

# **Economic implications on Armenia of the war in Ukraine and the sanctions against Russia: a two scenarios analysis**

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Berlin/Yerevan, June 2022

# Summary (1/2)

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## Indirect effect of war in Ukraine and sanctions against RUS

- The war in UKR and the sanctions against RUS have led to **higher global energy and food prices**; this indirect effect is of relevance for practically all countries
- **Higher energy prices** imply a shock of 0.5% of GDP in ARM in 2022, which is lower than in most energy importing countries; Gazprom gas contract covers the full year and ARM purchases Russian oil products, which currently trade at a discount
- ARM negatively affected by **higher food prices** (incl. wheat), as most countries

## Direct effect of war in Ukraine and sanctions against RUS

- Countries with substantial **economic links with RUS**, such as ARM, can face additional negative effects (“direct” effect of war/sanctions)
- The size of a potential **direct effect** depends on the economic outlook for RUS and in particular on the RUB/USD exchange rate
- Given that a forecast of RUB/USD in 2022 is difficult, we create **two scenarios**: scenario 80 (RUB/USD = 80) and scenario 100 (RUB/USD = 100)

# Summary (2/2)

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**Scenario 80:** RUB/USD=80; no decline of RUS GDP in USD terms

- No effect on exports to RUS, but remittances from RUS likely to decrease by 1.4% of GDP; moderate effect

**Scenario 100:** RUB/USD=100; RUS GDP to drop by ca. 20% in USD terms in 2022

- ARM exports to RUS to drop by USD 122 m or 0.9% of GDP
- Strongest decline: **brandy** (USD 12 m) and further agro-food products
- **Remittances** from RUS likely to drop by 2.3% of GDP; sizeable shock

**Both scenarios:** likely increase in **tourism** due to influx of high-skilled Russians

## Macroeconomic implications

- On the back of rather stable energy prices, limited effect on **inflation**; despite this, need for maintaining tight monetary policy to anchor expectations
- Possible sizeable migration of (ethnic) Armenians from RUS to ARM later this year would post a major challenge to **fiscal policy**

➤ **Effect on ARM depends on RUB/USD; in scenario 80 only moderate effect via remittances; in scenario 100, effect on exports and remittances is substantial**

# Outline

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1. Introduction
  2. Economic outlook in Russia in 2022
  3. Implications for energy imports
  4. Implications of higher wheat import prices
  5. Implications for exports to Russia
  6. Implications for remittances from Russia
  7. Implications for tourism revenues
  8. Effect on economic growth
  9. Effect on inflation
  10. Fiscal implications
- 
- Indirect effect
- Direct effect under two scenarios
- Macroeconomic implications

Annex

# 1. Introduction

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**The war in UKR and the sanctions against RUS have potentially two kind of economic effects on countries**

- Indirect effect due to higher global prices for energy and food
- Direct effect due to links with the RUS economy, in particular exports to RUS, remittances from RUS and tourism from RUS

**On the direct effect**

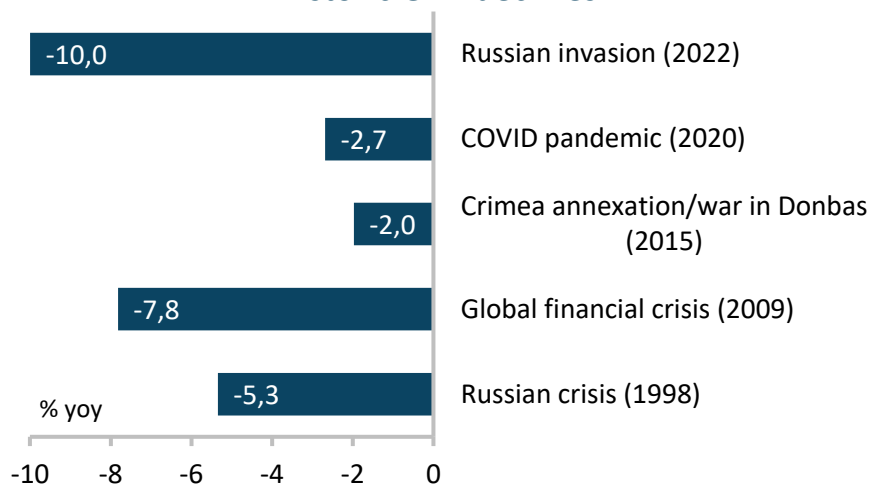
- Depends on the economic outlook for RUS in 2022
- While the RUS economy is certain to shrink in 2022, there is much uncertainty on the outlook for the Russian Ruble
- Thus: scenario analysis useful

**Aim of this policy briefing**

- Estimation of the indirect effect on ARM
- Analysis of the potential direct effect on ARM
- Assessment of the macroeconomic implications of these effects for ARM

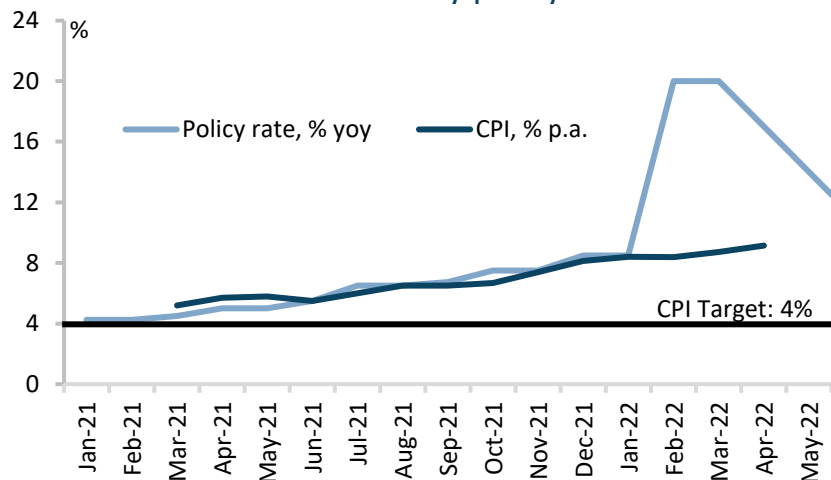
## 2. Economic outlook in Russia in 2022

Historic GDP declines



Sources: Rosstat, own calculations

Inflation and key policy rate



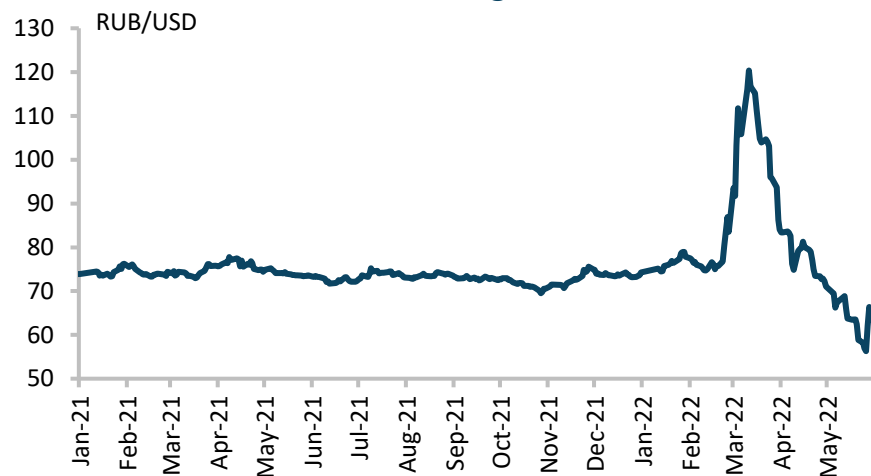
Source: CBR  
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### Severe economic and financial damage

- The war has led to several waves of sanctions on RUS by Western countries
- RUS real GDP likely to decline by 10% in 2022, which is unprecedented in modern history
- Inflation has accelerated after the start of the war, parallel to the weakening exchange rate
- CBR is facing a trade-off between supporting the real economy and financial stability / inflation objectives
  - To avoid run on deposits, CBR hiked the key rate to 20% p.a. in Feb-22
  - Once financial stability was restored, the key rate was gradually cut to 11% p.a. though inflation is still above target

# RUB/USD exchange rate: two scenarios

Exchange rate



Source: CBR

Selected economic indicators – two scenarios

Indicators, 2022	Scenario 80	Scenario 100
Real GDP growth, %	-10.0	-10.0
GDP growth in USD, %	-0.5	-20.4
Inflation, % eop	20	20
Exchange rate, RUB/USD	80	100

Sources: Goldman Sachs, CBR, own assumptions/calculations

- Unexpected sanctions on CBR reserves and banks (e.g. SWIFT exclusion) hit the RUB/USD exchange rate and led to a strong depreciation in Q1
- However, massive financial restrictions (“countersanctions”) were introduced on the FX market, which led to an exchange rate that is less and less determined by underlying market forces
- These restrictions, in combination with trade sanctions targeting primarily imports, and less (energy) exports, have led to the current RUB appreciation
- Given high uncertainty, we assume for 2022 two scenarios for RUB/USD (aop):
  - RUB/USD = 80 (scenario 80)
  - RUB/USD = 100 (scenario 100)

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## **Indirect effect**

due to higher global prices for energy and food



# 3. Implications for energy imports

ARM energy supply and imports (2019)

	Share in TES*	Gross import share	RUS share in imports	RUS share in TES*
Natural gas	61%	100%	85%	52%
Oil products	12%	100%	73%	8%
Solid fossil fuels	0%	99%	79%	0%
Nuclear fuel	18%	100%	100%	18%
Renewables	9%	-	-	-

Sources: IEA, The Observatory for Economic Complexity, own calculations, \*total energy supply

## Natural gas

- Most important energy source, including in transportation sector, as most cars powered by gas, not oil products
- Effectively all domestically used gas imported from RUS, but imports regulated via long-term contract with Gazprom (USD 165/tcm)

## Oil and oil products

- Armenia imports no crude oil due to lack of refineries or need for crude utilisation
- Oil products are only 12% of TES, one of the lowest shares globally; 73% of imports from RUS; but no significant price increases given that RUS oil is sold at historical discounts
- Implication: balance of payments shock of only 0.5% of GDP in 2002; significantly lower than in other energy importing countries

➤ **Moderate effect of higher energy prices**

Effect of higher energy prices in selected countries

	Effect as % of GDP
Armenia	0.5%
Georgia	2.1%
Moldova	3.5%
Kosovo	4.4%

Source: own estimations

## 4. Implications of higher wheat import prices

### Wheat price shock

	Wheat
Net quantity imported p.a.	268 thsd t
Import price before war*	255 EUR/t
Expected import price**	349 EUR/t
Price differential	94 EUR/t
Additional cost p.a.	EUR 25 m
<b>Additional cost p.a., % GDP</b>	<b>0.2 %</b>

Sources: Comtrade, World Bank, Marketwatch, own calc.; \*avg. 2021 for wheat;  
\*\*avg. 2022 future prices for wheat

### Wheat

- UKR is a major wheat producer; exports this year will go down significantly due to war
  - Implication: much higher global wheat prices
  - Assuming prices remain high, ARM will face additional expenditures of EUR 25 m or 0.2 % of GDP in 2022
- **Balance of payments shock of 0.2% of GDP due to higher wheat prices**

**Furthermore:** negative effect of higher prices for other food products

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# Direct effect

## due to economic links with RUS

# Two scenarios for RUS in 2022: overview

Direct effect: two scenarios for RUS and implications for ARM

Assumptions for 2022	Scenario 80	Scenario 100
RUB/USD exchange rate, aop	80; strong Ruble	100; weak Ruble
RUS GDP in USD	No decline	Decline by ca. 20%
Implications for ARM		
Exports to RUS	No effect	Drop by 0.9% of GDP
Remittances from RUS	Moderate decline by 1.4% of GDP	Strong drop by 2.3% of GDP
Tourism revenues from RUS	Likely to increase	Likely to increase
Overall	Moderate direct effect	Substantial direct effect

Sources: own estimates

## ➤ Magnitude of direct effect depends largely on RUB/USD exchange rate

In the following slides: more detail discussion of direct effect under two scenarios

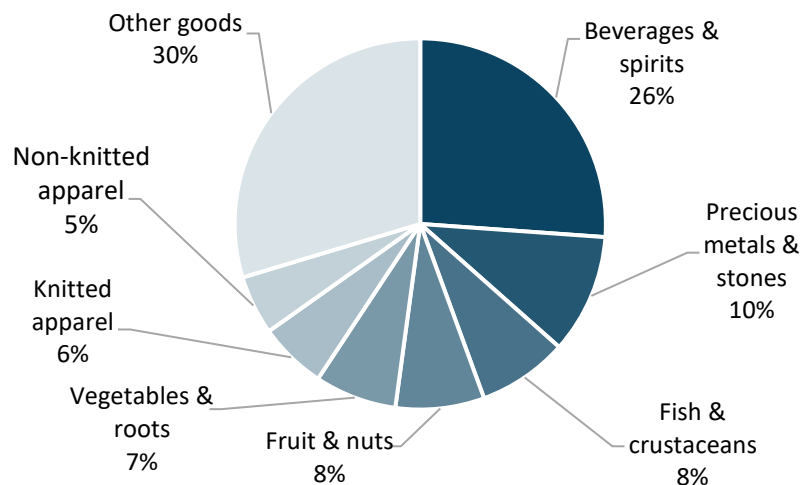
## 5. Implications for exports to Russia

ARM exports of goods to RUS



Source: WITS, own estimates

Structure of ARM exports to RUS, 2021



Source: WITS, own estimates

### ARM exports of goods to RUS, 2021:

- USD 800 m, 29% of total goods exports
- Share in GDP: 5.9%
- **Significant role of RUS market**

### Export structure by products, 2021:

- Agriculture & food: 61%
- Apparel & footwear: 12%
- Stones & glasses: 11%
- **Exports of agro-food is most exposed**

# Estimation of impact on exports

**Scenario 80:** no or very limited effect on ARM exports to RUS expected

**Scenario 100:** total losses of exports amount to **USD 122 m or 0.9% of GDP**

Scenario 100: effect on exports of main product groups in 2022

HS	Product Description	Impact on ARM exports to RUS, USD m	Impact on ARM total exports, USD m
220820	Spirits obtained by distilling grape	-12	-12
7102	Diamonds, whether or not worked	-28	0
030211	Trout, fresh or chilled	-10	-10
61	Apparel, knitted	-9	-9
0702	Tomatoes, fresh or chilled	-9	-9
62	Apparel, non-knitted	0	0
0809	Apricots, cherries, peaches	-7	-7
7103	Precious stones, other than diamonds	-4	-2
240220	Cigarettes	0	0
0406	Cheese and curd	-1	-1
	Other products*	-72	-72
	<b>Total</b>	<b>-152</b>	<b>-122</b>
	<b>% of GDP</b>	<b>-1.1%</b>	<b>-0.9%</b>

Source: WITS, own estimates; \* benchmark response for RUS imports from ARM (excl. top-10 products), 2015 vs 2013: 1.12

# Policy recommendations on exports for scenario 100

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## **Spirits obtained by distilling grape**

- RUS can no longer import FRA cognac & ESP brandy
- Therefore, ARM could replace FRA cognac & ESP brandy, which is not shipped to RUS anymore

## **Diamonds**

- Exports could be reoriented to Switzerland (CHE)

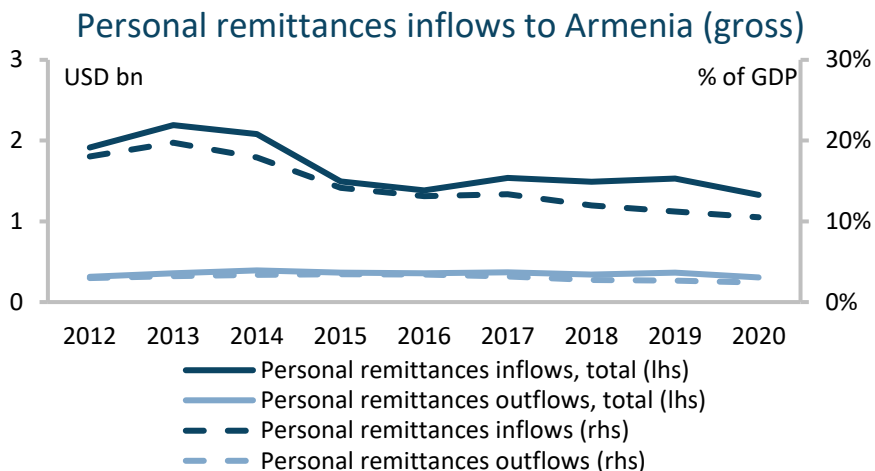
## **Non-knitted apparel**

- EU firms offering non-knitted apparel left RUS market
- ARM could aim to replace these products, which are no longer available on the RUS market

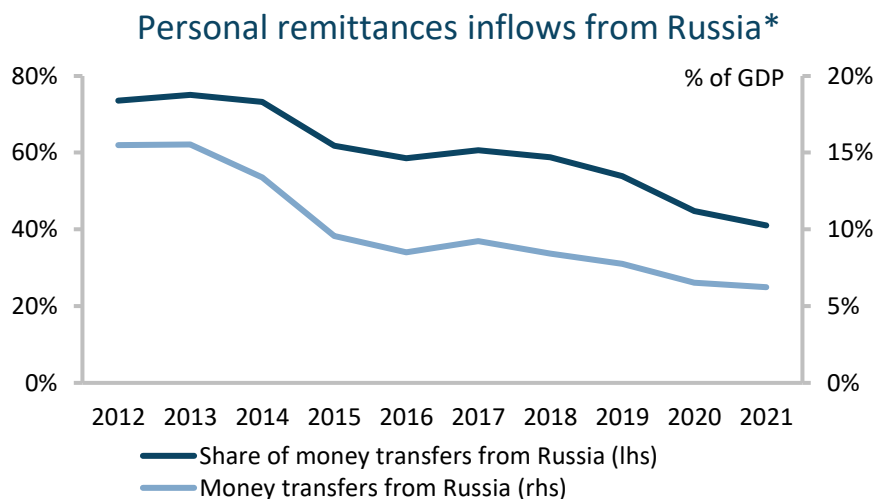
## **Precious stones**

- Some potential for reorientation toward the EU & USA

## 6. Implications for remittances from Russia



Sources: Central Bank of Armenia, IMF, own calculations; Note: personal remittances = personal transfers + compensation of employees



Sources: Central Bank of Armenia, IMF, own calculations, \*based on money transfer data

- Remittances\* play a key role for the economy of ARM
  - USD 1.3 bn (10.5% of GDP) in 2020
  - Not a component of GDP, but support economic demand
- Share of RUS has decreased, but RUS remains main source
  - 2013: 75% of inflows
  - 2020: 41% of inflows
- Remittances from RUS, 2021
  - USD 865.6 m or 6.2% of GDP
- **Important role of remittances from RUS for the ARM economy**

\*Remittances are approximated by money transfer data, which was a good proxy before the war; after the war money transfers have increased because they also include personal transfers of Russians who moved to ARM



# Expected effect on remittances from RUS

Effect of war/sanctions on remittances from RUS, 2022

	Scenario 80		Scenario 100	
	USD m	% of GDP	USD m	% of GDP
<b>Expected effect on remittances from RUS</b>	<b>-216.3</b>	<b>-1.4%</b>	<b>-354.9</b>	<b>-2.3%</b>
Maximum exposure	-864.4	-5.5%	-864.4	-5.5%

Source: own calculations

## Scenario 80

- Remittances from RUS to drop by ca 25%
- Balance of payments shock: 1.4% of GDP

## Scenario 100

- Remittances from RUS to drop by ca 40%
- Balance of payments shock: 2.3% of GDP

➤ **Significant negative effect on remittances from RUS in both scenarios**

# 7. Implications for tourism revenues from RUS

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RUS invasion of UKR will affect ARM tourism revenues in 2022 in three main ways:

## 1. Price & income effect → negative

- RUS GDP in USD will decline in 2022 (scenario 100)
- The resulting income shock will lower propensity to spend money on tourism

## 2. Substitution effect → positive

- Without the war, many RUS would have spent their vacation in popular tourist destinations (e.g. in Western Europe)
- However, due to the war, RUS tourists face obstacles when visiting countries which introduced sanctions (e.g. payment systems, flight connections etc.)
- As a result, some RUS will spend their vacation in RUS. However, others look for substitute destinations (such as ARM)

## 3. Influx effect → positive

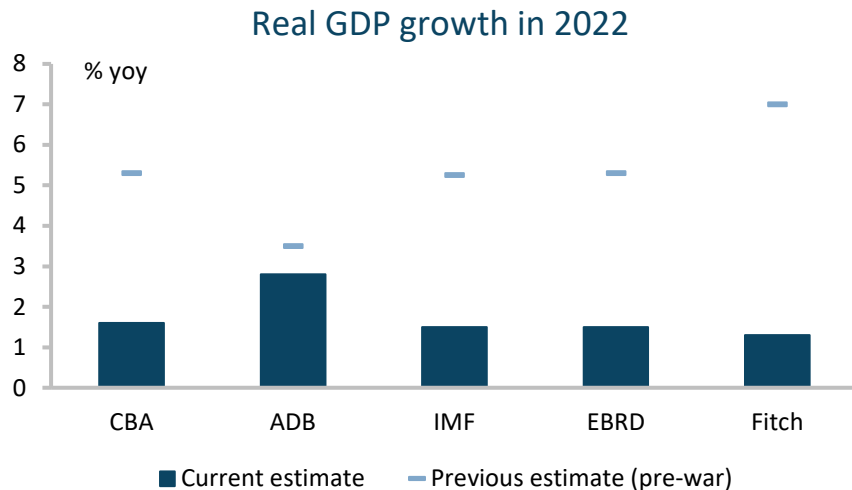
- The war has caused a significant influx of (high-skilled) Russians into ARM, whose expenditures will (temporarily) increase tourism revenues
- Effect is difficult to estimate due to high uncertainty of underlying factors (number of people, avg. expenditure, length of stay, etc.)

➤ **Forecast not feasible, but net effect likely to be positive in both scenarios**

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# Macroeconomic implications

# 8. Effect on economic growth



Source: respective institutions; CBA (15. March 2022), ADB (6. April 2022), IMF (3. May 2022), EBRD (8. May 2022), Fitch (8. April 2022)

## Regional comparison of real GDP forecasts for 2022

	Current forecast (% yoy)	Change in forecast (pp)
Armenia	1.6	-3.7*
Georgia	3.5	-1.5
Azerbaijan	3.7	1.2
Russia	-10.0	-12.0
Germany	2.1	-1.9
EU-19	2.8	-0.7

Sources: CBA (15. March 2022), ADB (6. April 2022), Goldman Sachs (21. March 2022), IfW Kiel (March 2022); \*excl. GDP reduction due to supply issues in copper industry

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## Pre-war GDP forecasts for 2022

- High forecasts by most institutions
- CBA: 5.3%\*

## Forecast revision

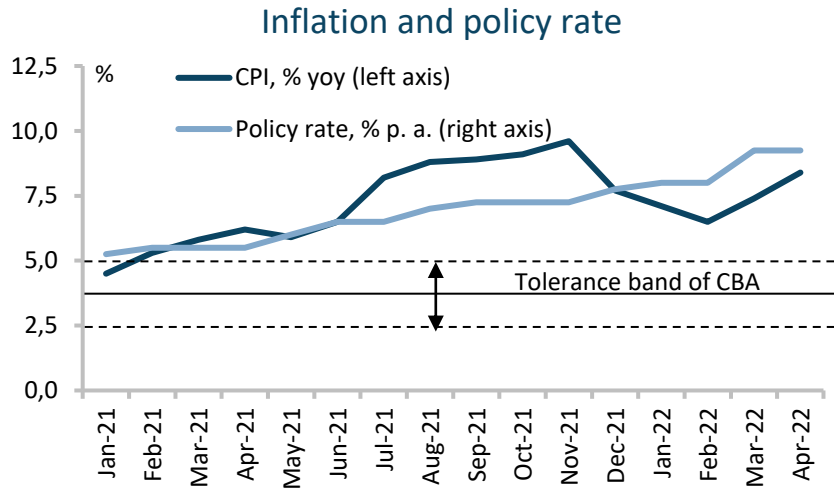
- Strong downward forecast revision, soon after the start of war
- CBA: 1.6%, i.e. 3.7 pp lower

## Latest situation

- RUB stronger than expected, due to massive financial restrictions in RUS
  - Implications: lower drop in ARM exports to RUS and in remittances from RUS
  - On top: potential upsides via high-skilled migration & relocation of RUS firms
- **Negative effect on GDP growth, but likely less than currently forecast**

\* excl. supply constraints in copper industry which led to a 0.3 pp forecast reduction

# 9. Effect on inflation



Source: Armstat

## Exchange rate



Source: CBA

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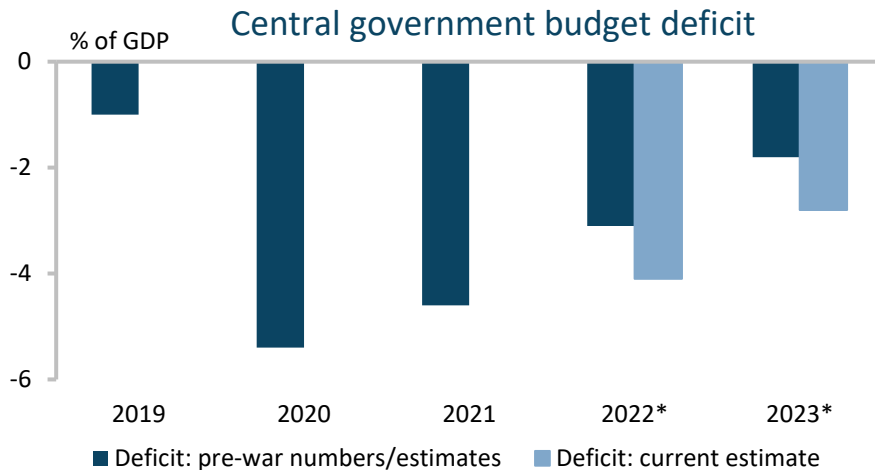
## Inflation

- 2021: high inflation driven by food prices (36% of CPI basket)
- 2022: further increase of food prices due to war in UKR
- But: ARM somewhat isolated from higher energy prices due to war
- Thus: limited effect of war on inflation
- CBA hiked its policy rate by 125bp since start of the war to anchor expectations

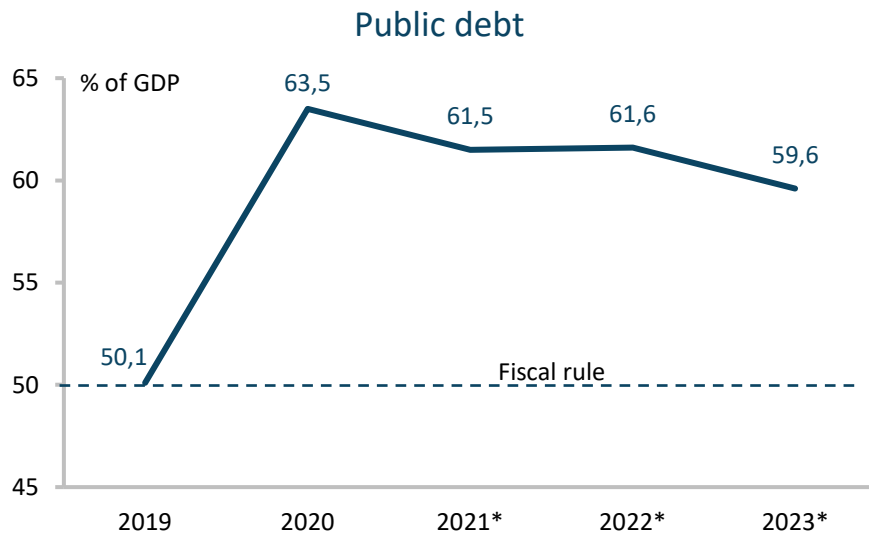
## Exchange rate

- Depreciation after start of war in UKR
- But exchange rate stable; below Jan-21
- **Limited effect of war on inflation**
- **CBA needs to maintain tight monetary policy to anchor expectations**

# 10. Fiscal implications



Source: Ministry of Finance, \*IMF forecast



Source: IMF, \*estimation/forecast, note: central government's public and publicly-guaranteed debt, estimates before start of war in UKR

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## Budget deficit

- Original plan for 2022: 3.1% of GDP
- However, deficit likely to be higher (4.1% of GDP), due to two reasons
  - Lower revenues due to reduced economic growth
  - Probably considerable expenditures to deal with migration of (ethnic) Armenians from RUS later this year

## Public debt

- Eurobond spread increased strongly, but maturity in 2031; no immediate concern
- Renewed staff-level agreement and cooperation with IMF important

➤ **Possible role of donors in financing additional expenditure due to migration from RUS later this year**

# About the German Economic Team



Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments of Ukraine, Belarus\*, Moldova, Kosovo, Armenia, Georgia and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

*\*Advisory activities in Belarus are currently suspended.*

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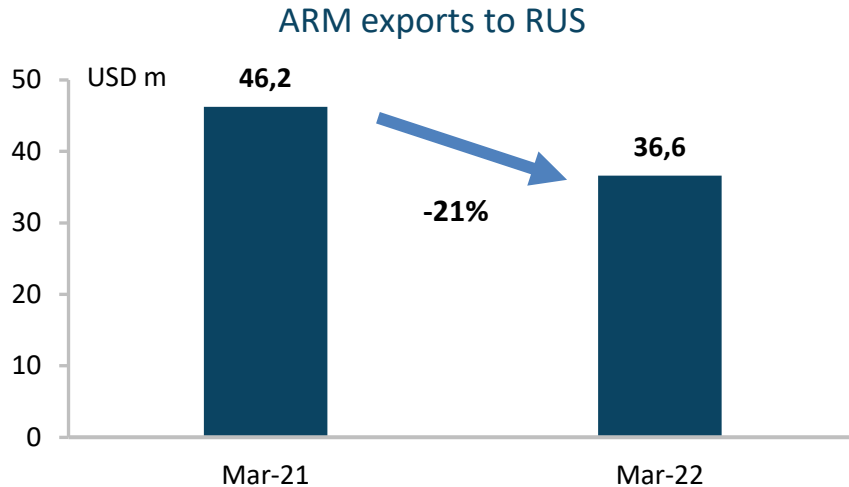
# Annex 1: effect on exports of top-10 products (scenario 100)

HS	Product Description	Price & income	Substitution	Exports to RUS	Reorientation	Total exports
220820	Spirits obtained by distilling grape	-46	34	-12	0	-12
7102	Diamonds, whether or not worked	-28	0	-28	28	0
030211	Trout, fresh or chilled	-10	0	-10	0	-10
61	Apparel, knitted	-9	0	-9	0	-9
0702	Tomatoes, fresh or chilled	-9	0	-9	0	-9
62	Apparel, non-knitted	-8	8	0	0	0
0809	Apricots, cherries, peaches	-7	0	-7	0	-7
7103	Precious stones, other than diamonds	-4	0	-4	2	-2
240220	Cigarettes	0	0	0	0	0
0406	Cheese and curd	-1	0	-1	0	-1
	Other products	-72	0	-72	0	-72
	<b>Total</b>	<b>-194</b>	<b>42</b>	<b>-152</b>	<b>30</b>	<b>-122</b>

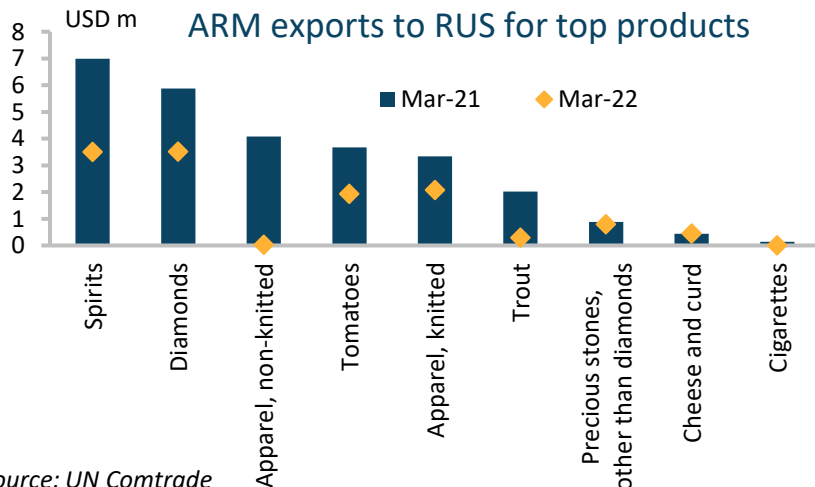
Source: WITS, own estimates



# Annex 2: exports to RUS in March 2022



Source: UN Comtrade

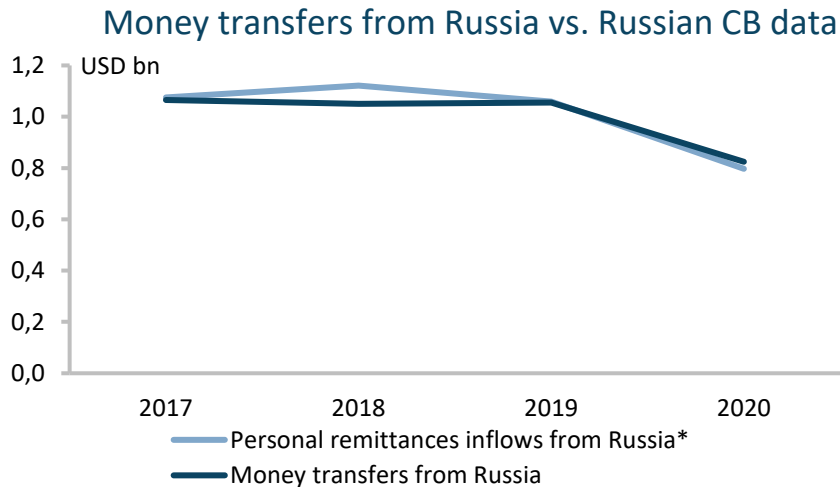


Source: UN Comtrade

- ARM exports to RUS decreased by 21% yoy (or USD 10 m) in Mar-2022
- In particular: exports of spirits, diamonds, tomatoes, trout and apparel decreased significantly
- For non-knitted apparel, the decrease is stronger than expected
  - Predicted substitution effect for non-knitted apparel expected to appear only in several months
  - Reason: existing inventories & adjustment time for consumers to change consumption pattern

➤ **Strong effect of war in UKR on ARM exports to RUS, at least in the very short term**

# Annex 3: remittances vs. money transfers from RUS



Sources: Central Bank of Armenia, Rosstat, \*based on RUS statistics for remittances sent to ARM



Source: Central Bank of Armenia

- Before the war: money transfers were a good proxy for remittances
- Mar/Apr-22: significant increase of money transfers to ARM
- These transfers, however, are not remittances per definition
  - After the start of the war, many Russians came to temporarily live in ARM and opened bank accounts
  - As such, amount of money transfers significantly increased due to transfers by Russian nationals to their Armenian bank accounts

➤ **The money transfer data is no longer representative for remittances**