

**EXECUTIVE
BOARD
MEETING**

SM/22/113

Correction 1

June 7, 2022

To: Members of the Executive Board

From: The Acting Secretary

Subject: **Switzerland—Selected Issues**

Board Action: The attached corrections to SM/22/113 (5/26/22) have been provided by the staff:

Evident Ambiguity

Page 24

**Factual Errors Not
Affecting the
Presentation of Staff's
Analysis or Views**

Pages 20 and 37

Questions:

Mr. Horton, EUR (ext. 39850)

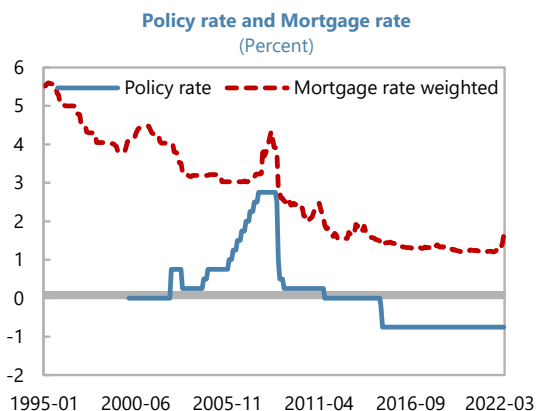
Mr. Zeng, EUR (ext. 35723)

Ms. Maslova, EUR (ext. 38306)

Ms. Valderrama, EUR (ext. 37816)

Figure 4. Impact of Interest Rate Shocks on Affordability Risk

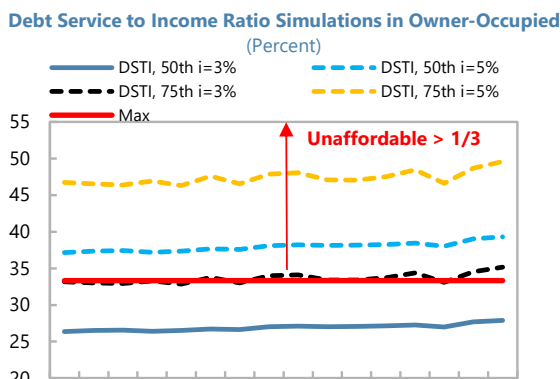
The long-term average mortgage rate reached 3.7 percent prior to the policy rate being set at 0.



Sources: Haver Analytics; and IMF staff calculations.

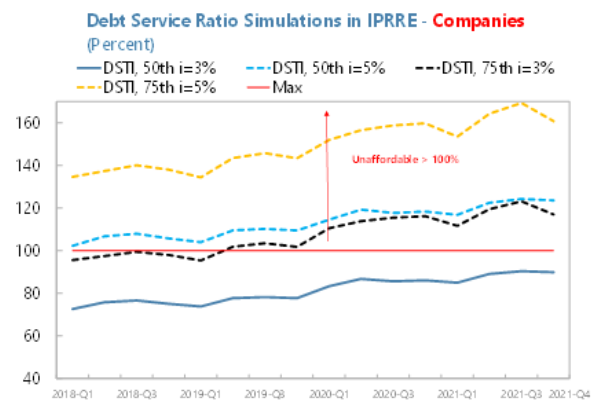
...as well as in rented-out properties of *households companies*^{1/}...

... A quarter (half) of recent mortgage flows could become unaffordable if rates increase to 3 (5) percent in SORE ...

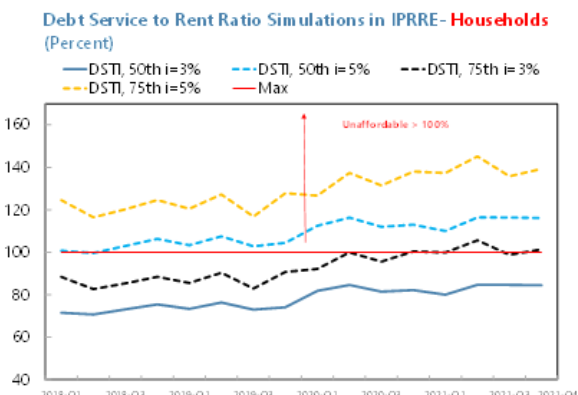


Sources: SNB; and IMF staff calculations.

....and investment properties of *companies households*^{1/}



Sources: SNB; IMF staff estimates.



Sources: SNB; IMF staff estimates.

1/ This simulation assumes that income generated by the property is the only source of income for assessing affordability risk. As households typically have other sources of income, and can draw on their financial wealth, these figures tend to overestimate the level of affordability risk. Note: The top left chart shows the policy rate (mid of the LIBOR 3m target range until 2019; policy rate after 2019), and the weighted mortgage rate for new business weighted by the relative share of variable mortgages, fixed-rate mortgages, and LIBOR mortgages. SORE stands for self-occupied real estate. IPRRE stands for income producing residential real estate. Affordability risk is considered high when imputed costs from mortgage servicing (including amortization, interest, and maintenance) exceed one-third of income (owner-occupied segment) or rents (investment-led segment). To compute affordability risk, we assume that average LTV is 80 percent and maintenance costs represent 1 percent of loan value. The chart 'Debt Service Ratio Simulations in IPRRE – Companies' takes into account the tightening of the amortization requirement established by self-regulation in August 2019, effective in January 2020.

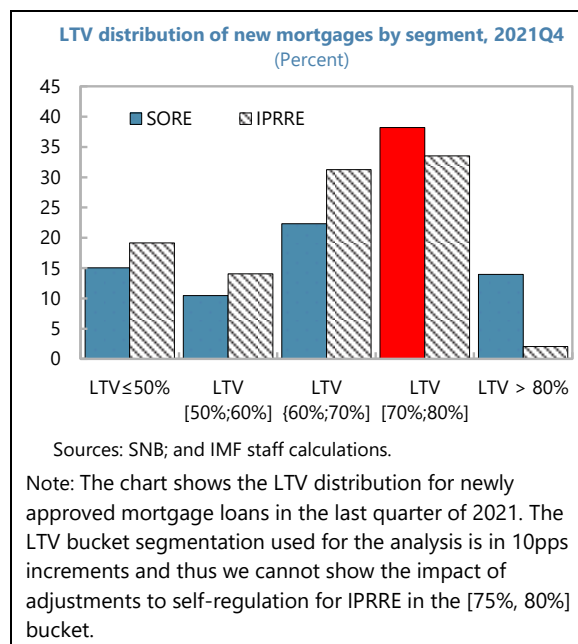
10. To contain the build-up of vulnerabilities, macroprudential authorities (and lenders) can rely on borrower-based tools that strengthen borrower balance sheets.¹⁰ To address financial stability risks arising from rapid house price inflation and increasing household debt, authorities can use borrower-based tools including LTV, DTI and DSTI regulatory limits on mortgage lending. These instruments also build bank resilience indirectly by reducing the loss rate of the

¹⁰ While a tightening of lender's underwriting standards will help contain mortgage growth, self-regulation guidelines are not designed to reduce systemic risk and thus help to prevent crisis, by contrast with macroprudential authorities' goals.

survey data but eliminates construction loans and removes outliers. The survey records a loan's general characteristics (e.g., borrower, type of loan, credit limit, income, value of collateral, rent, interest rate, down payment). This allows a very granular segmentation. The data are segmented by type of business transaction (i.e., SORE and IPRRE segments) and vintage (20 vintages). In the IPRRE segment, income is defined as yearly rental income on the property. Within each segment/vintage, loan risk characteristics are grouped into 12 LTV buckets, 8 DTI buckets (LTI basis) and 11 DSTI buckets. To account for the correlation structure of risk factors, we construct matrices for 96 LTV/DSTI buckets, and 132 LTV/DTI buckets.

21. The data point to some recent improvement in LTV ratios, but with unequal effects across segments. High-LTV lending has declined in the IPRRE segment but remains elevated for self-occupiers (SORE). The recent tightening of self-regulation rules for investment properties is reflected in a decrease of high-risk LTV loans (>70 percent) from 41 in Q1:2017 to 36 percent in Q4:2021.¹⁶ However, the share of high LTV loans in the SORE segment increased during the intervening period, with a bunching of loans below the 80 percent threshold.

22. Borrower leverage, as captured by the DTI, has increased over time across segments.¹⁷ Affordability risk is particularly elevated for highly leveraged borrowers with low equity buffers. The share of loans in the [70%, 80%] bucket with DTI exceeding 5 reached around 30 percent in both the SORE and IPRRE segments. This value seems high by international standards, where the most common maximum DTI cap in peer countries is 4.5.¹⁸ On the other hand, debt servicing ratios remain contained due to the presence of non-amortizing mortgages for loan amounts below two thirds of the value of collateral at issuance.



¹⁶ The adjusted self-regulation rules now require borrowers to provide a minimum down payment of at least 25 percent of the LTV. As the LTV bucket segmentation used for the analysis is in 10pps increments we show the statistics at the 70 percent cap which lies near the 75 percent threshold.

¹⁷ The share of loans with a DTI higher than 6 has increased from about 35 to 50 percent over 2017–2021 in both, the SORE and the IPRRE segments.

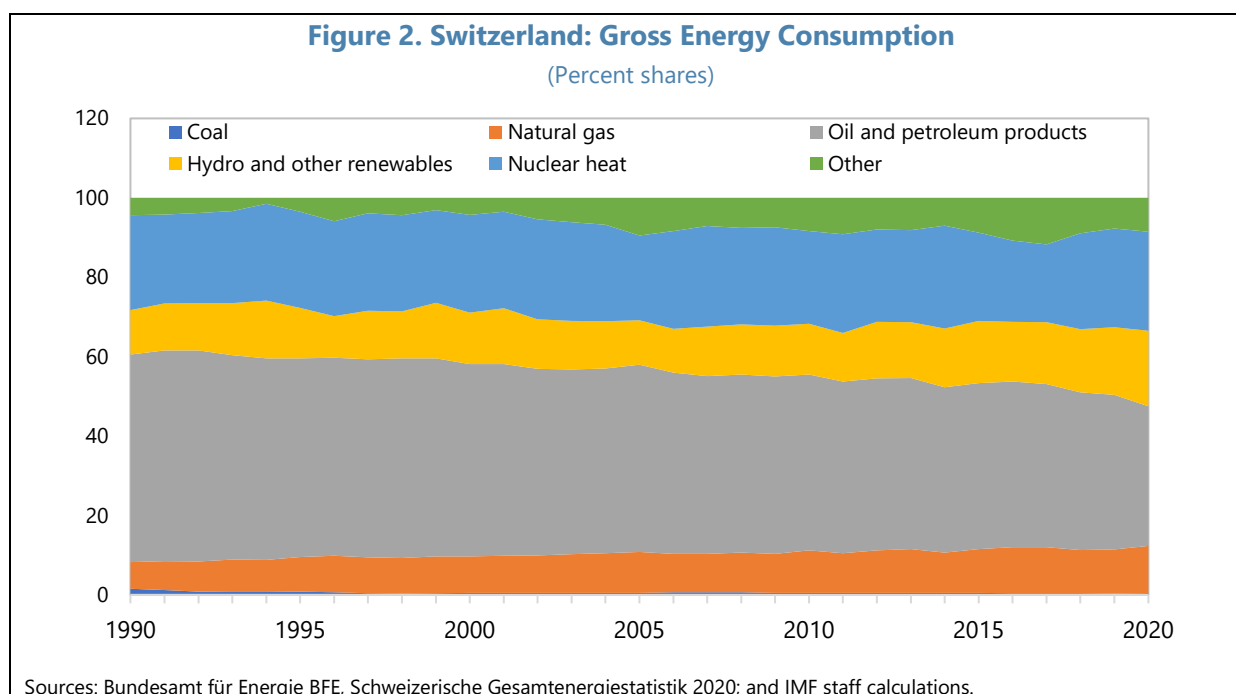
¹⁸ E.g., Denmark (exception for wealthy borrowers); UK (15-percent exemption), Sweden (where higher LTIs trigger additional amortization). A cap of 3.5 is set in Ireland (20-percent first-time borrower exemption). Others have implemented a DTI limit with a broader debt concept (Norway—5; Latvia—6, 10-percent exemption; Slovakia—8 of net disposable income or 6.4 gross). A caveat to the comparison is that income is defined on a net basis in the SNB survey on new mortgages whereas some countries may use a gross definition of income.

gas from other energy products (e.g., petrol, diesel, and heating oil), for which stockpiles are required to meet average Swiss demand for several months.

3. This paper analyzes the impact of a possible interruption of Russian gas imports on Switzerland's energy balance and provides policy recommendations. Section B considers developments in the natural gas sector in Switzerland, comparing these to developments in the EU. Section C presents a scenario analysis of the impact of a halt in Russian gas imports. Section D concludes and provides policy recommendation, with a discussion of measures being implemented by the Swiss authorities.

B. Natural Gas Reliance in Switzerland and the European Union

4. About a half of energy consumed in Switzerland comes from hydrocarbons. Switzerland's reliance on coal, natural gas, oil, and petroleum products declined from about 60 percent of gross energy consumption in 1990 to 48 percent in 2020 (Figure 2). Trends across different types of hydrocarbons varied during the period. Shares of coal and oil and petroleum products, respectively, in gross energy consumption declined from 1.5 and 52.3 percent in 1990 to 0.4 and 35.2 percent, while the share of natural gas increased from 6.7 to 11.9 percent in the period. The developments are quite similar to those in the European Union (EU), where the share of hydrocarbons also trended down. That said, the share of hydrocarbons in gross available energy ~~is~~ **Switzerland** is higher in the EU.



5. Natural gas is mostly used for heating and cooling in Switzerland. The share of natural gas in energy consumption for heating and cooling has increased over time, reaching almost 29 percent in 2020 (Figure 3). Gas became the key energy source for this purpose, exceeding the