NINETY-SIXTH INTERNATIONAL ATLANTIC ECONOMIC EUROPEAN CONFERENCE

PLENARY PANEL:
THE ROADS TO MONETARY STABILITY

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INTERNATIONAL ATLANTIC ECONOMIC SOCIETY

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PLENARY PANEL:
THE ROADS TO MONETARY STABILITY

Chair:
Robert Z. Aliber

OVERVIEW

- FEATURES OF MONETARY INSTABILITY
- SYNOPTIC HISTORY
- FLEXIBLE EXCHANGE RATES—COMPELLING PROMISES, MISERABLE PERFORMANCES
- HOW MANY SEATS AT THE NEGOTIATING TABLE FOR MONETARY REFORM?
- MANAGING THE PRICE OF THE U.S. DOLLAR
- MANAGING THE SUPPLY OF RESERVE ASSETS AND THE U.S. DOLLAR PRICE OF GOLD

FEATURES OF MONETARY INSTABILITY

- MORE THAN SEVENTY BANKING CRISES
- MASSIVE VARIABILITY IN PRICES OF CURRENCCIES
- SHARP VARIABILITY IN PRICES OF STOCKS AND REAL ESTATE
- UNPRECEDENTED REVERSAL IN U.S. INTERNATIONAL INVESTMENT
- POSITION—FROM LARGEST CREDITOR TO LARGEST DEBTOR

SYNOPTIC HISTORY

- World War I -WHY THE UNITED STATES BECAME A CREDITOR COUNTRY
- 1930s-MASSIVE DECLINE IN TRADE--“BEGGAR THY NEIGHBOR” POLICIES
- 1940s-IMF RULES ON MANAGING CHANGES IN THE PRICES OF CURRENCIES
- 1950 and 1960s-PERSISTENT U.S. TRADE SURPLUS/PAYMENTS DEFICIT
- 1971-U.S. OPTIONS: INCREASE U.S. GOLD PRICE OR CLOSE GOLD WINDOW

FLEXIBLE EXCHANGE RATES—COMPELLING PROMISES, MISERABLE PERFORMANCES 5

- PROMISES
- SMALLER DEVIATIONS BETWEEN MARKET AND REAL PRICES OF CURRENCIES
  FEWER BANKING CRISES

- PERFORMANCE
- MUCH LARGER DEVIATIONS AND MANY MORE FINANCIAL CRISES

- WHY THE PERFORMANCE DIFFERED– PROPONENTS IGNORED CROSS BORDER TRADE IN SECURITIES
- MUCH LARGER/MANY MORE FREQUENT MONEY MARKET SHOCKS
- MONEY MARKET SHOCKS DISRUPT GOODS MARKET EQUILIBRIUM
- MONEY MARKET SHOCKS LEAD TO SPIKES IN ASSET MARKETS

HOW MANY SEATS AT THE TABLE?

- WHICH POLICY OPTIONS ARE AVAILABLE TO THE UNITED STATES?
- MANAGE ACCESS TO U.S. DOLLARS
- MANAGE THE U.S. DOLLAR PRICE OF GOLD

INSULATING THE GOODS MARKETS FROM MONEY MARKET SHOCKS

- TINBERGEN MIS-MATCH—TWO TARGETS/ONE INSTRUMENT

- POLICY RESPONSE—INTRODUCE A SECOND INSTRUMENT–
- A SECOND EXCHANGE RATE FOR MONEY MARKET TRANSACTIONS
- A TAX ON CROSS BORDER INVESTMENT FLOWS
- NON-PRICE CONTROLS ON CROSS BORDER INVESTMENT INFLOWS

MANAGING INTERNATIONAL LIQUIDITY 8

- A U.S. INITIATIVE TO RE-INTRODUCE GOLD AS A RESERVE ASSET
- U.S. TREASURY BUYS AND SELLS GOLD AT $2,067 +/- 10 PERCENT

CONCLUSION

- FLEXIBLE EXCHANGE RATE ARRANGEMENT
- “THEORY” IS INTELLECTUALLY BANKRUPT—IGNORES CROSS-BORDER
- TRADE IN SECURITIES
- IMMENSE COST TO GLOBALIZATION—CHANGES DISRUPT GOODS
- HIGH COSTS TO U.S. ECONOMY

- SEGMENT CROSS BORDER MONEY FLOWS

- RE-INTRODUCE GOLD HAS A RESERVE ASSET

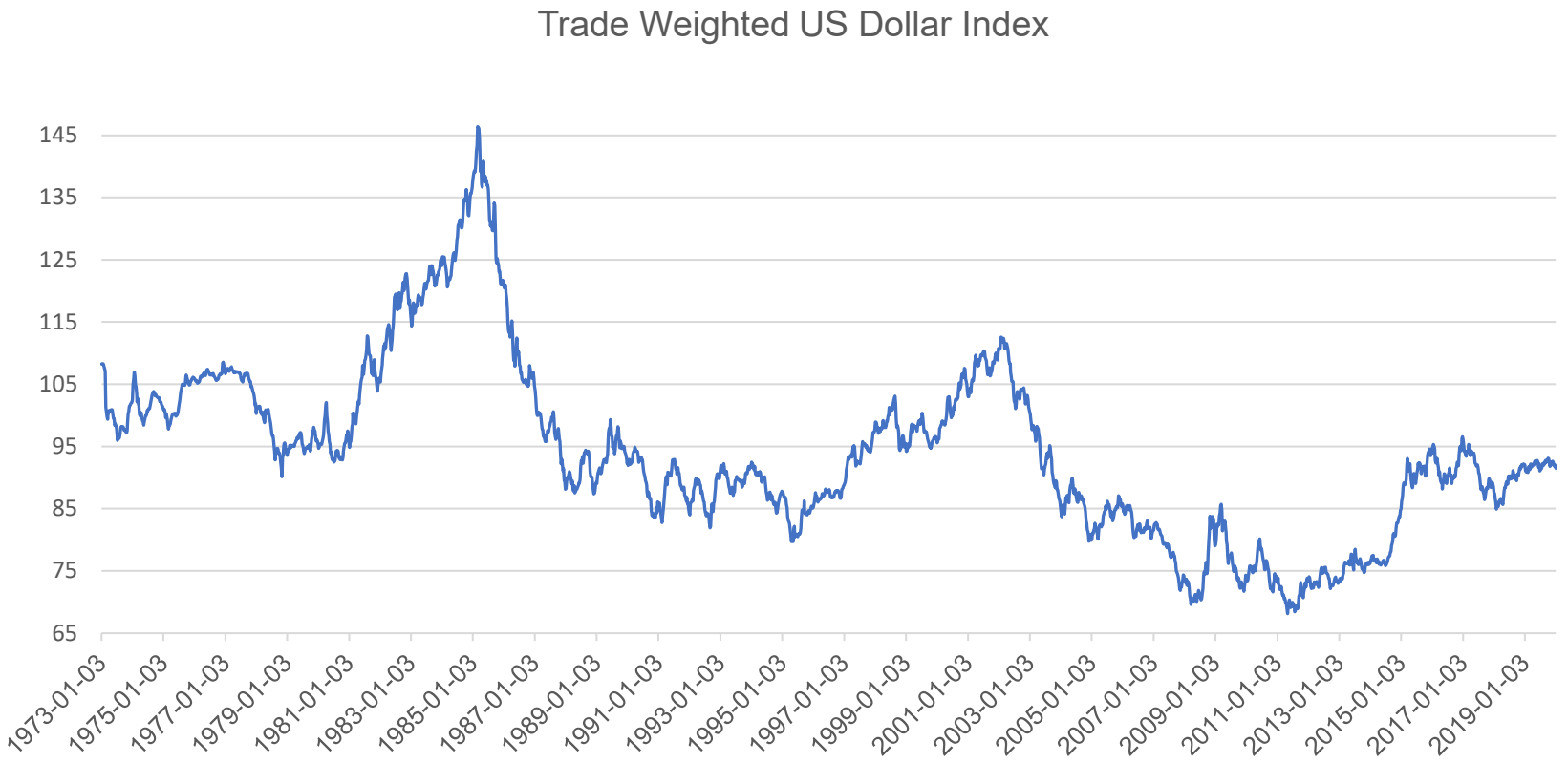
OBSTACLES TO FINANCIAL STABILITY

Nicholas P. Sargen

Atlantic Economic Conference

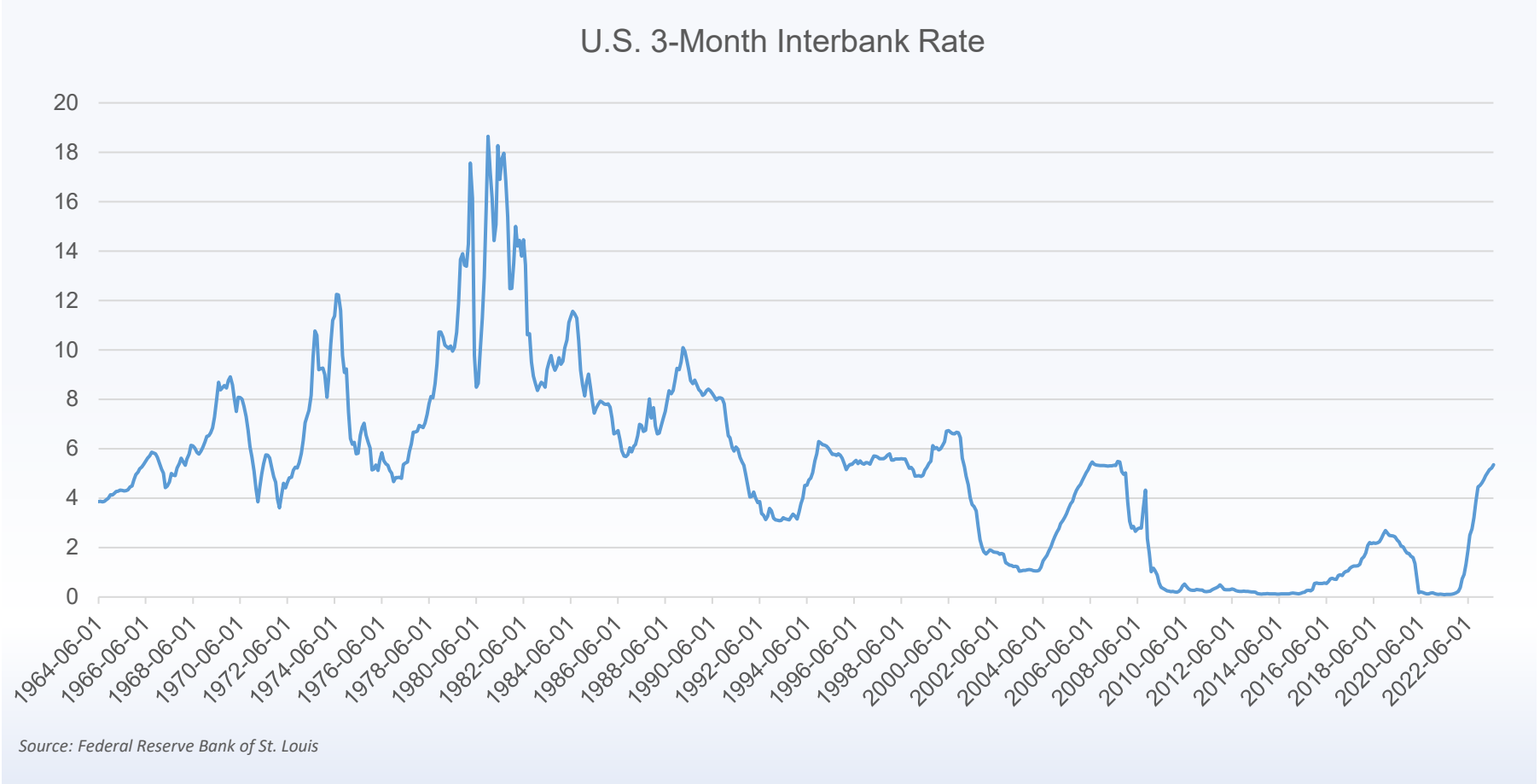
October 7, 2023

FLUCTUATIONS IN THE VALUE OF THE U.S. DOLLAR OVER THE PAST 50 YEARS



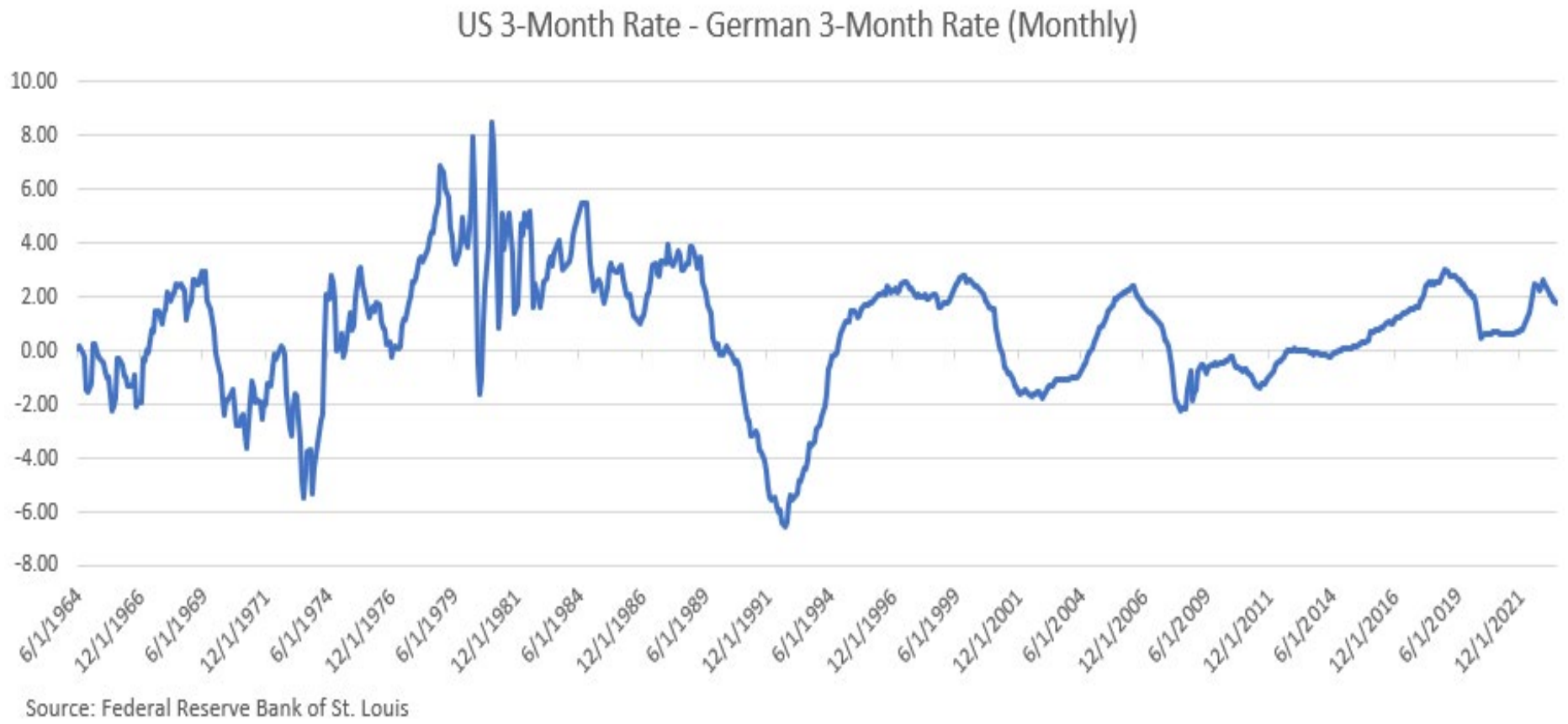
Source: Federal Reserve Bank of St. Louis

U.S. INTEREST RATE FLUCTUATIONS SINCE THE MID-1960S



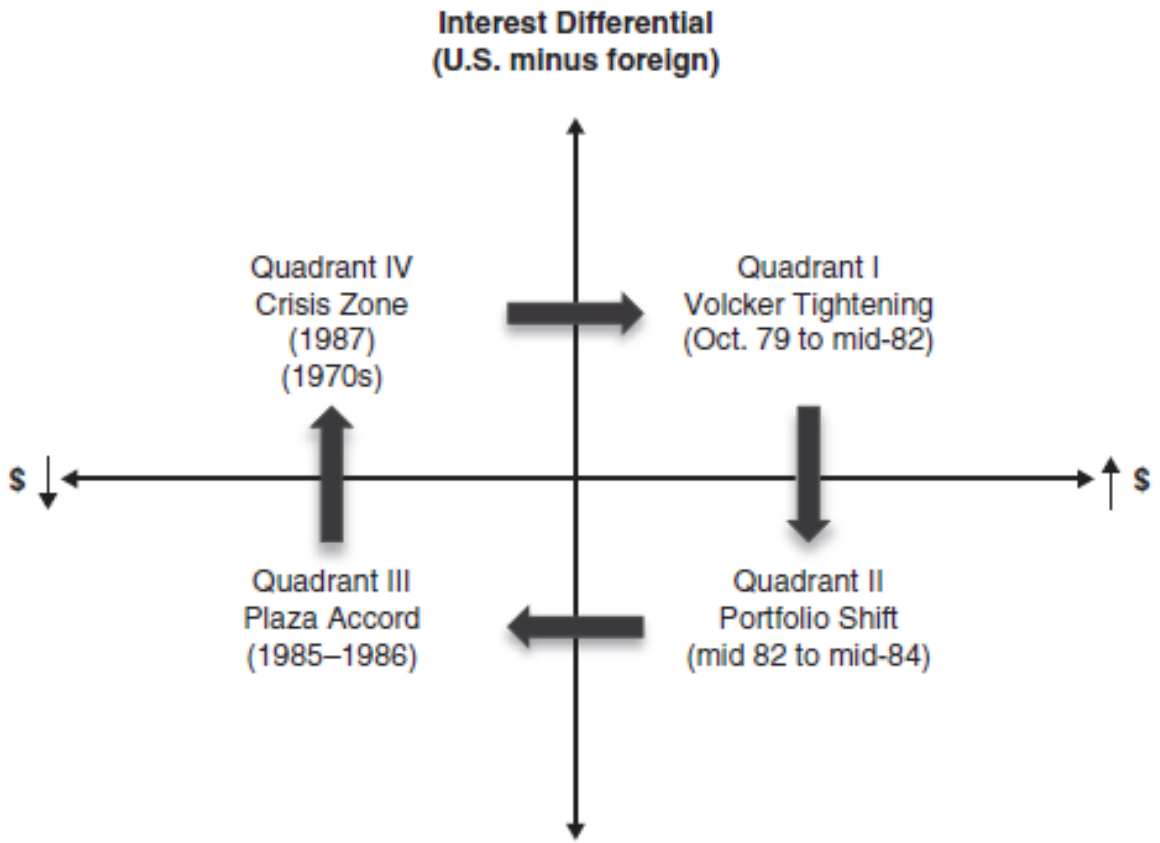
Source: Federal Reserve Bank of St. Louis

SHORT-TERM INTEREST RATE DIFFERENTIAL: U.S. VERSUS GERMANY

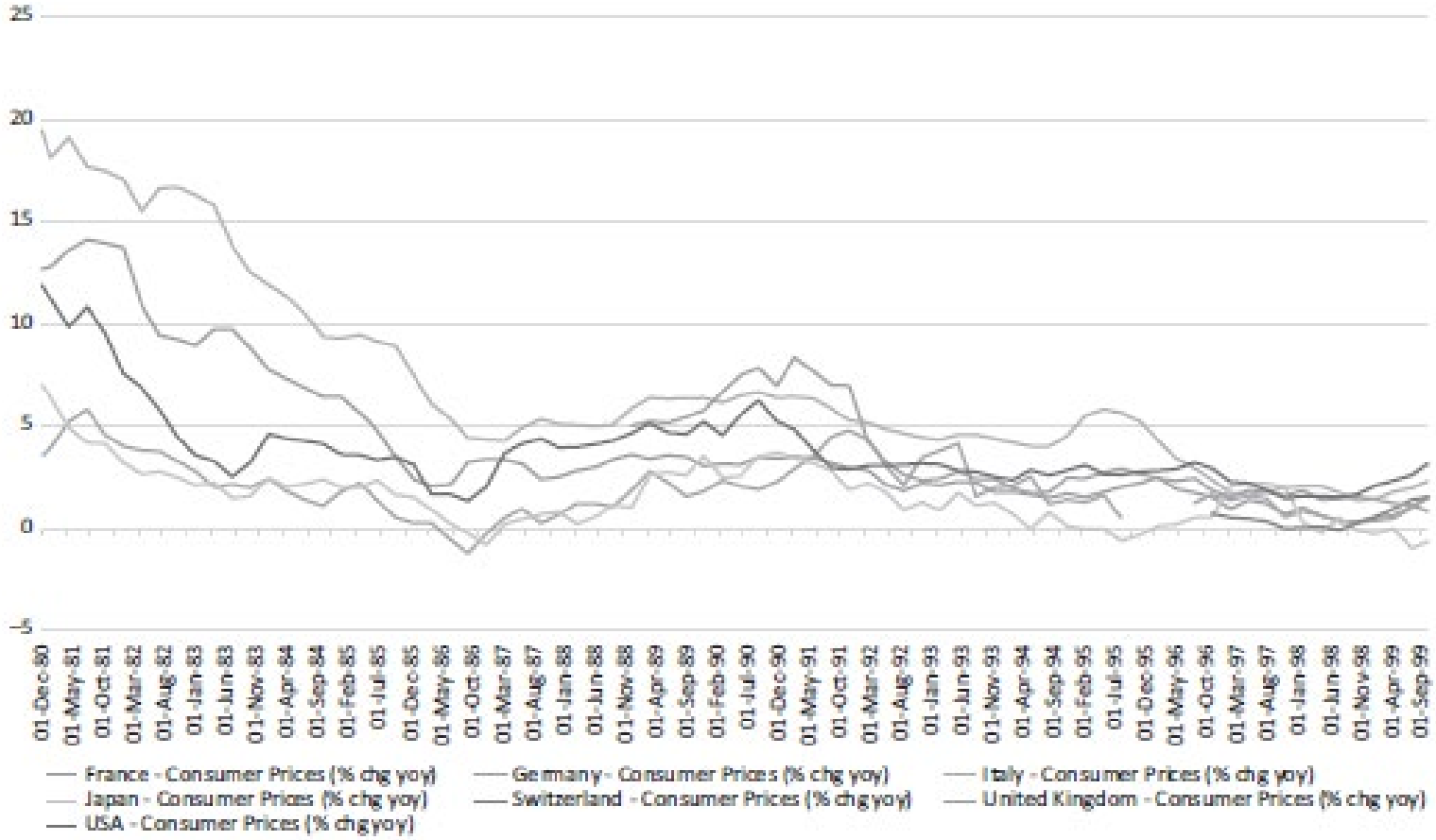


Source: Federal Reserve Bank of St. Louis

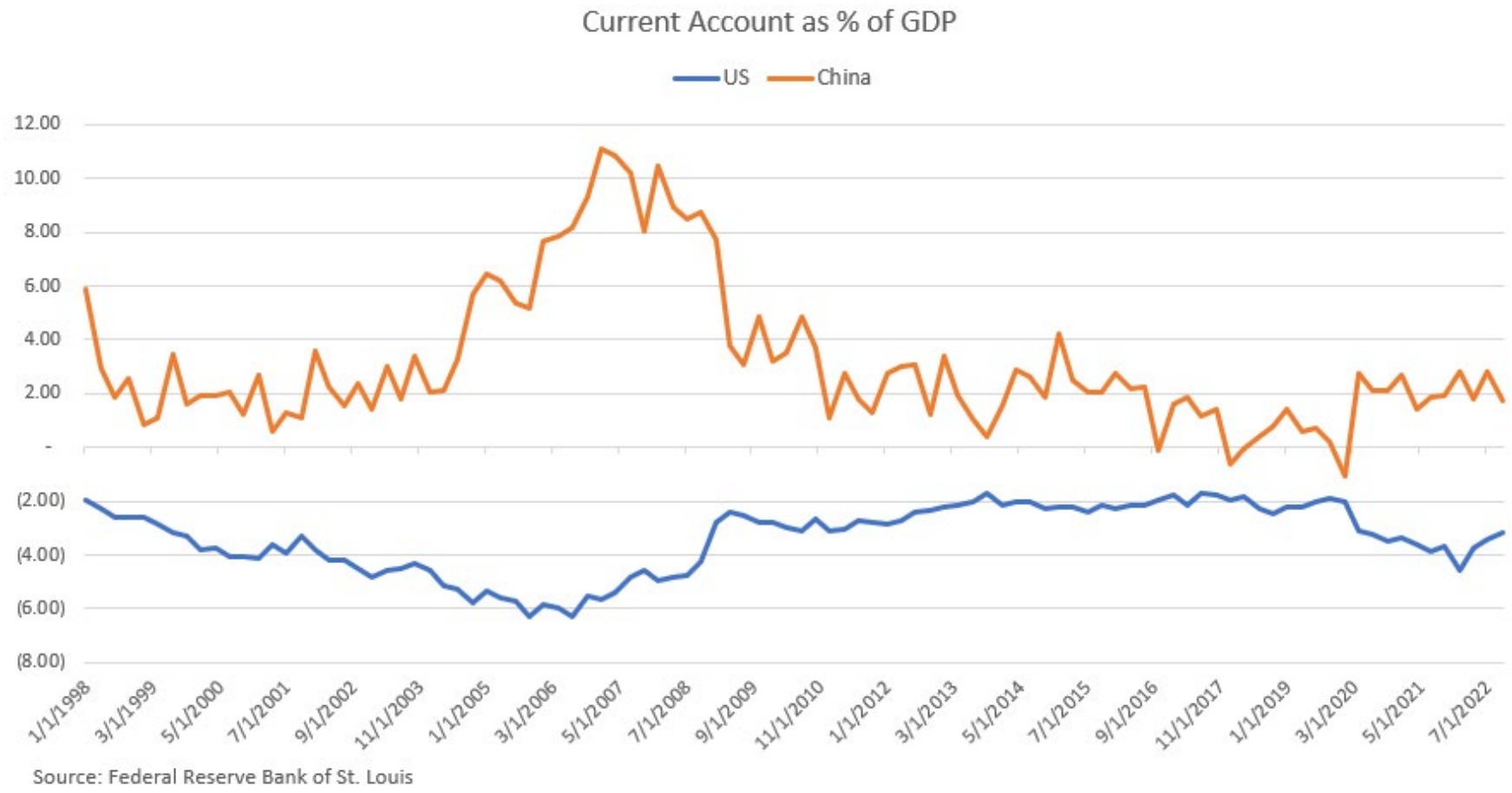
EXCHANGE RATE CHANGES AND INTEREST RATE DIFFERENTIALS, 1970-1980S



CONVERGE OF G-7 INFLATION RATES BY THE 1990S



CURRENT ACCOUNT IMBALANCES FOR THE US AND CHINA
(PERCENT OF GDP)



Source: Federal Reserve Bank of St. Louis

Financial stability and monetary stability nexus Mortgages…

SIGRIDUR BENEDIKTSDOTTIR

Roadmap
Monetary Policy and Financial stability nexus

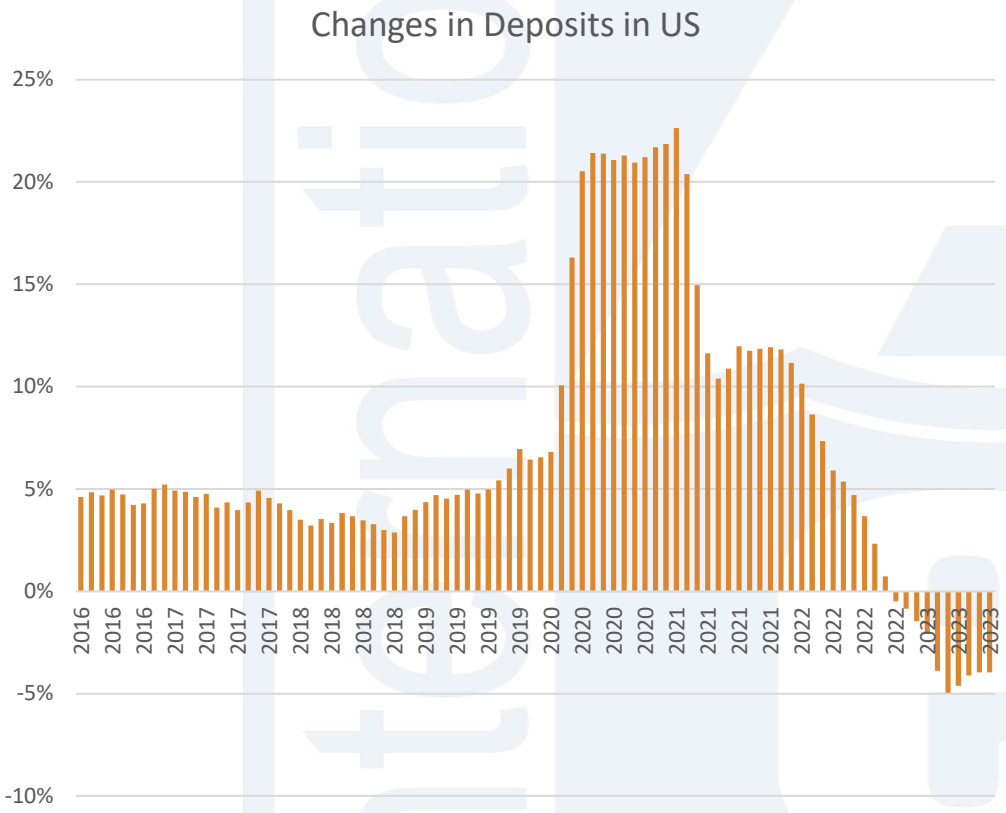
- Bank jitters in the spring of 2023 -> are monetary and financial stability at odds now?
- Monetary policy and Financial stability of households
  - Variable v.s. fixed rate mortgage loans

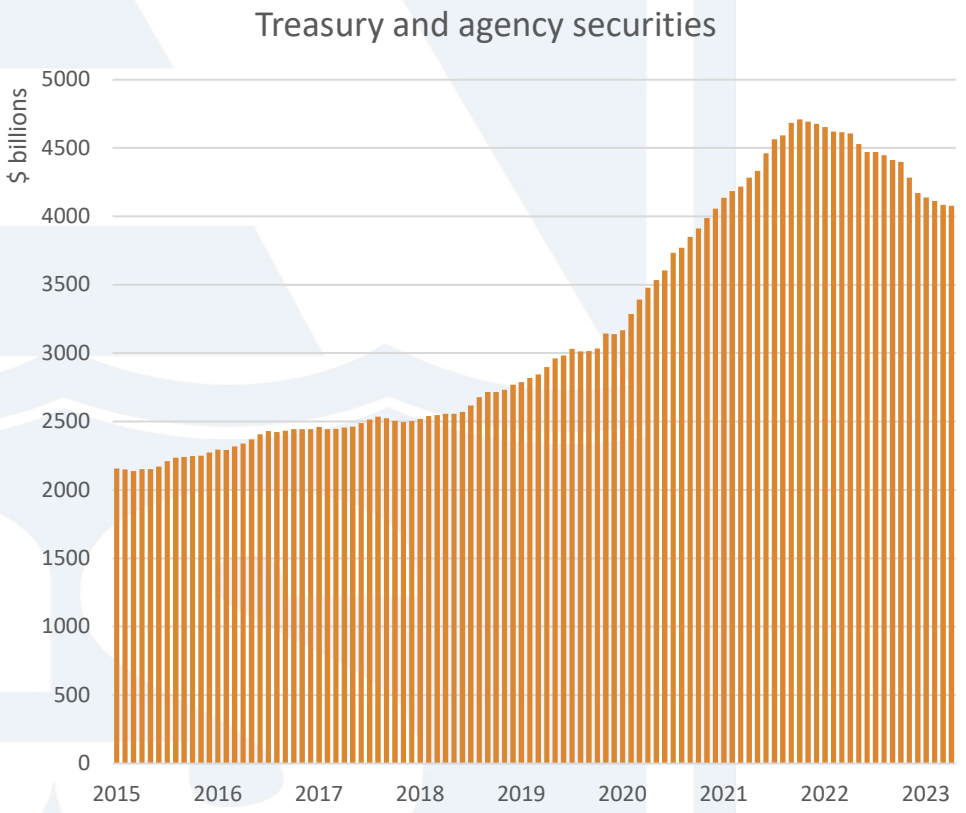
Spring of 2023

SVB AND CONTAGION TO OTHER BANKS

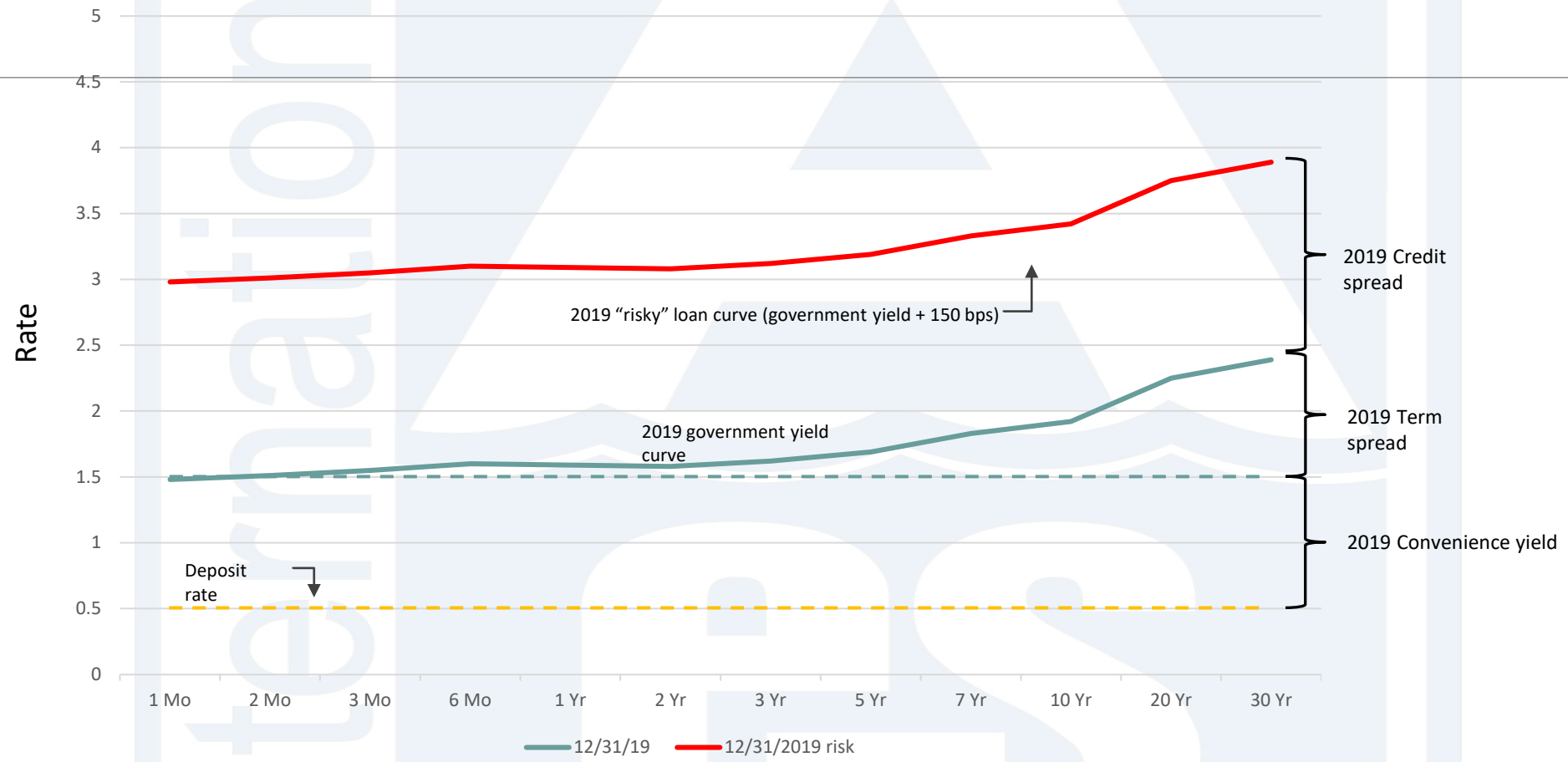
CREDIT SUISSE

Background. Deposit surge in the US

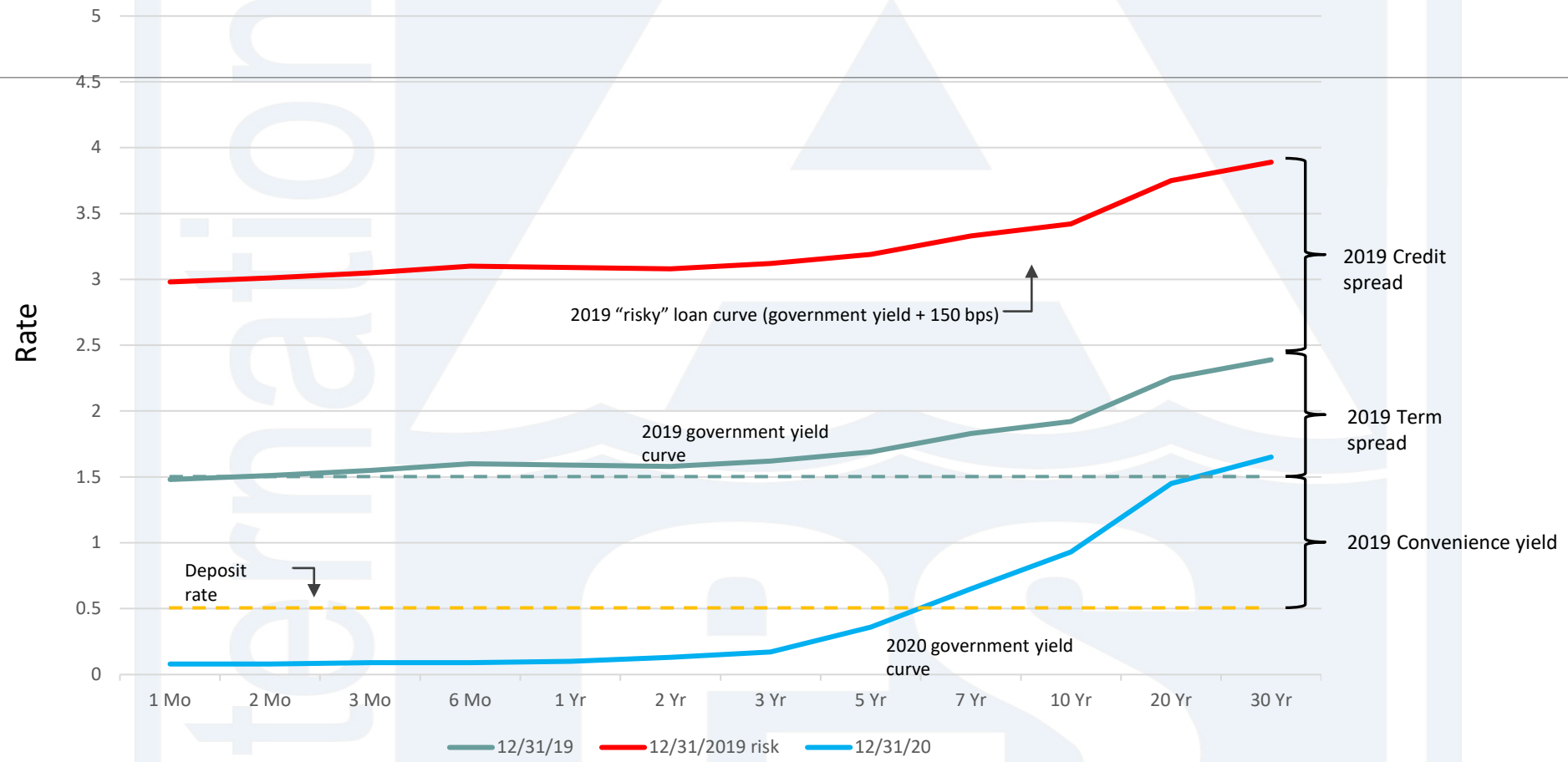


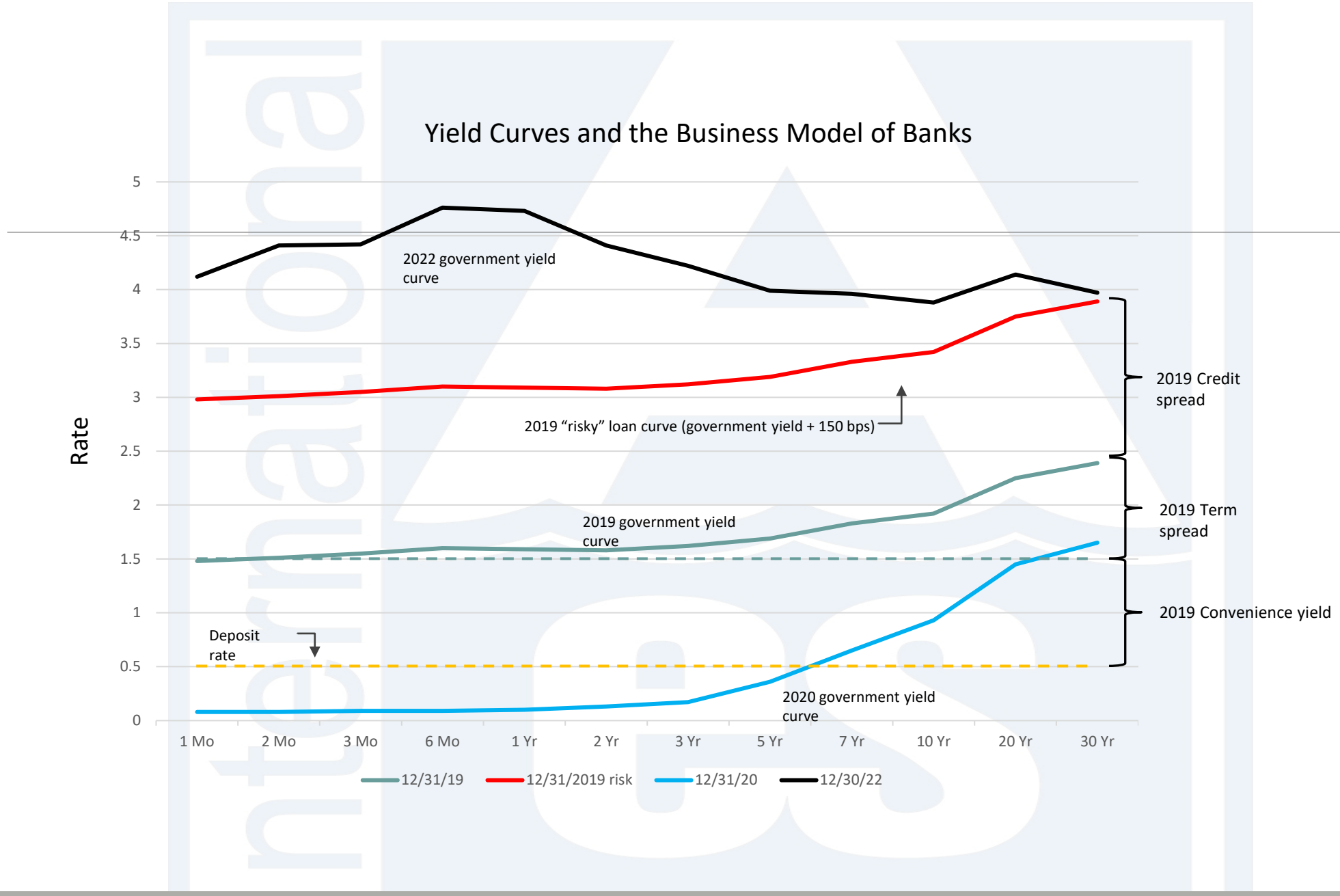


Yield Curves and the Business Model of Banks



Yield Curves and the Business Model of Banks




Yield Curves and the Business Model of Banks
Rate
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2022 government yield curve
2019 "risky" loan curve (government yield + 150 bps)
2019 government yield curve
Deposit rate
2020 government yield curve
2019 Credit spread
2019 Term spread
2019 Convenience yield
1 Mo
2 Mo
3 Mo
6 Mo
1 Yr
2 Yr
3 Yr
5 Yr
7 Yr
10 Yr
20 Yr
30 Yr
12/31/19
12/31/2019 risk
12/31/20
12/30/22

SVB

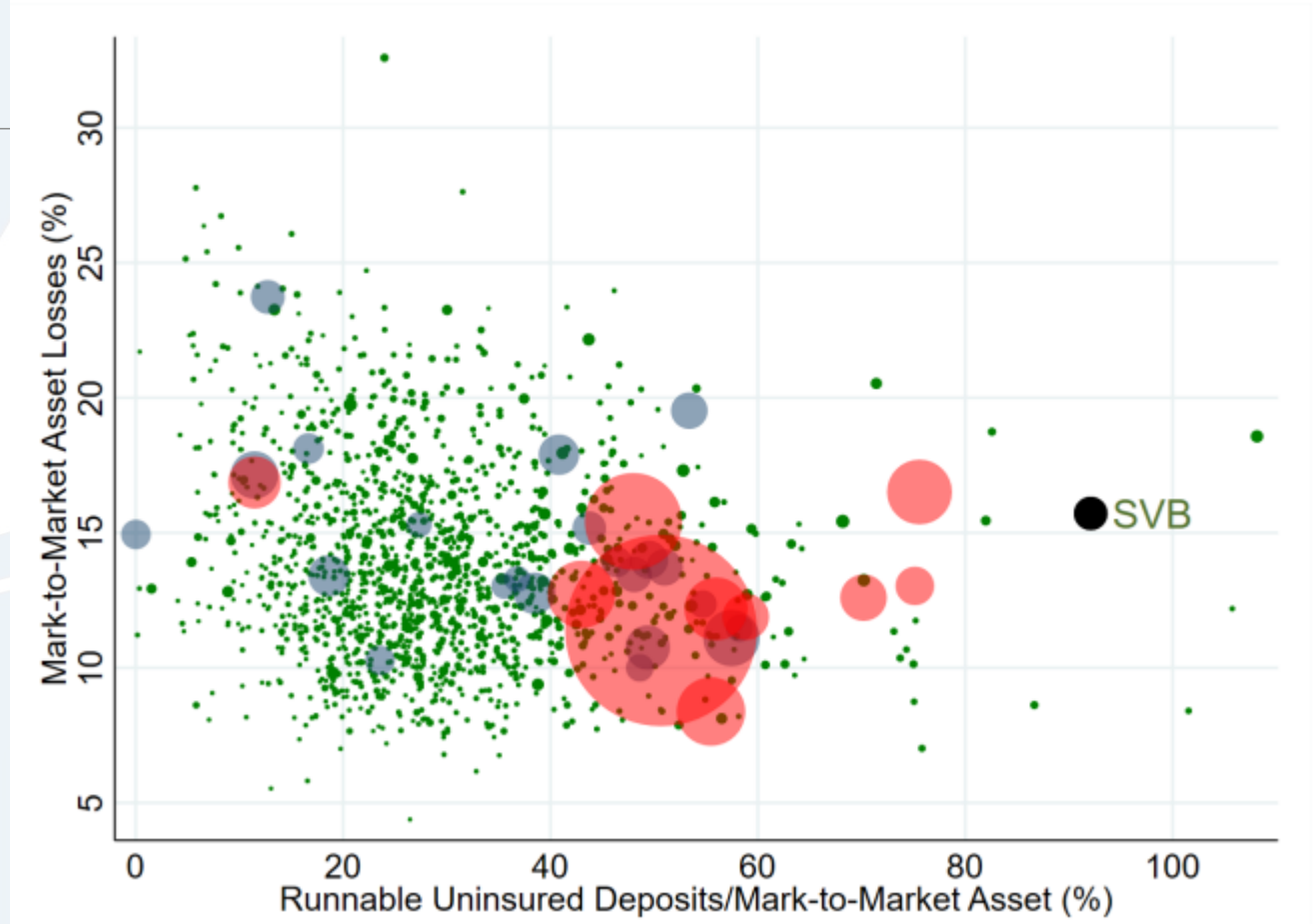
Fast deposit growth

Purchased Government securities … long term

Deposits mostly uninsured

→ Run riks

→ Interest rate risk



Source: Monetary Tightening And U.S. Bank Fragility In 2023: Mark-To-Market Losses And Uninsured Depositor Runs?, Seru et al (March 2023)

Regulatory and supervisory failure

Tailoring in 2019 relaxed a number of rules

- *LCR and NSFR*
- *Stress testing*
- *Resolution planning*

Banks with assets <$250 bn:

- No LCR or NSFR requirement, unless short-term wholesale funding exceeds $50 bn.
- Liquidity stress tests only quarterly, vs. monthly for bigger banks.

SVB. More than half of HQLA treasuries

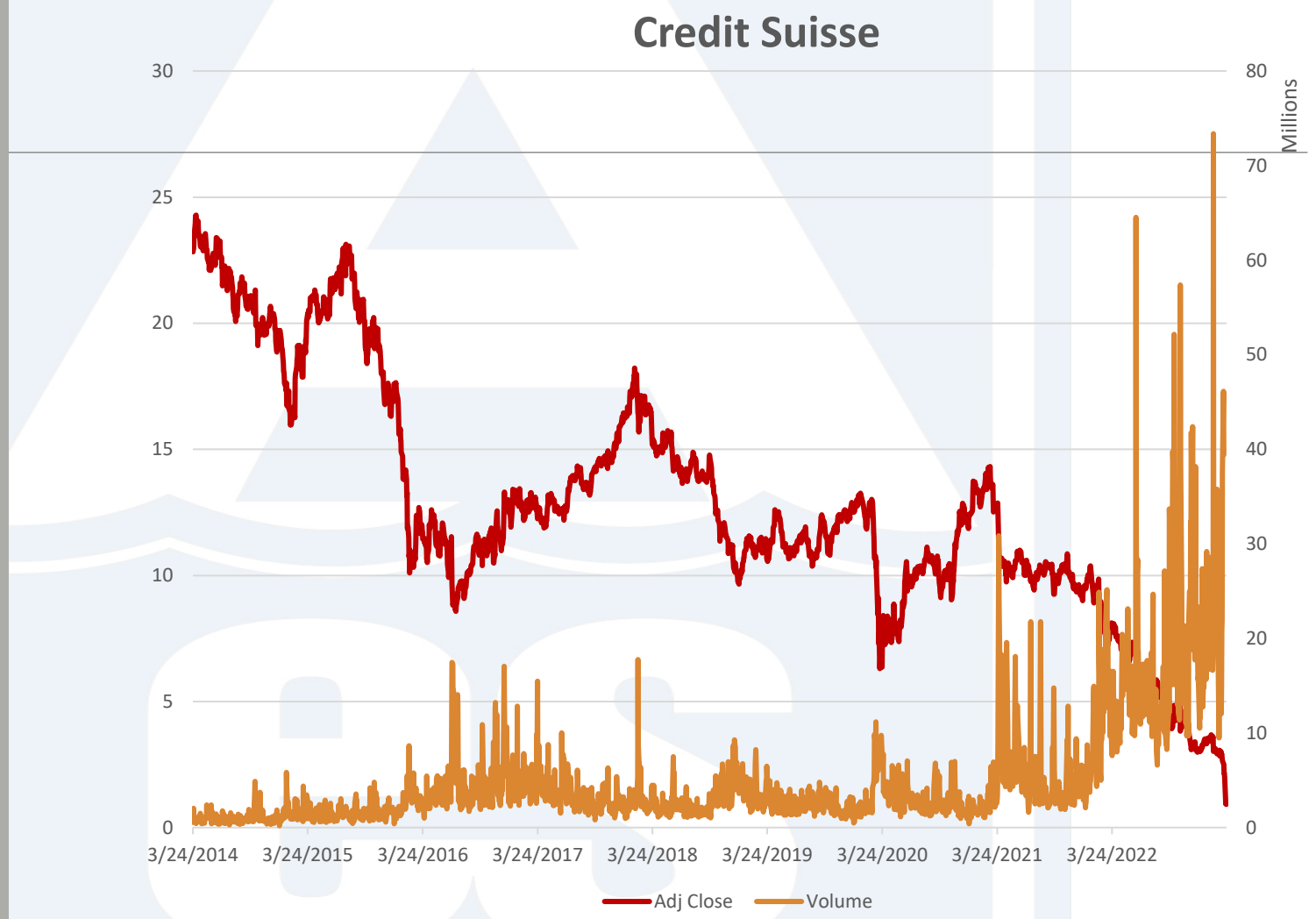
SVB. LCR just 75%, implying $18-$36 billion more HQLA if subject to the rule.

First Republic Bank: LCR of just 52%

LCR Calculations. Greg Feldberg	
Net cash outflow	$ 71 billion
LCR	75%
Liquidity shortfall @100% LCR	$ 18.1 billion
Liquidity shortfall @100% LCR	$ 35.8 billion

Credit Suisse

Badly run bank for a number of years.



Credit Suisse

Newsworthy losses

- Archegos
- Greensill
- Money laundering
  - Among other a settlement with French authorities in October 2022

Massive run on deposits October 2022.

Income statement just before the banks failure

	2022	2021
Statements of operations (CHF million)		
Net interest income	5,341	5,811
Commissions and fees	8,853	13,165
Trading revenues [1]	(451)	2,431
Other revenues	1,178	1,289
Net revenues	**14,921**	**22,696**
Provision for credit losses	**16**	**4,205**
Compensation and benefits	8,813	8,963
General and administrative expenses	7,782	7,159
Commission expenses	1,012	1,243
Goodwill impairment	23	1,623
Restructuring expenses	533	103
Total other operating expenses	9,350	10,128
Total operating expenses	**18,163**	**19,091**
Income/(loss) before taxes	**(3,258)**	**(600)**
Income tax expense	4,048	1,026
Net income/(loss)	**(7,306)**	**(1,626)**
Net income/(loss) attributable to noncontrolling interests	(13)	24
Net income/(loss) attributable to shareholders	**(7,293)**	**(1,650)**

- *Loss last year due to provisioning – now just operational!*
- *Exacerbated by reassessment of deferred taxes… ergo profits*

Conclusion

In the US.

- Risk management failure
- Supervisory and regulatory failure
- → not a MP and FS at odds issue

In Credit Suisse

- Long term risk management and governance failure
- → not a MP and FX at odds issue

In general are MP and FS at odds now?

… no, risks that rose during the low interest decade are materializing

Financial and monetary stability were at odds in the decade following the GFC

- instead of increasing resilience or leaning against increases in systemic risk US authorities rolled back a part of Dodd Frank

“When stance of monetary policy is accommodative over an extended period, the likelihood of financial turmoil down the road increases considerably … the causal pathways that lead to this result [are] credit creation and asset price overheating” (Grimm et al. NBER working paper series 2023)

Loose monetary policy increases risk-taking by financial institutions, firms and ***households.***

- Individual behavior rational … but in the aggregate not good

Grimm et. al.

Policymakers should take the dangers imposed by keeping policy rates low for long seriously, and thus weigh the potential short-run gains of loose monetary policy against potentially adverse medium-term consequences. Such policies increase the risk of financial crises and thus the risk of high social, political, and economic costs.

Monetary policy, financial stability and mortgage contracts

VARIABLE RATE LOANS V.S. FIXED RATE LOANS

Motivation for research

Importance of housing for households

- Largest asset
- Largest liability

Importance of housing for the economy

- A economic contraction that coincides with financial instability is longer lasting and deeper
- Downturns that coincide with a house price bust tend to be deeper and last longer than those that do not (Cerutti et al. 2015)
- “Equity and house prices cycles are typically longer and more pronounced than credit cycles” (Classens et. al. (2011)
- Spillovers to the rest of the economy via consumption, construction activity and credit

Research question

How do terms of mortgages effect the accumulation of systemic risk and amplification of economic cycles when monetary and financial policies are at odds

Focusing on variable v.s. fixed rate mortgage contracts.

Literature overview and questions
Monetary policy transmission

The transmission mechanism of Monetary Policy is stronger under adjustable-rate mortgages compared with fixed rate mortgages (e.g. Bernanke and Gertler 1995)

there is evidence that monetary policy has had a stronger direct stimulative effect in areas of the United States where ARMs are more commonly used (Keys et al. 2014, Di Maggio et al. 2015).

almost all of the direct monetary policy transmission is through households with mortgages. Households that own their homes or rent change their spending but by less than (Cloyne et all. 2020)

So is low for long worse for economies with variable rate mortgages?

Literature and risk …

Rubio 2011 finds that for a given monetary policy a higher proportion fixed rate mortgages is welfare enhancing

- Why – is that because of financial instability?

Research has found that the interest elasticity in the United Kingdom (and Netherlands) is high relative to countries with fixed rate mortgages (IMF, 2004 among others)

- Tax deductibility of interest rates also matters (Damen et al. 2016)

When monetary policy is tightened research has shown that mortgage defaults are more likely in countries with variable rate mortgages.

- The default ratio declines by more than a third if mortgages are fixed rate (Stanga et al 2020)

Literature and risk

… households are very bad at gauging this risk

Badarinza, Campbell and Ramadorai (2018) find that ***current cost*** drives households mortgage choices

- One year ahead inflation expectations only weakly and longer ahead not at all.

→ households mostly not rational forward looking agents.

In the US where consumers have the choice between fixed rate and ARMS – share of ARMS rises by 9 percentage points in response to a 1% increase in the spread between fixed rates and ARMs rates offered.

- Current spread only … not rational future spread

There is substantial evidence that ARM borrowers in the United States do not understand the extent to which ARM rates can vary (Bucks and Pence 2008), and there is also evidence for suboptimal mortgage refinancing in Denmark, the United States, and the United Kingdom (Andersen et al. 2015, Campbell 2006, Miles 2004)

Research question

Main source of systemic risk is the housing market. Leverage and house prices

- Highly leveraged
- Households not forward looking
- Highly effected by capital flows … non-tradable good

Do house prices and leverage fluctuate more in countries with variable rate mortgages?

… threatening to amplify booms, increase systemic risk which would cause larger downturns as well

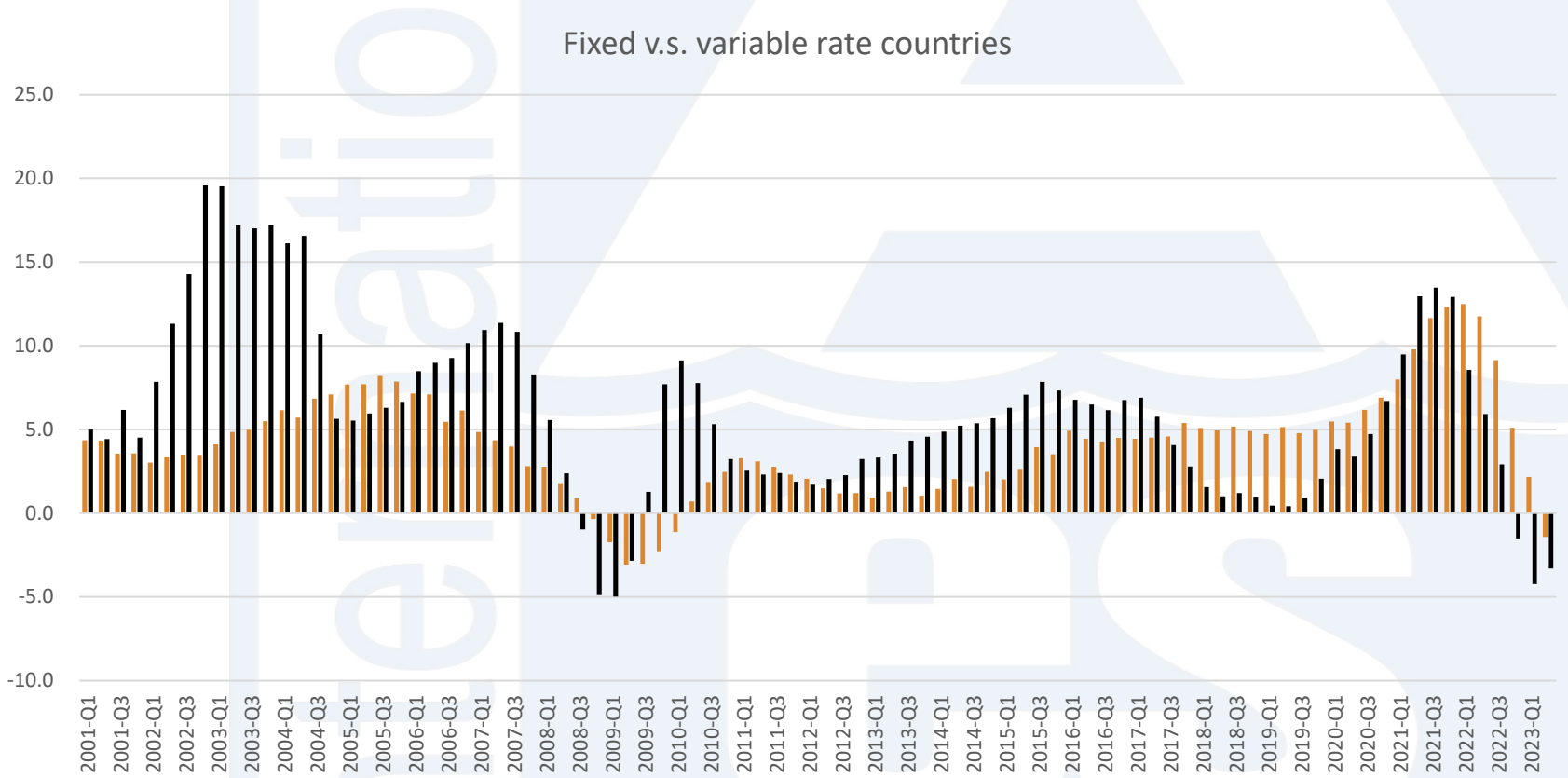
… endogeneity

Contracts vary a lot

Country	LTV	Term	Tax Ded.	Interest type	Funding
Australia	100	25	No	Variable	Wholesale
Austria	80	25	No	Fixed	Retail Deposit
Belgium	100	20	Yes	Fixed	Retail Deposit
Canada	95	25	No	Mixed	Retail Deposit
Cyprus	80	30	No	Mixed	Retail Deposit
Czech Republic	100	20	Yes	Mixed	Retail Deposit
Denmark	80	30	Yes	Mixed	Mtg. Bonds
Estonia	90	30	Yes	Variable	Retail Deposit
Finland	80	20	Yes	Variable	Retail Deposit
France	100	20	No	Fixed	Retail Deposit
Germany	80	15	No	Fixed	Retail Deposit
Greece	80	15	Yes	Variable	Retail Deposit
Hong Kong	70	15	No	Variable	Other
Iceland	100	40	Yes	Variable	Retail Deposit
Israel	95	20	No	Mixed	Retail Deposit
Italy	80	22	Yes	Variable	Retail Deposit
Japan	80	30	Yes	Mixed	Retail Deposit
Luxembourg	80	25	Yes	Variable	Retail Deposit
Malta	80	30	No	Fixed	Retail Deposit
Netherlands	125	30	Yes	Fixed	Retail Deposit
New Zealand	85	30	No	Variable	Retail Deposit
Norway	85	20	Yes	Variable	Retail Deposit
Portugal	90	30	Yes	Variable	Retail Deposit
Singapore	80	35	Yes	Variable	Retail Deposit
Slovenia	70	10	No	Variable	Retail Deposit
South Korea	70	20	Yes	Variable	Retail Deposit
Spain	100	20	Yes	Variable	Retail Deposit
Sweden	95	45	Yes	Variable	Mtg. Bonds
Switzerland	80	20	Yes	Fixed	Retail Deposit
UK	110	25	No	Variable	Retail Deposit
USA	100	30	Yes	Mixed	Securitization
Argentina	80	20	Yes	Variable	Retail Deposit
Brazil	90	25	No	Fixed	Retail Deposit
Bulgaria	81	15	No	Variable	Retail Deposit
China	80	15	No	Variable	Retail Deposit
Colombia	70	15	Yes	Fixed	Securitization
Croatia	50	30	Yes	Mixed	Retail Deposit
Hungary	70	20	No	Mixed	Mtg. Bonds
India	110	20	Yes	Mixed	Retail Deposit
Indonesia	90	20	No	Variable	Retail Deposit
Ireland	100	40	Yes	Mixed	Retail Deposit
Latvia	100	30	No	Variable	Retail Deposit
Lithuania	100	25	Yes	Variable	Retail Deposit
Malaysia	80	35	Yes	Variable	Retail Deposit
Mexico	100	25	Yes	Variable	Other
Philippines	80	30	No	Variable	Other
Poland	100	32.5	Yes	Variable	Retail Deposit
Russia	100	20	Yes	Mixed	Retail Deposit
South Africa	100	30	No	Variable	Wholesale
Thailand	100	20	Yes	Mixed	Retail Deposit
Turkey	75	7.5	No	Fixed	Retail Deposit
		20	Yes	Fixed	Other
		25	No	Variable	Retail Deposit

Interest rate	Tax deduction	No Tax Deduction
Variable	12	5
Fixed	3	4
Mixed	5	3

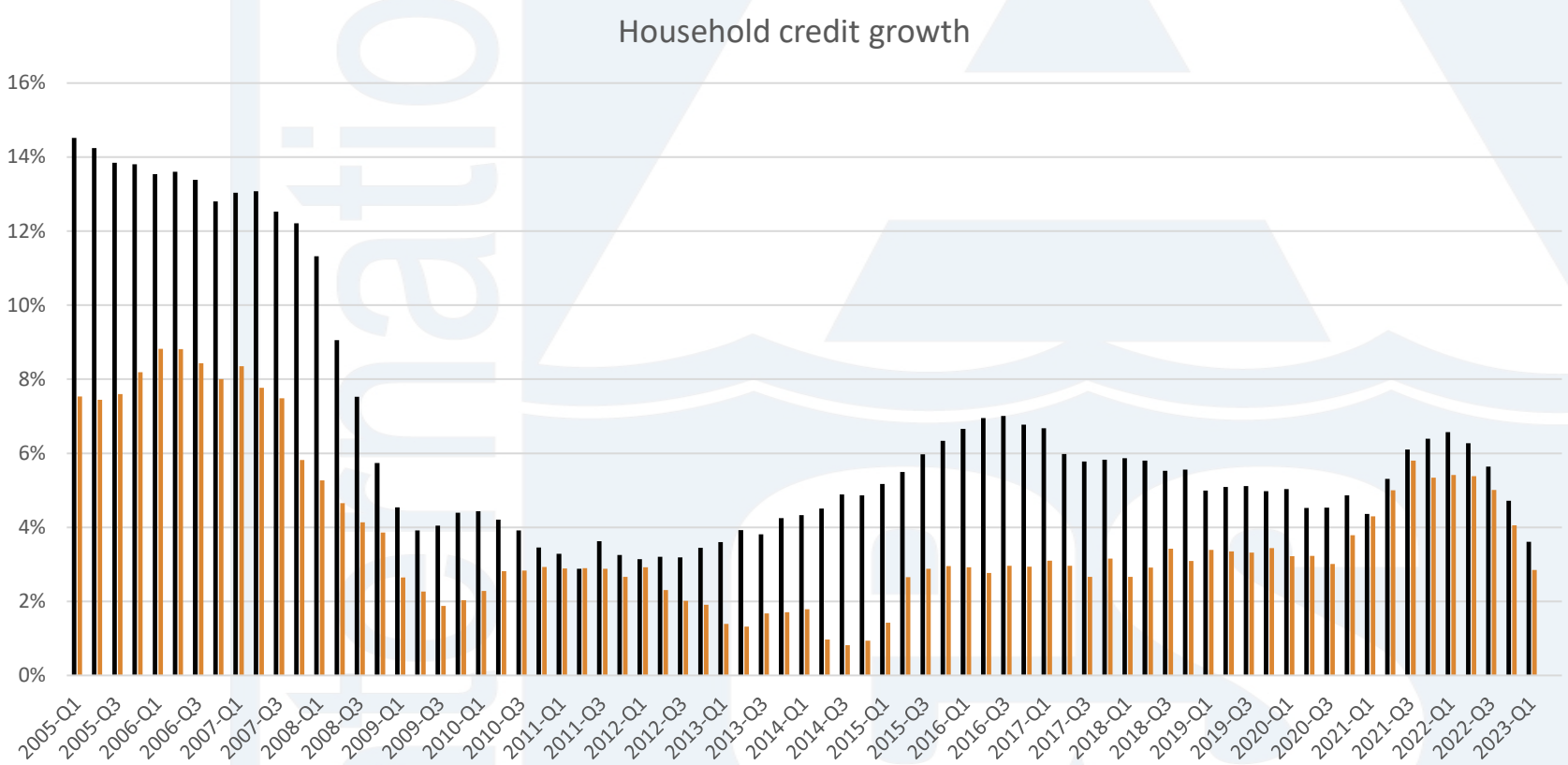
Much more fluctuation in housing prices in countries with variable rate loans



Variable rate countries (av,std)=(6.0,5.2)
Australia
Finland
New Zealand
Norway
South Korea
Sweden
UK

Fixed rate countries (av,std)=(3.9,2.8)
Austria
Belgium
France
Germany
Netherlands
Switzerland
US

Much more credit growth in variable rate countries during boom and low rate periods



Variable rate countries (av,std)=(6.5% ; 0.034)
Australia
Finland
New Zealand
Sweden
UK

Fixed rate countries (av,std)=(3.8 ; 0.021)
Austria
France
Germany
Netherlands
Switzerland
US

Fixed or floating: A case study of Denmark's former colonies

Gylfi Zoega
University of Iceland

96th International Atlantic Economic Conference: Philadelphia

The Nordic countries

Monetary regimes

Denmark – fixed exchange rates since 1982 (DM) and 1999 (euro)

Finland – euro since 1999

Iceland – floating exchange rate

Norway – floating exchange rate

Sweden – floating exchange rate

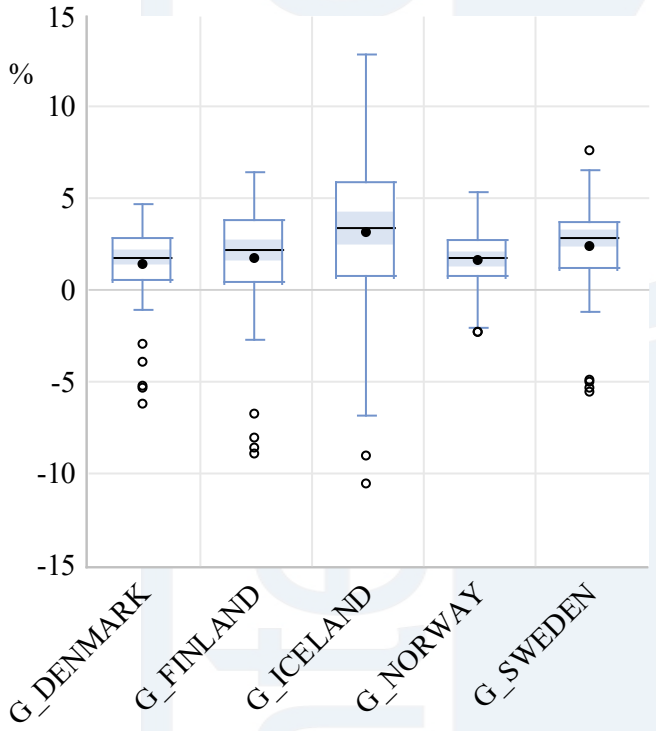
Faroe Islands – Danish krona

Does the monetary regime affect the magnitude of the business cycle?

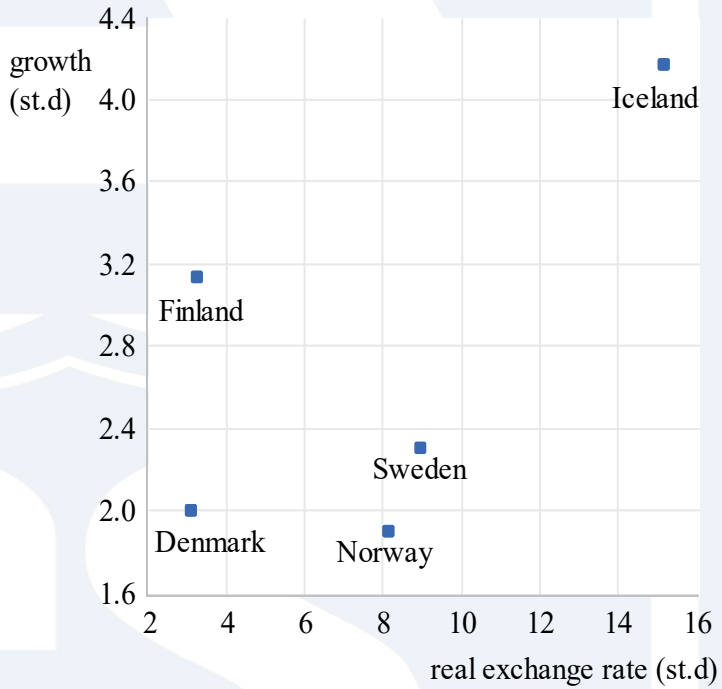
Does a floating exchange rate insulate an economy against shocks?

Does exchange rate flexibility bring more output stability?

Rate of growth of output, 1994 Q1 to 2019 Q4 (quarterly)

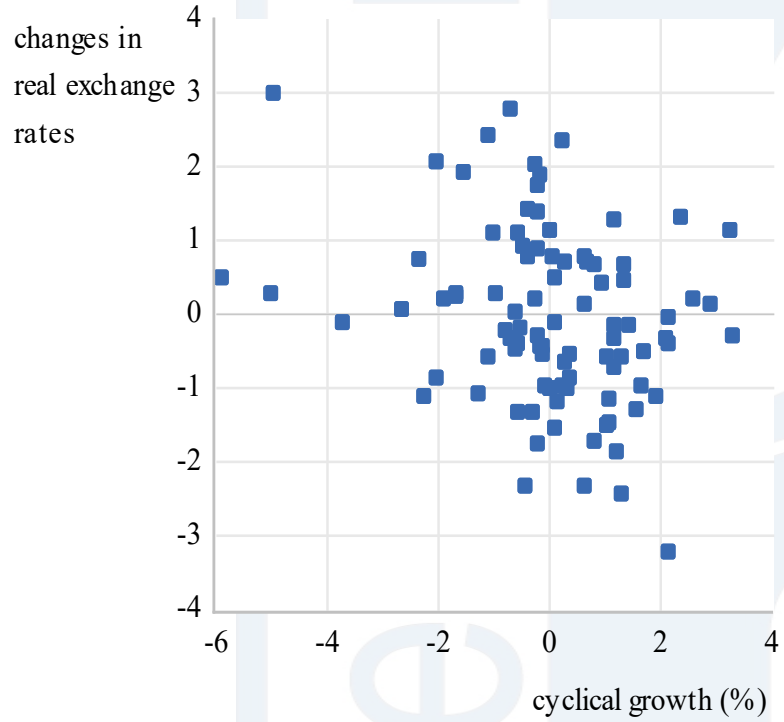


Volatility (st.d.) of growth and the real exchange rate



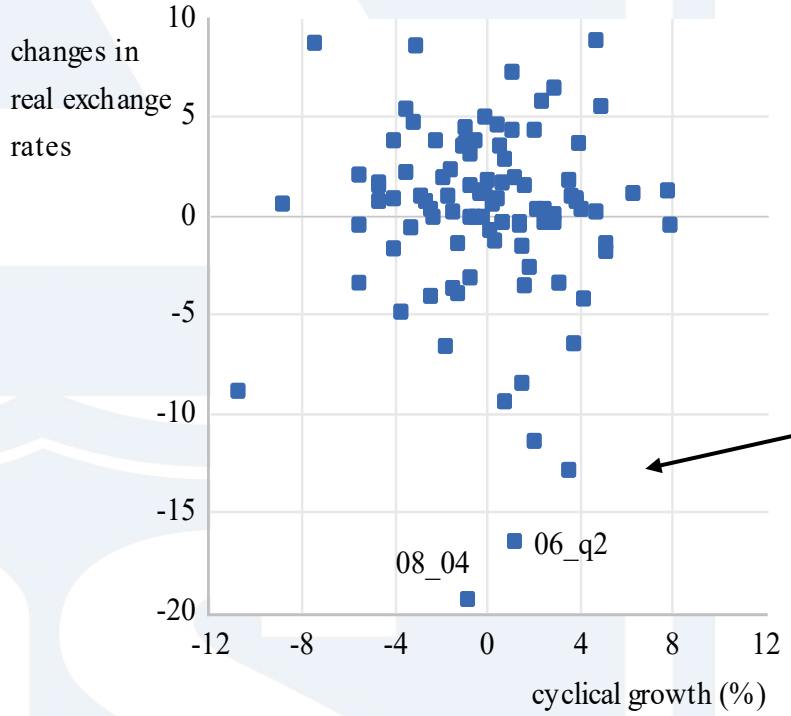
Denmark

Cyclical growth and changes in real exchange rates (1996Q1 2019Q4)



Iceland

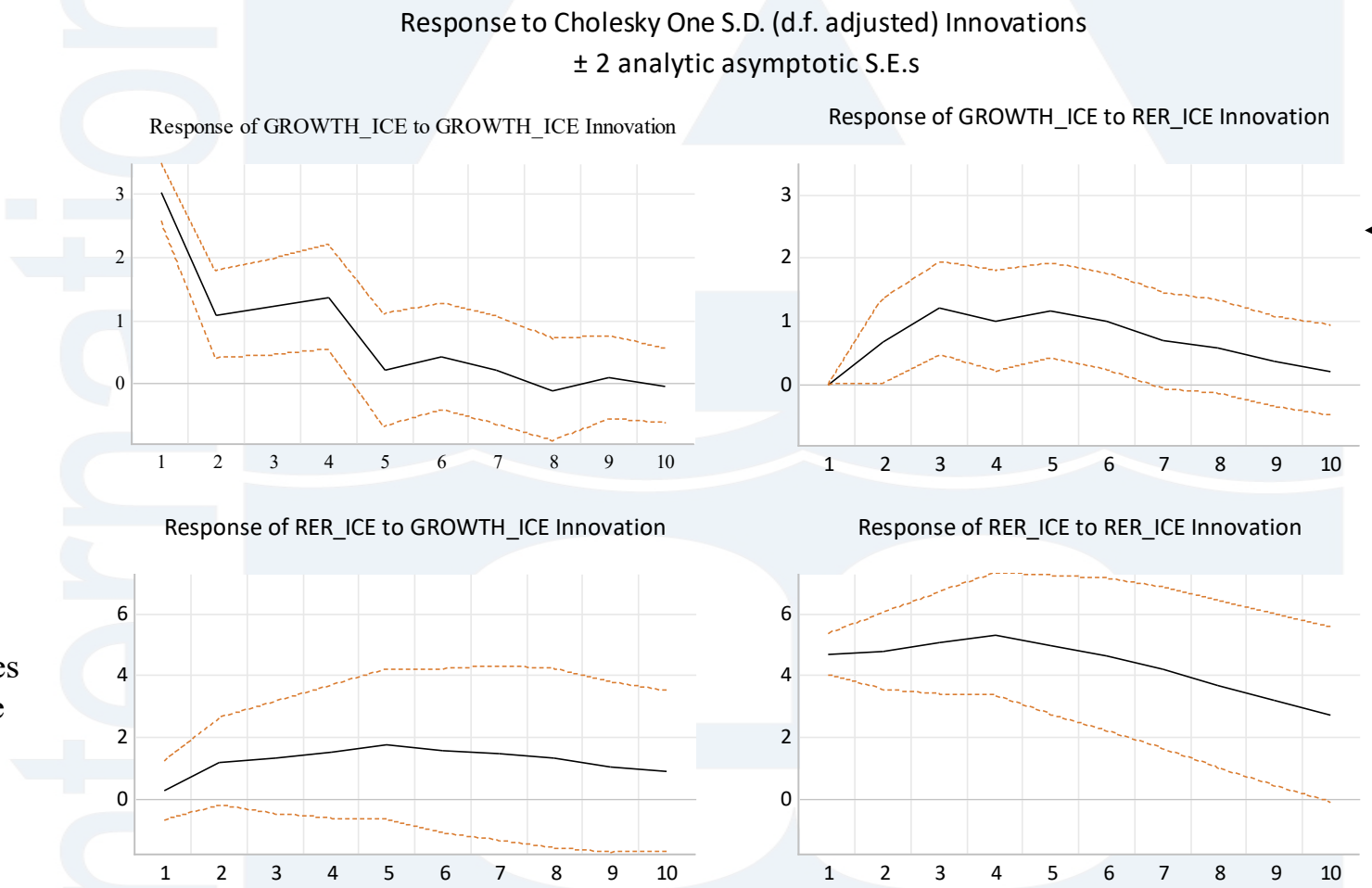
Cyclical growth and changes in real exchange rates (1996Q1 2019Q4)



Capital outflow episodes.

Cyclical growth found as the difference between actual growth and a H-P filtered trend.

Impulse response functions for real exchange rates and output growth Iceland



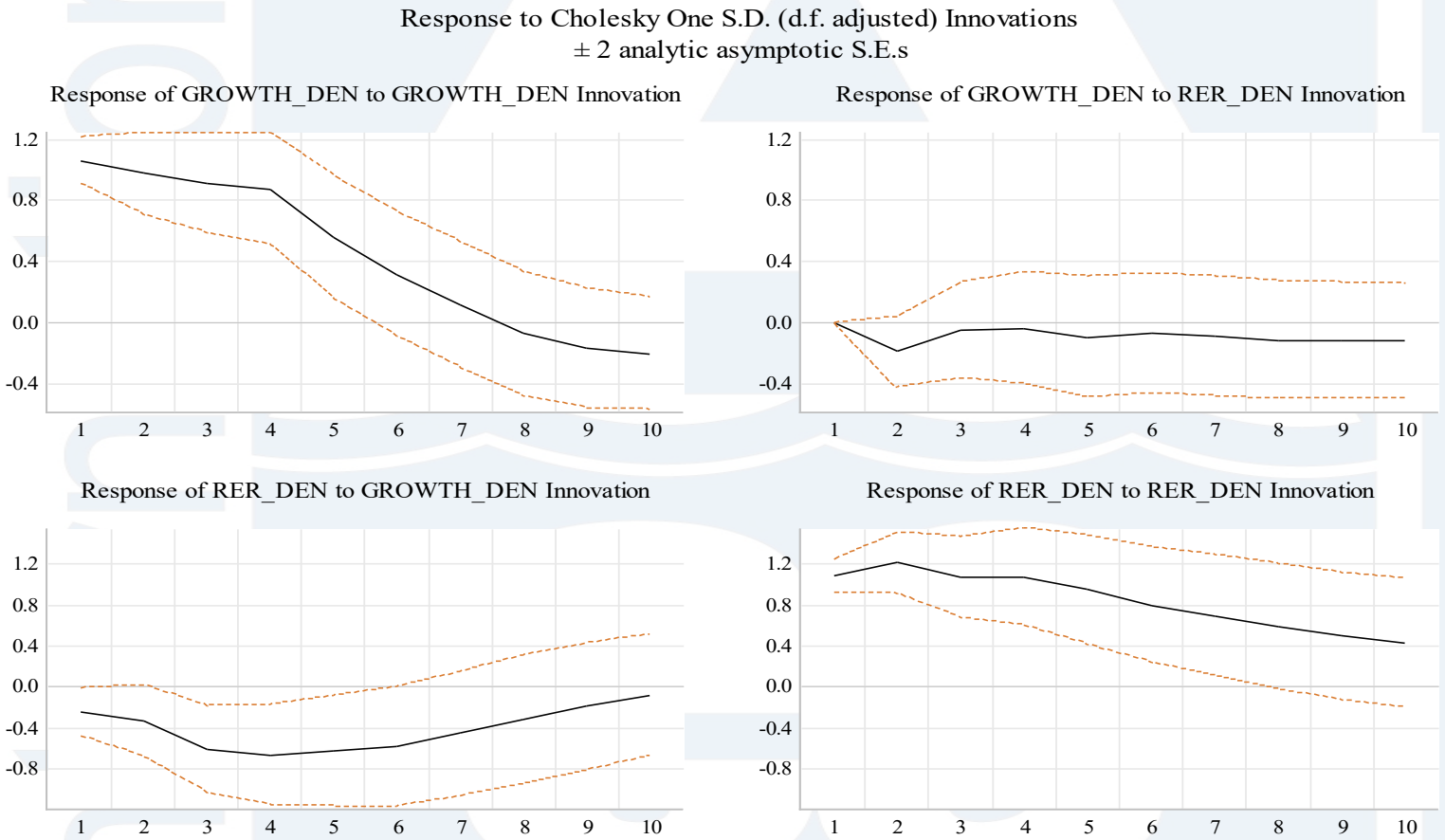
Real exchange rate appreciation causes positive output growth.

Destabilizing effect – capital inflow.

Positive output growth causes apprecation of real exchange rate.

Stabilizing effect.

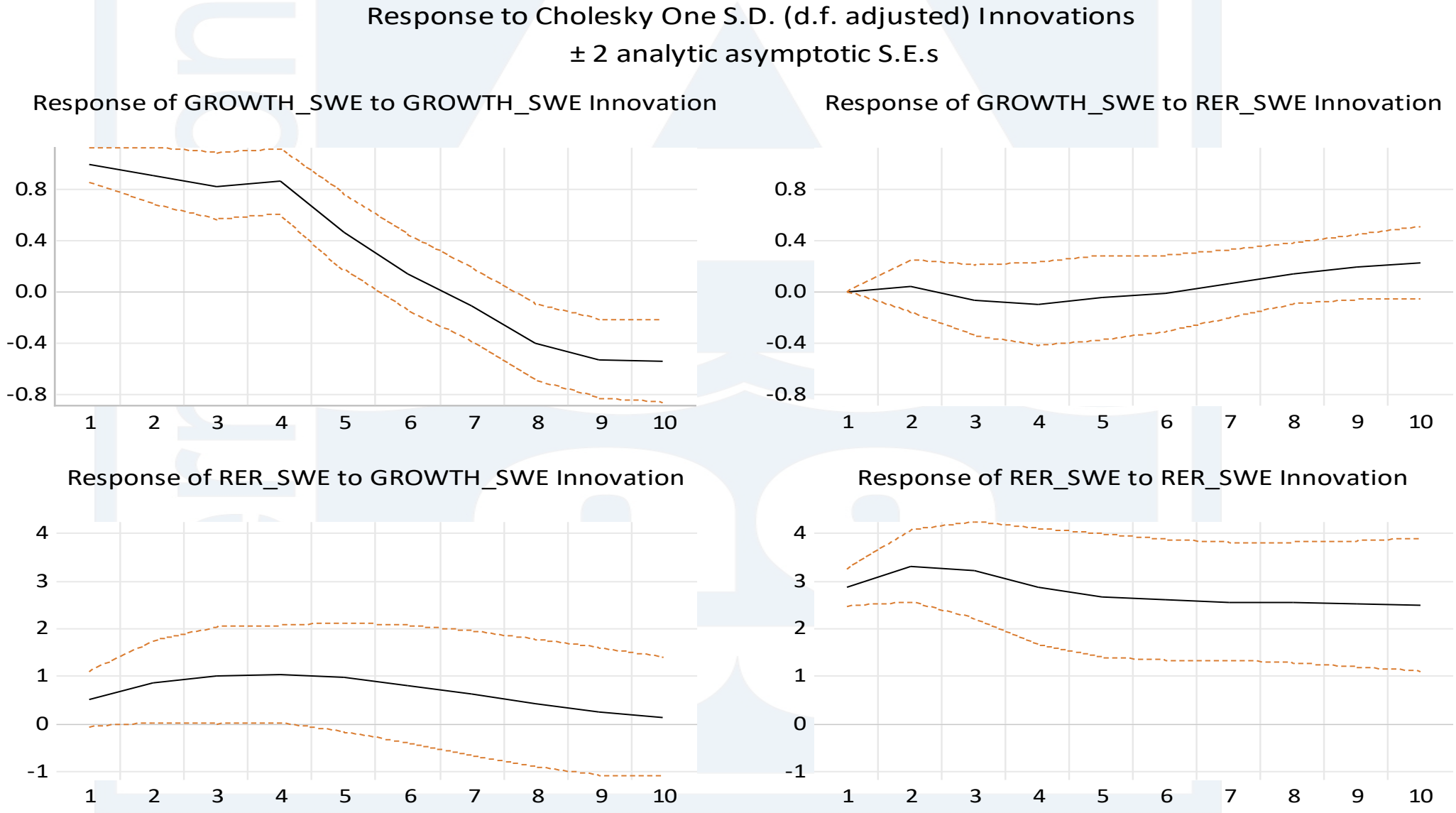
Impulse response functions for real exchange rates and output growth Denmark



No significant effect.

No significant effect.

Impulse response functions for real exchange rates and output growth Sweden



Stabilizing effect

- Bottom line:

- Not much evidence that exchange rate flexibility has stabilized ouput growth in Iceland, nor for that matter in Sweden.
- Output growth not more volatile in Denmark.
- But
  - Denmark is a more diversified economy than Iceland, population 15 times larger.
  - Instead of comparing Iceland to Denmark, we can compare it to the Faroe Islands, which have homerule but are part of the Kingdom of Denmark, outsource the foreign service, university, financial supervision and the central bank to Denmark.

Two island economies with limited diversification of industries

	Faroe Islands	Iceland
Population (000s)	52.9	400
GDP per capita (000 dollars)	69.01	68.73
Life expectancy (years)	83.1	82.8
Unemployment (%)	0.6	3.3
Fish exports (% of total)	88	
Fiscal transfers from Denmark (% of total gov. revenues)*	8.8	

* Fixed monetary sum – not cyclical

Faroe Islands

Iceland

= approximately 70 dollars

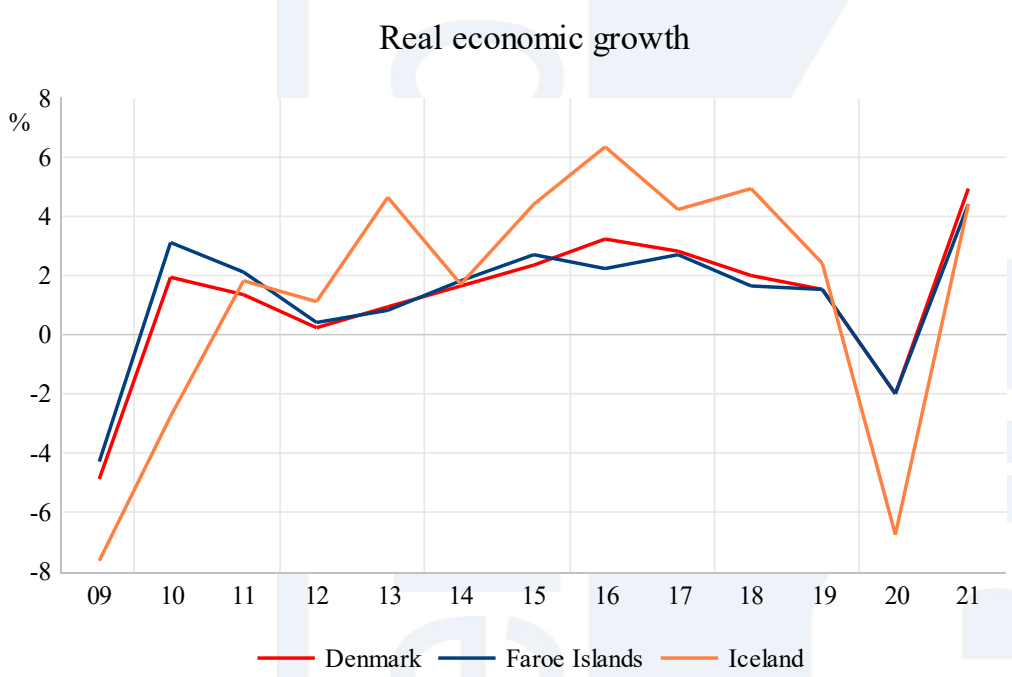
No central bank
Danish krona used
Fixed exchange rates against euro

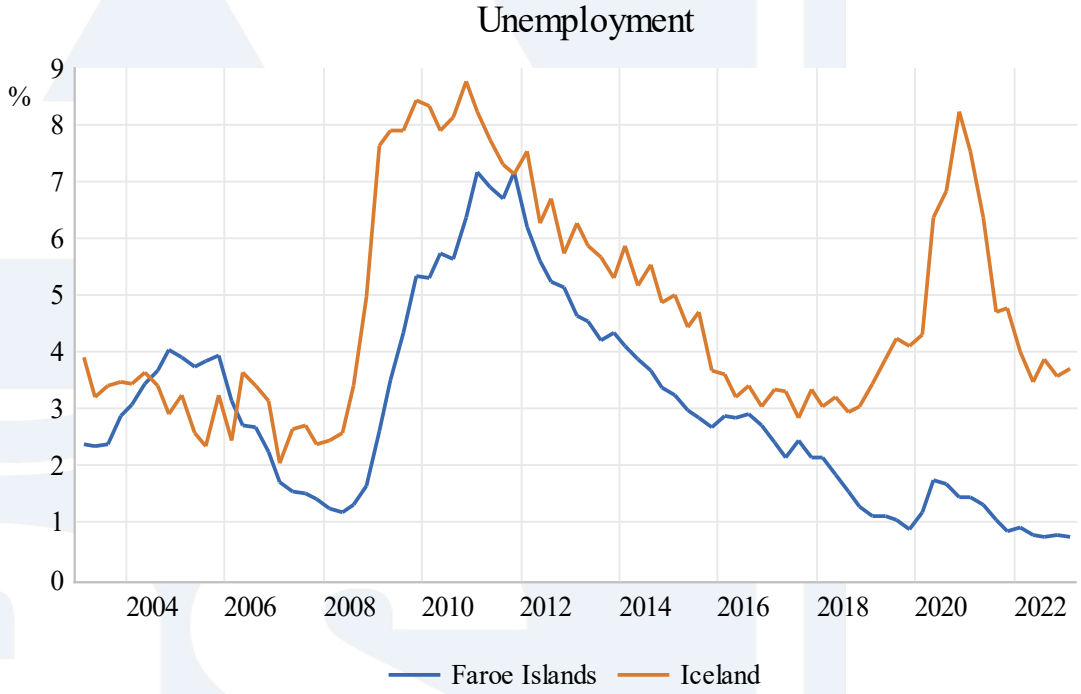
Independent central bank
Monetary policy committee
Inflation targeting
Floating exchange rates

Optimal currency areas with EU?

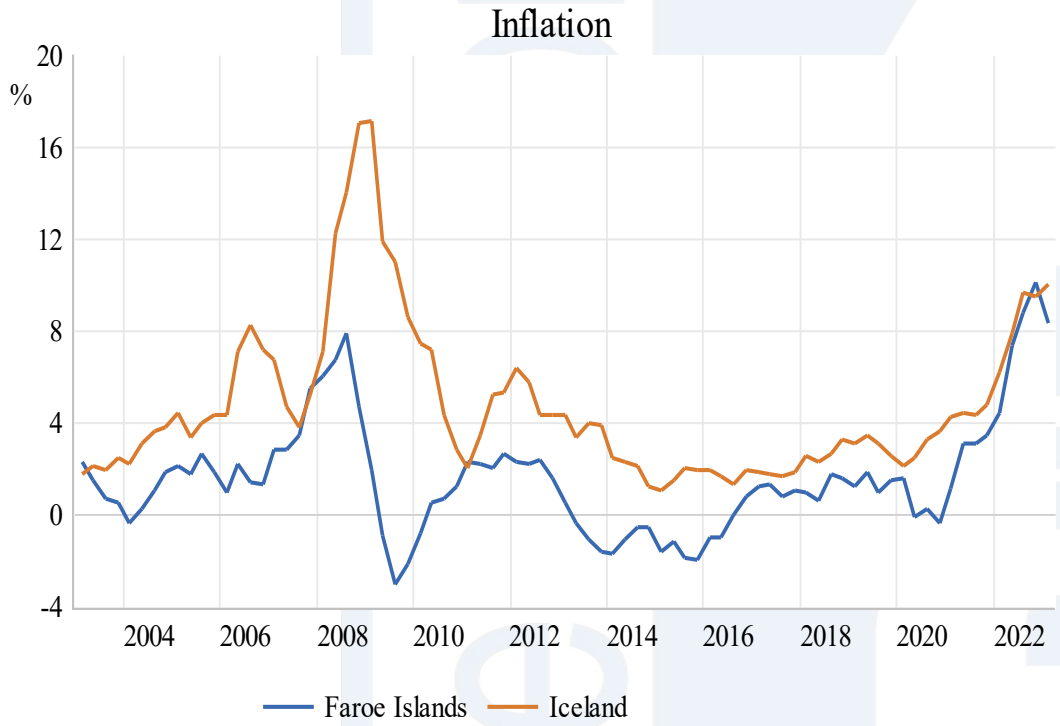
Asymmetric shocks
Wages and prices rigid, but both countries are part of a common European labour market

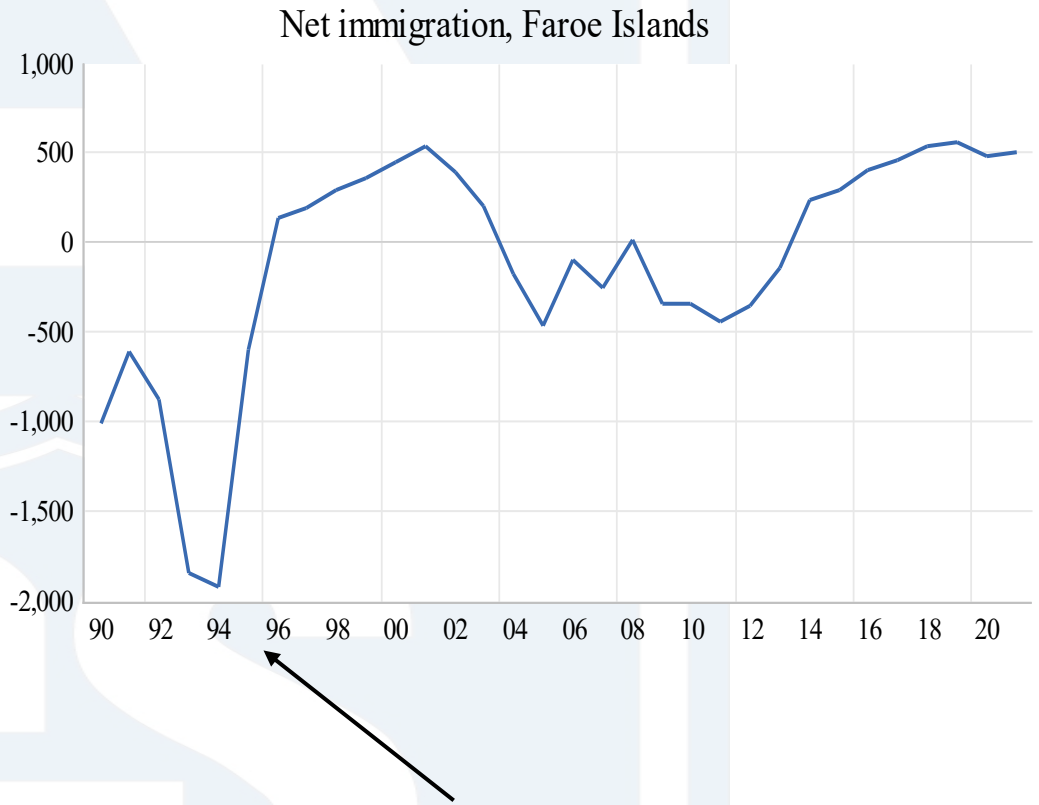
Output and unemployment





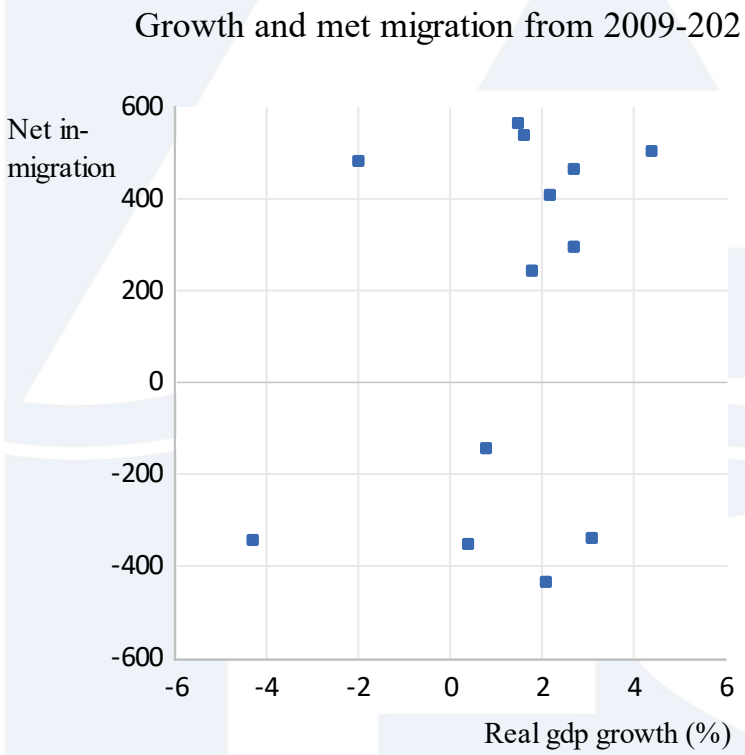
Inflation and net immigration





Financial crisis in 1994 – sovereign debt crisis, bailed out by Denmark.

Relationship between growth and net migration to the Faroe Islands



- Bottom line:

- Not much evidence that exchange rate flexibility has stabilized ouput growth in Iceland in comparison to the Faroe Islands.
  - More volatile output growth in Iceland
  - More volatile unemployment in Iceland
  - More inflation in Iceland
- However, following a financial crisis, output and unemployment recover sooner due to exchange rate depreciation.
  - Ireland took longer to recover than Iceland post 2008… unemployment remained higher for longer.
  - But the crash in Iceland had a lot to do with a floating currency and capital mobility.

Downside of flexible exchange rates in a tiny open economy

- Incomplete risk diversification.
  - Pension fund assets valued at two year's GDP only partially invested abroad.
  - Shocks to local economy affect the value of pension assets.
- Limited foreign direct investment.
  - All foreign investment not part of the domestic currency area.
- Exchange rate fluctuations reduce trade.
- Inflation expectations not well anchored.
  - Higher interest rates.

- Benefits of fixed exchange rates in Denmark.
  - Backed by the ECB making it more stable.
  - Nominal anchor for economy.
    - Fiscal policy.
    - Wage agreements.
  - Own currency, bond market more stable than in the eurozone.
  - If disaster strikes, devaluation possible, in contrast to the eurozone.

NINETY-SIXTH INTERNATIONAL ATLANTIC ECONOMIC CONFERENCE

5-8 October 2023