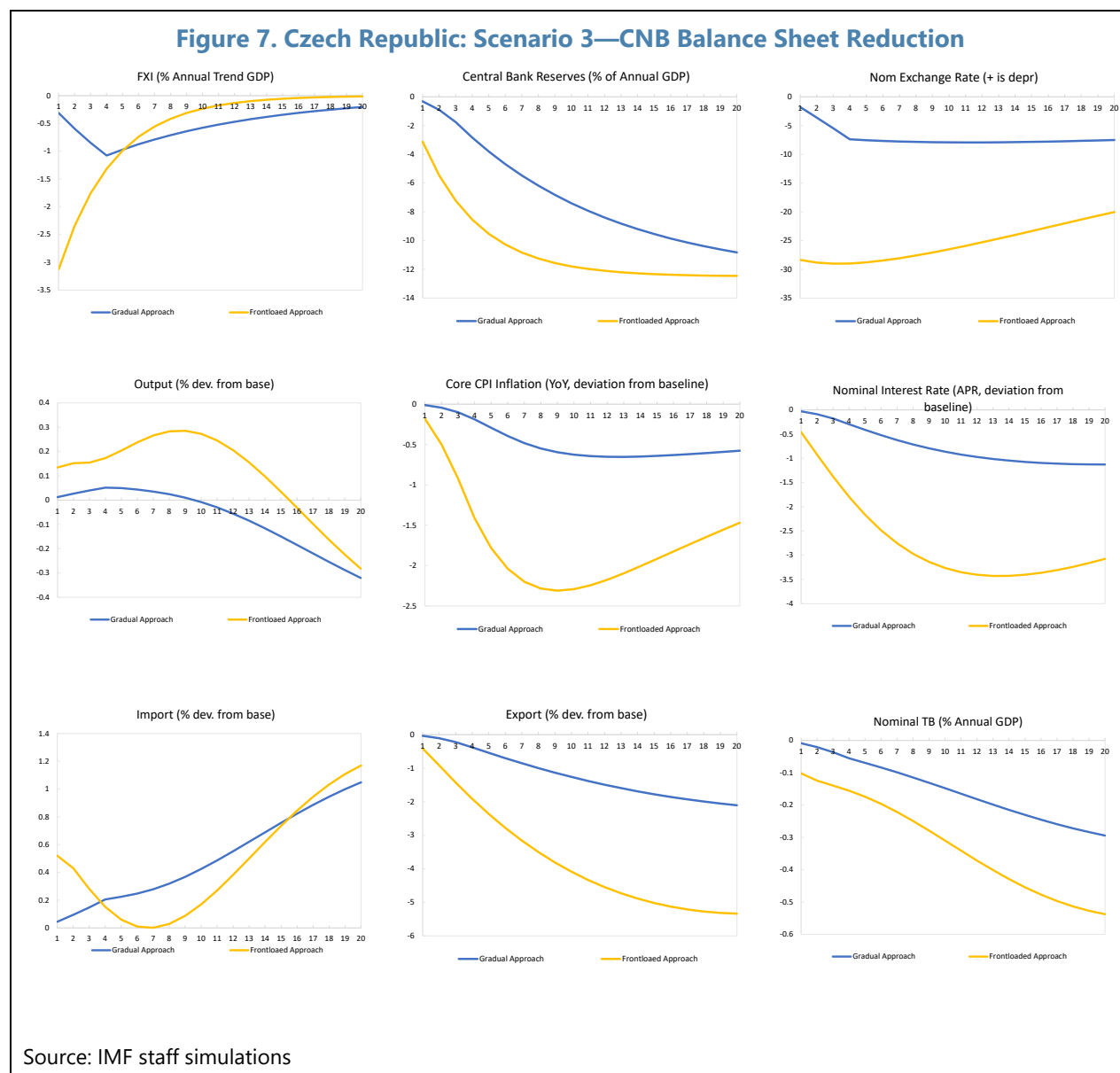
Note: Lines follow a similar path (overlap) where less than three lines are illustrated.

**24. Under Scenario 3, central bank balance sheet reduction, the degree of CZK appreciation and the resulting effects on inflation and trade balance vary according to the pace of FX reserve sales.** The simulation considers both a front-loaded and a gradual reduction in FX reserves. In each case, the CNB preannounces the intention and the path for reducing reserves by one third - from the current level of about 45 percent of GDP to 30 percent of GDP, leaving ample reserves remaining to withstand shocks.

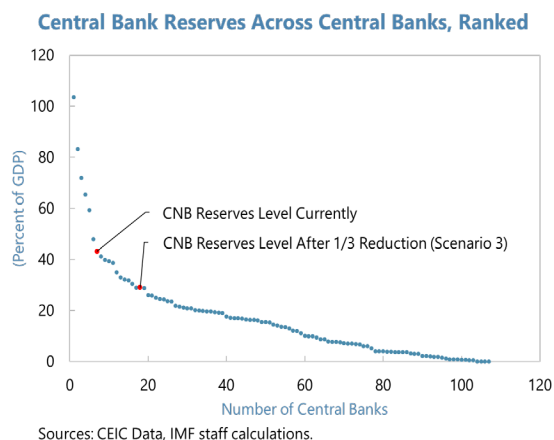
- **Using a frontloaded approach**, the CNB is assumed to communicate and implement a rapid decline in reserves over one year. In addition, FX market depth is assumed to be limited, meaning that markets cannot fully absorb the speedy large CNB FX sales. Under these conditions, the QIPF model generates i) a strong and front-loaded appreciation of the CZK, ii) a substantial decline in

inflation, prompting iii) significant policy rate easing in response to the disinflationary impact. Consumption and output would rise initially due to the easing of monetary policy, while exports would gradually fall and the trade balance would deteriorate over time (see Figure 7).

- **Using a gradual approach**, the CNB is assumed to communicate its intention to gradually reduce its FX reserves over a three-year period. FX markets are assumed to be able to absorb the gradual FX sell-off, although the CZK would still appreciate during the first year (albeit to a lesser extent than under the front-loaded scenario. In this case, QIPF suggests i) a more moderate and manageable impact on output and core inflation, ii) a smaller deterioration in the trade balance, and iii) a modest and gradual policy rate easing over the simulation horizon.



**25. A preannounced and gradual approach would provide a more stable macroeconomic adjustment path, and leave ample reserves to withstand shocks.** A gradual strategy with a clearly preannounced pace of FX reserve reduction, designed to preserve the FX market’s ability to absorb FX sales, offers a more manageable macro environment. This approach results in only modest CZK appreciation and a limited impact on core inflation. If monetary policy space allows, the CZK appreciation could in principle be offset through a modest policy rate easing. According to the estimated model, a CZK nominal appreciation of approximately 6 percent under the gradual scenario, could be neutralized with an additional 70 bp policy rate reduction during the first 3 years (normal forecast horizon). While this approach does not pose immediate financial stability risks, the CNB may still consider activating ex-ante macroprudential tools such as the DTI and DSTI limits should lower lending rates contribute to an undesirable buildup in credit.



## E. Conclusions

**26. The IMF’s IPF can be helpful in supporting scenario analysis.** The IPF offers a useful tool for assessing policy tradeoffs and impacts when simulating risks around the baseline or conducting policy simulations, thereby contributing to the ongoing update of the CNB’s monetary policy analytical and forecasting framework.

**27. The Czech economy is a small open advanced economy with some shallowness of FX markets identified as the main friction under the IPF.** Meanwhile, there is no evidence for FX balance sheet mismatches, nor of any major risk of de-anchoring of inflation expectations. Overall, the frictions that can amplify shocks or alter policy tradeoffs are thus modest in the Czech Republic.

**28. The CNB has ample reserves to withstand external shocks.** In the event of a correction in global asset valuations leading to currency depreciation, a combination of policy rate tightening and selling of foreign currency (FXI) delivers the most effective macroeconomic stabilization, as opposed to relying solely on policy rate tightening.

**29. The impact of fiscal stimulus and the monetary policy response depend on the composition of fiscal expansion.** Fiscal expansion that contributes to the buildup of macroeconomic imbalances is countered exclusively with tighter monetary policy, while the monetary policy response is more muted when the expansion has positive effects on productivity.

**30. A gradual approach to reducing the size of CNB FX reserves suggests a reasonably stable adjustment path while still leaving ample reserves.** A gradual and preannounced pace of FX reserve reduction offers a more manageable macro environment. If monetary policy space allows, the CZK appreciation could in principle be offset through a modest additional policy rate easing. Early introduction of macroprudential measures could help mitigate emerging vulnerabilities.

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