



CROATIAN NATIONAL BANK

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# De-euroisation in Croatia - Mission (Im)Possible?

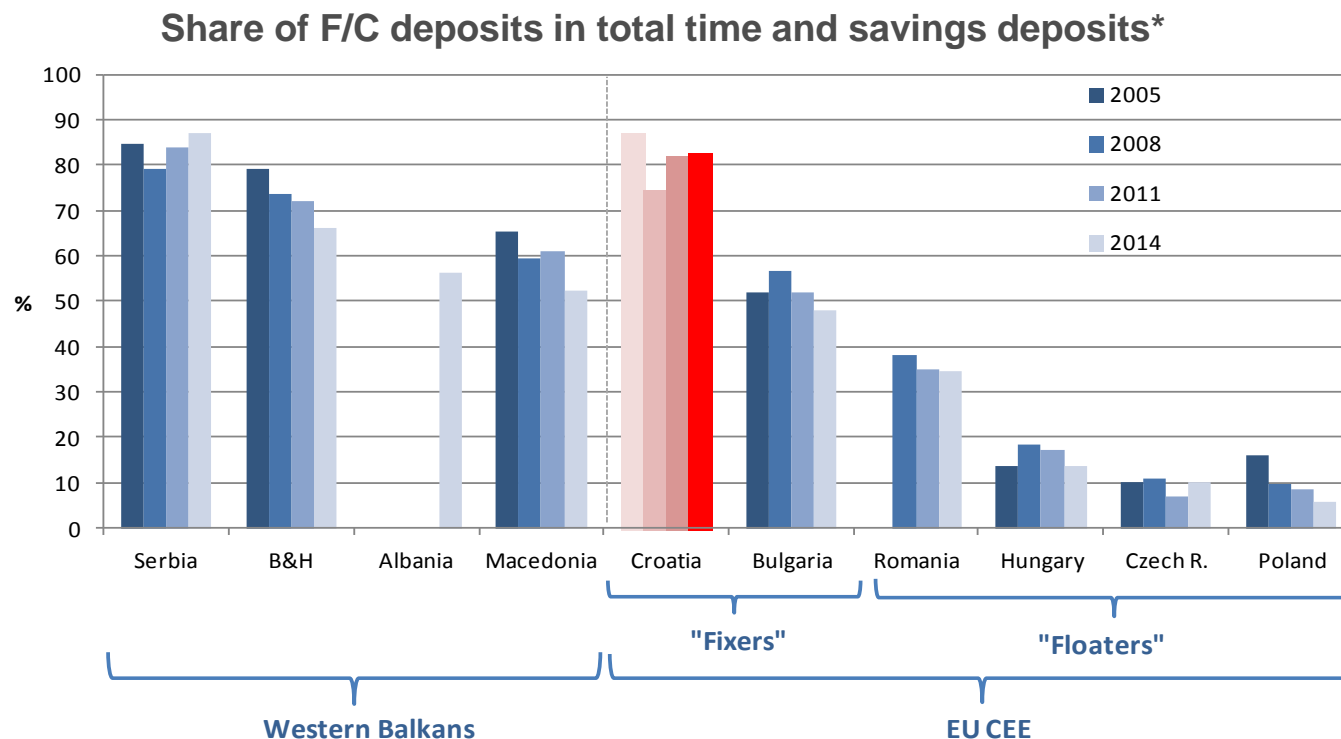
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# **1. EUROISATION IN CROATIA – EVOLUTION AND ENVIRONMENT**

# Currency substitution in the region



Note: F/ C deposits include domestic currency deposits with a currency clause (except for Serbia).

Source: National central banks.

- ❑ Highly pervasive and quite widespread among transition economies
- ❑ A phenomenon which in principle appears as a consequence of past macro-economic mismanagement – high inflation and devaluations

# Deposit and credit euroisation

## – Hedging vs. carry trade

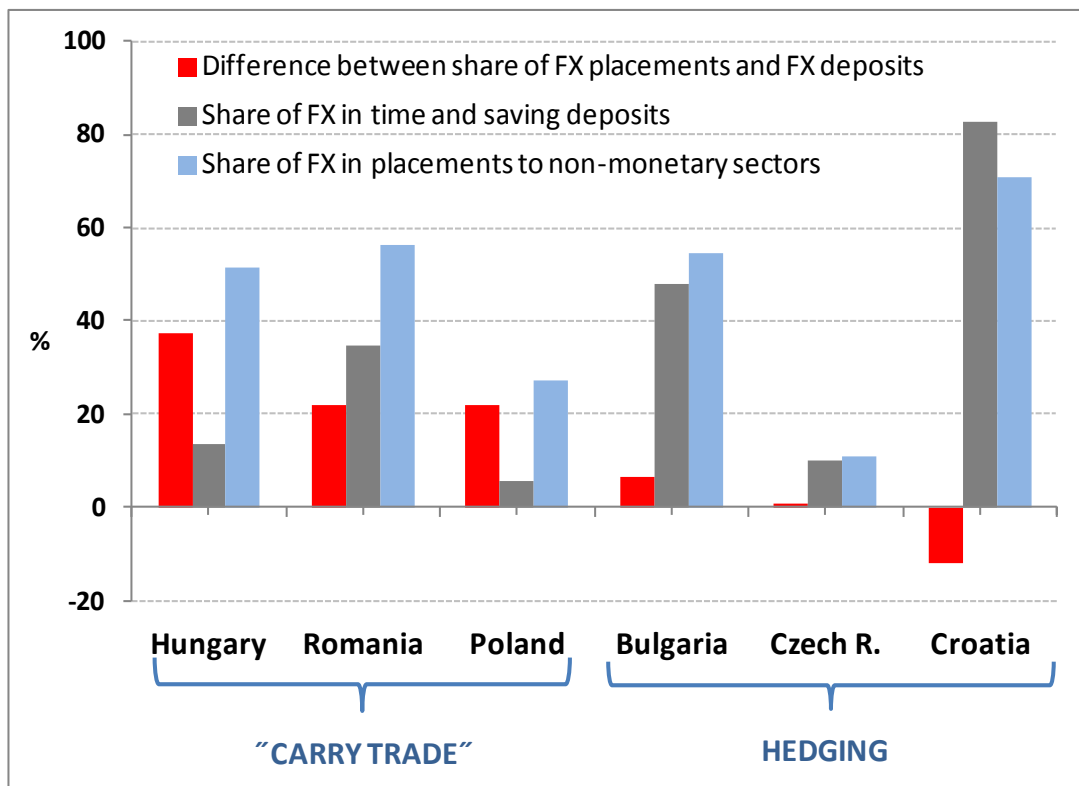
□ In some countries, credit euroisation is a consequence of deposit euroisation

– Hedging

□ In other cases, credit euroisation triggered by interest rate differentials, and not necessarily coupled with deposit euroisation

– Carry trade

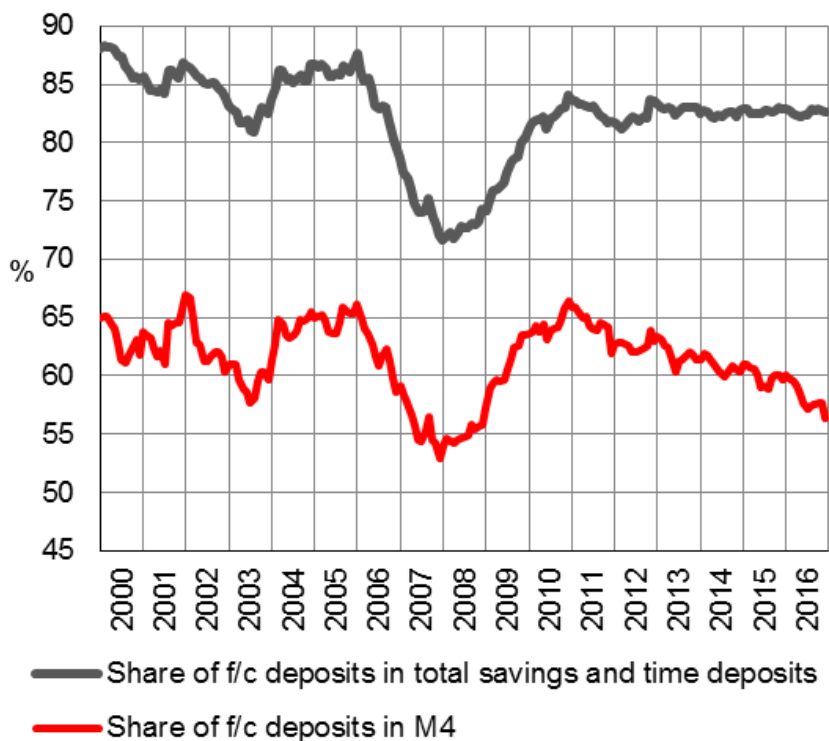
Share of foreign currency in domestic deposits and placements



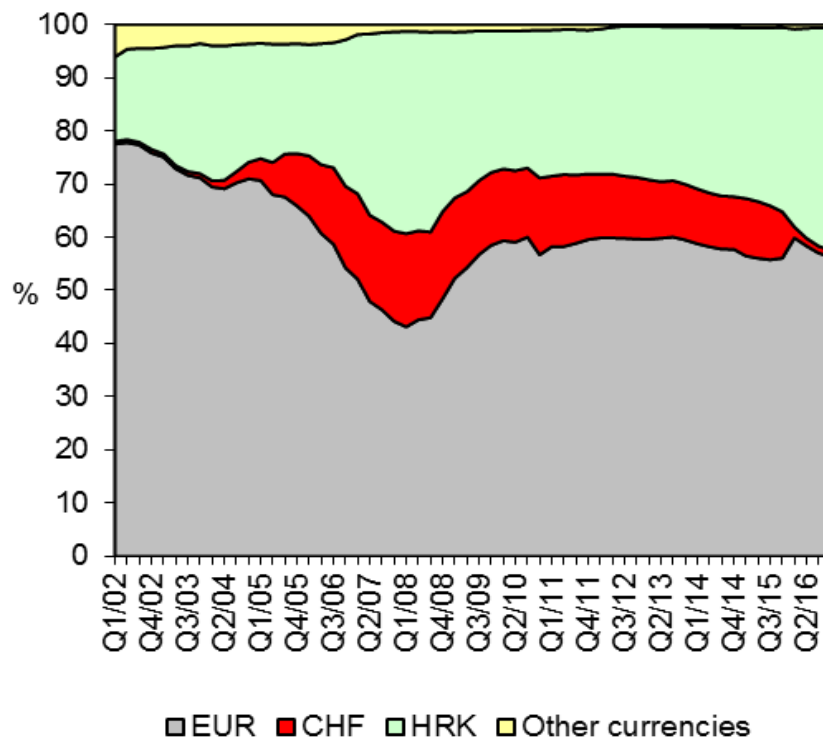
Source: National central banks (data for end-2014).

# Euroisation in Croatia deeply entrenched, despite ...

Root of the problem  
- Deposit euroization



Flip side of the coin  
- Credit euroization



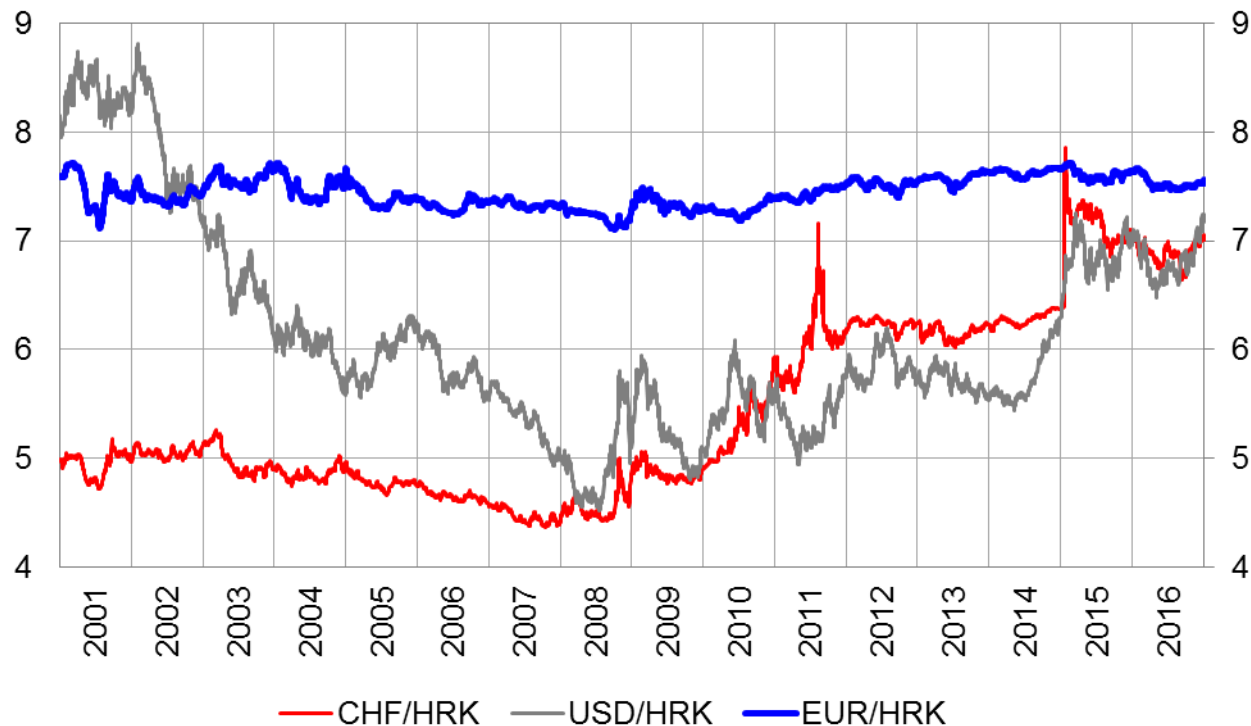
Source: HNB

Note: Kuna deposits with a currency clause included in F/C deposits. Monthly data before Q1 2004 estimated from the available quarterly data.

Source: HNB

# ... exchange rate stability,

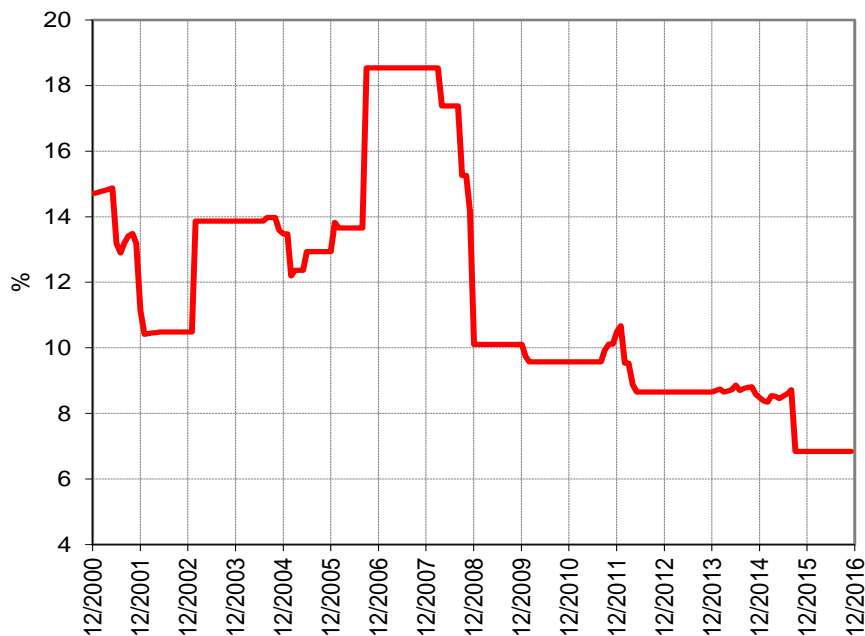
## Exchange Rate Performance (daily data)



Source: HNB

# ...credible countercyclical monetary policy,

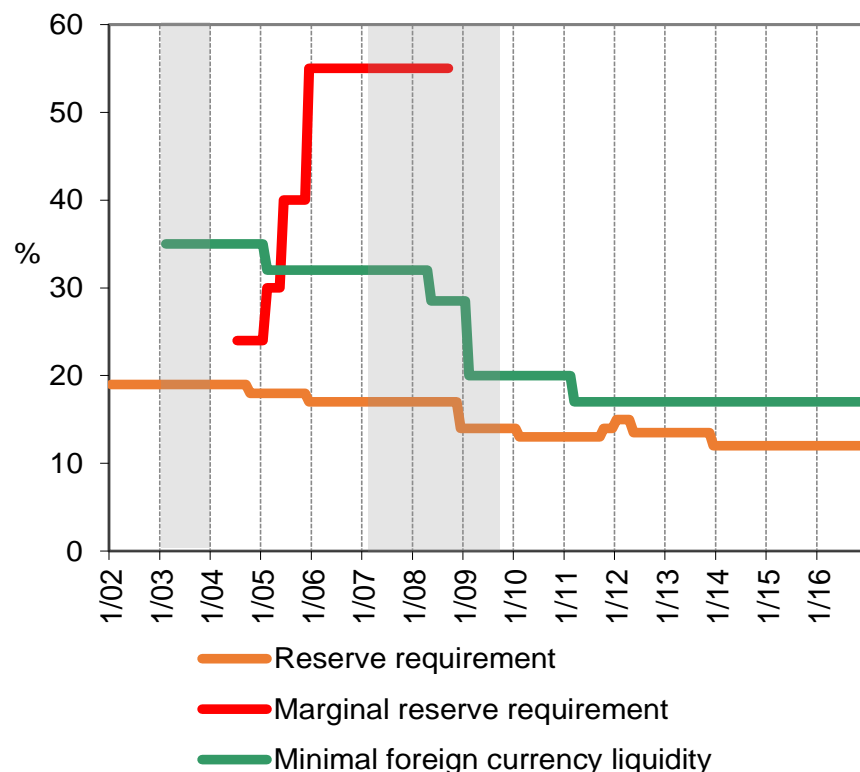
Monetary policy indicator suggests strong countercyclicality...



Note: The monetary policy indicator is a composite measure of regulatory burden for banks, weighted by their share in total banks' liabilities.

Source: HNB

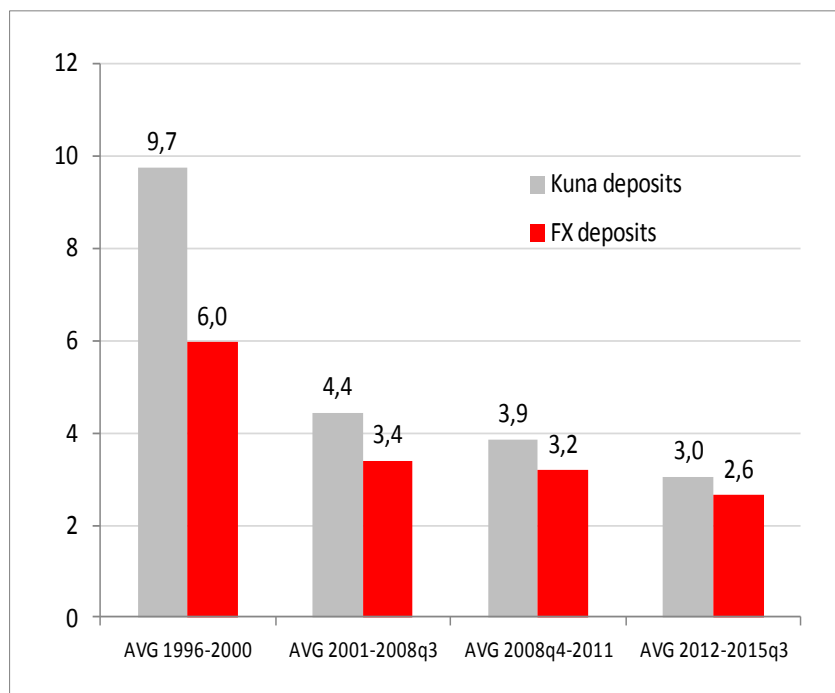
...implemented through an extensive set of instruments



Source: HNB

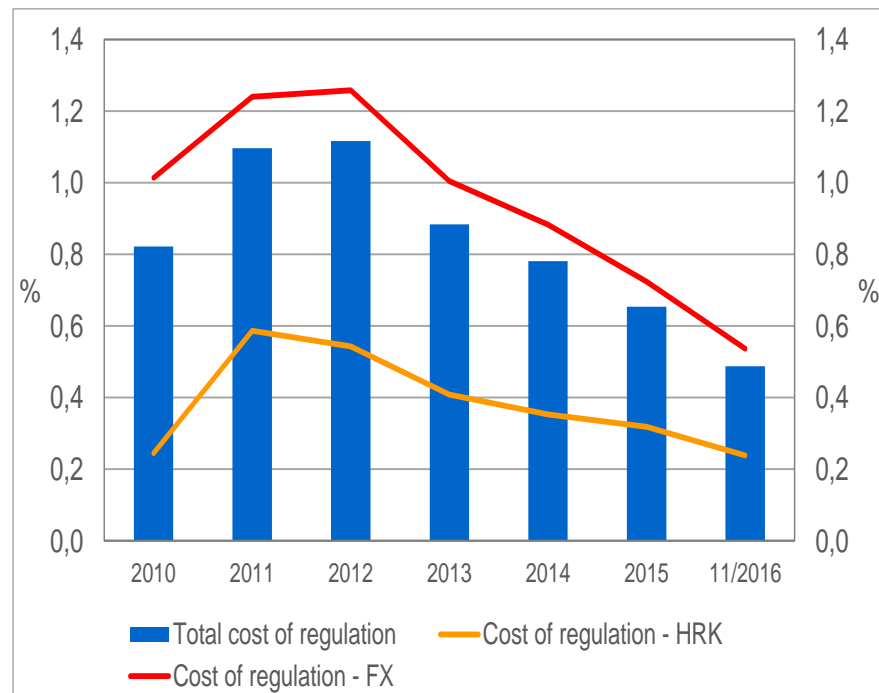
# ... and interest disincentives to euroisation

## Interest rate differential on time and savings deposits



Source: HNB

## Cost of regulation

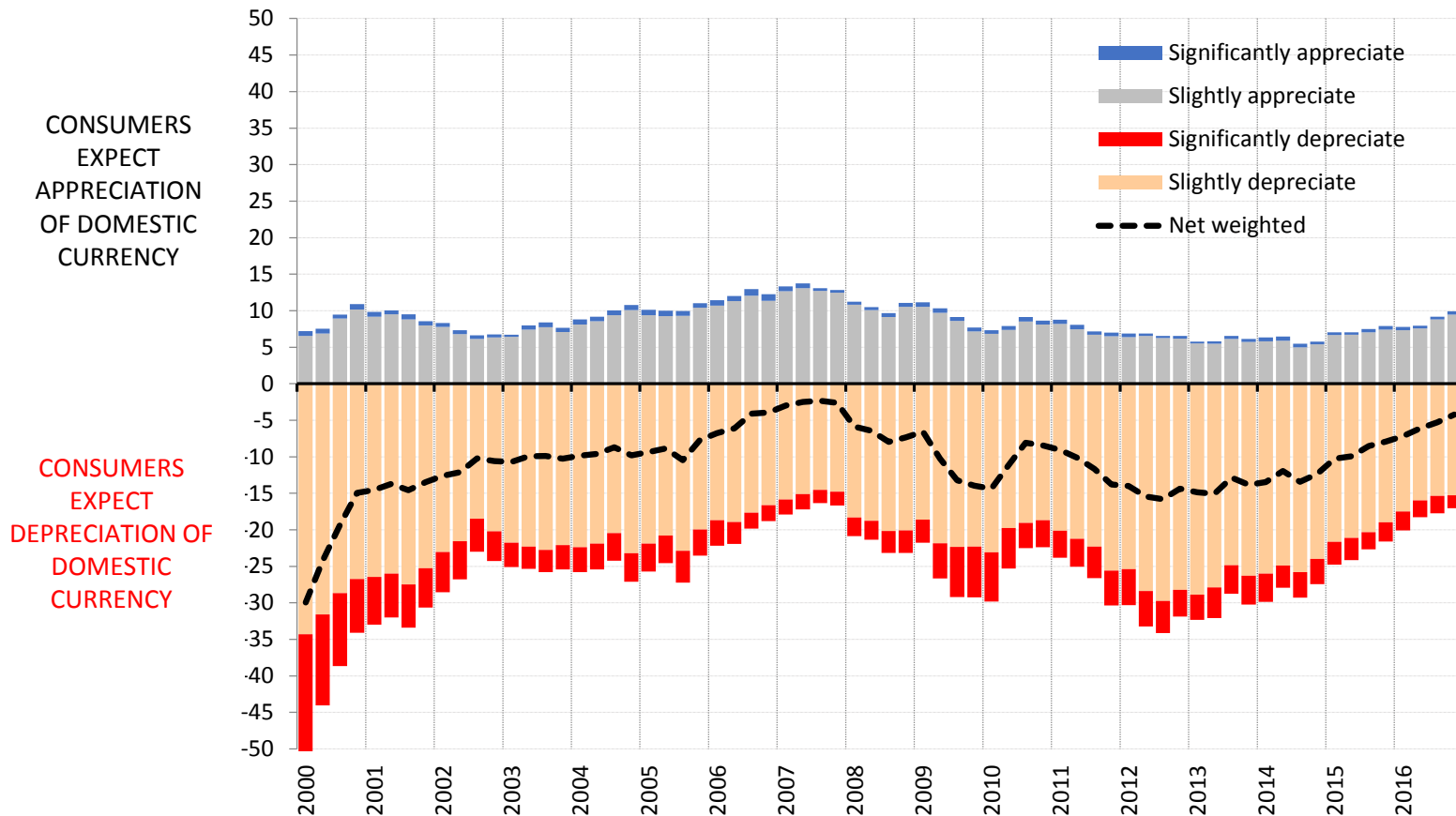


Note: The cost of regulation is estimated as a weighted difference between the lowest required return on placements and the nominal cost of sources of financing for banks, taking into account the amount of bank assets immobilized due to regulatory requirements.

Source: HNB



# Stubborn lack of confidence in domestic currency



Note: Net weighted is calculated as sum of answers where significantly expected change in ER is weighted by 1 and slightly expected change in ER by 0.5. Data are 4-quarter moving average of net expectations regarding the direction of the exchange rate in the next 12 months.

Source: Consumer Confidence Survey, HNB

# Policy Implications

- Despite favorable macro and financial conditions, monetary and macroprudential policies



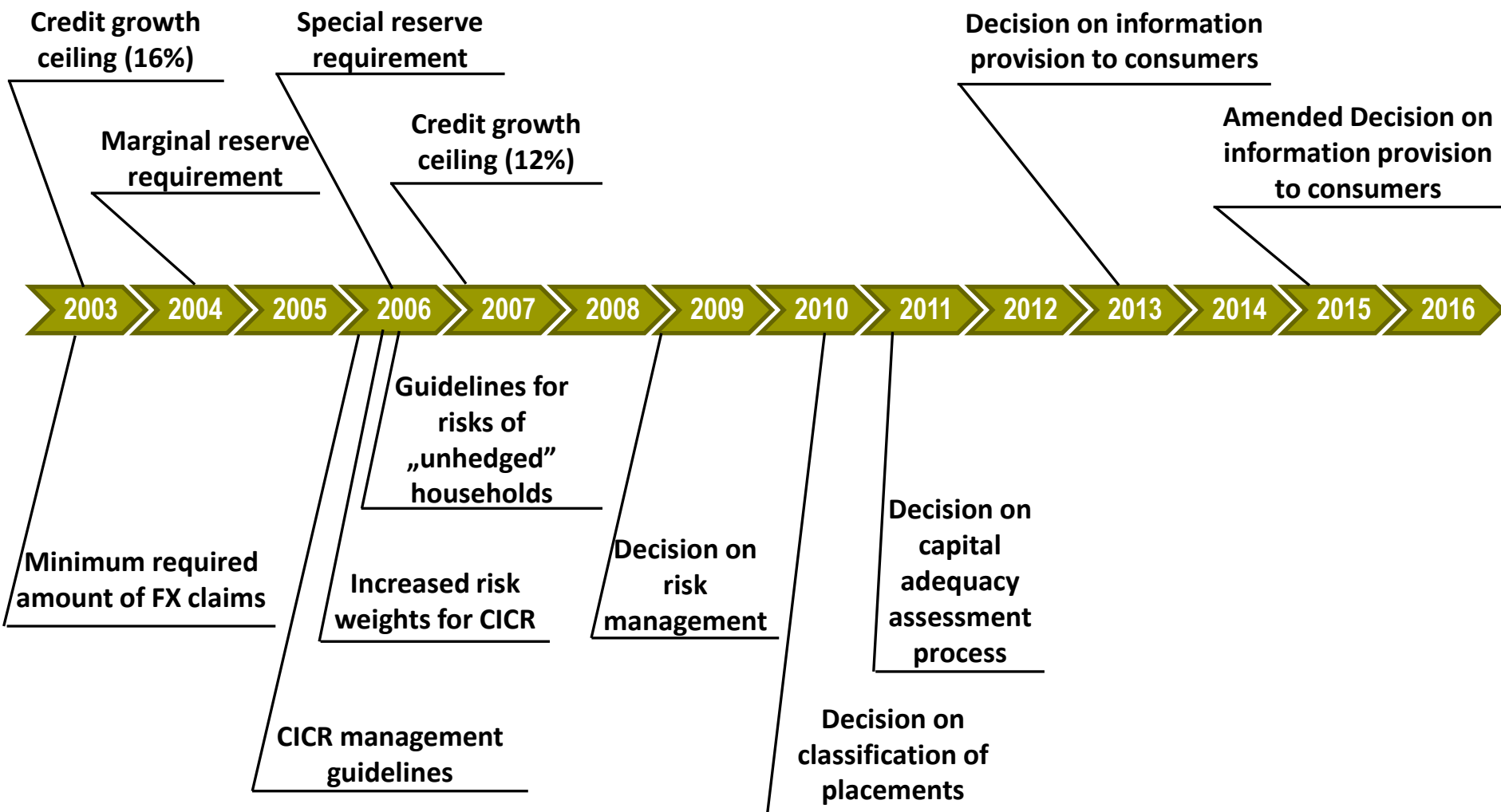
**AVERAGE DEPOSIT EUROISATION  
IN CROATIA  
80% IN PAST 20 YEARS (+/- 8%)**

- **Implications for monetary policy** – achieving the mandate in the euroised country is not the same task as in other countries – inflation expectations are closely linked to the exchange rate
- **Implications for financial stability** – Currency induced credit risk (CICR) is an integral part of credit risk
  - Therefore, **sufficient FX liquidity levels** have to be maintained together with sufficient capitalization of the banking system for covering potential losses related to CICR

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## 2. POLICY EFFORTS

# Policy measures directly and indirectly addressing euroisation



# Recent moves – oriented towards higher consumer's awareness on currency risks

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- ❑ *Decision on the content of and the form in which consumers are informed prior to contracting banking services (introduced in 2013, amended in 2015)*
- ❑ Banks are obliged to illustrate:
  - impact of a possible one-off Kuna depreciation on the monthly annuity or installment for the loan:
  - calculation of the joint impact of parallel increase in the interest rate and kuna depreciation on the monthly annuity or installment
- ❑ For loans denominated in FX, the comparable information for a loan granted in the domestic should be provided
  - if such loan does not exist – bank must inform borrower on other credit institutions – CNB publishes an information list of banks offering loans in the domestic currency

# Fighting euroization – the EU way

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- ❑ European Systemic Risk Board (ESRB) issued *Recommendation on FX lending*, proposing a series of **measures** to tackle the systemic risks on foreign exchange lending.
- ❑ These measures are introduced **to improve the resilience of the financial institutions** that provide this type of loans and thus shield the whole financial system
- ❑ Croatia has been marked as **fully compliant** with this *Recommendation*

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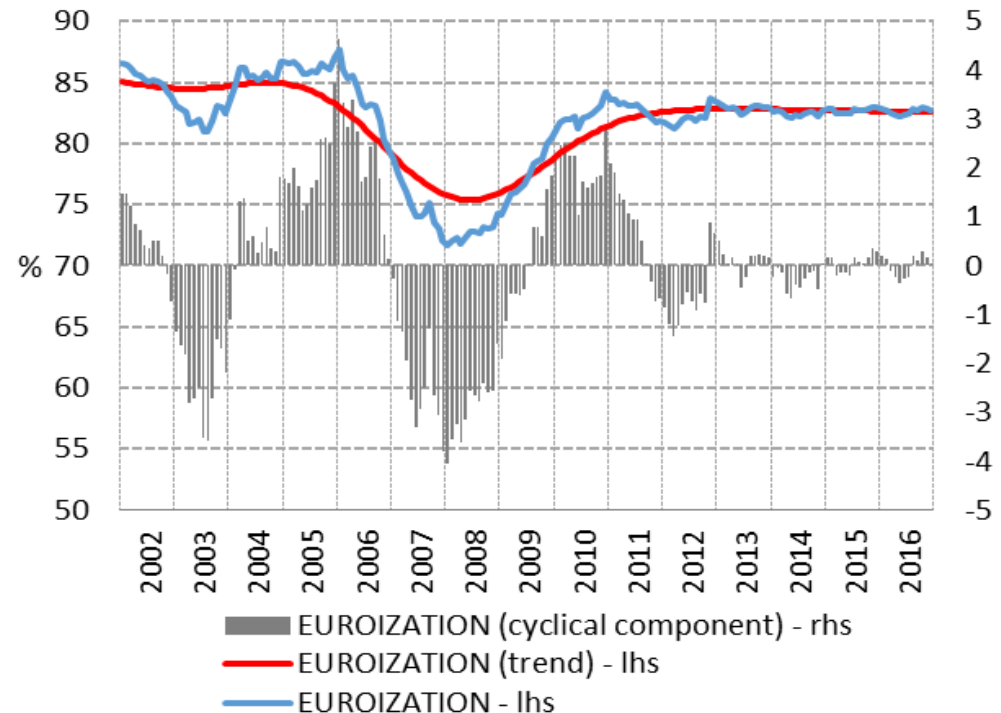
# **3. ASSESSING EUROISATION PERSISTENCY**

# What drives deposit euroisation?

## Two questions:

- 1) what drives long-run euroisation?
- 2) what determines cyclical fluctuations in euroisation?

Deposit euroisation dynamics divided to cyclical and trend components (using HP filter)





# Long-run euroisation

- Following Ize and Levy Yeyati (2003) and Levy Yeyati (2006), we expect relationship between trend euroisation and “optimal” euroisation level based on Minimum Variance Portfolio (MVP) model:

$$MVP = \frac{var(\Delta CPI) + cov(\Delta CPI, \Delta ER)}{var(\Delta CPI) + var(\Delta ER) + 2cov(\Delta CPI, \Delta ER)}$$

- Johansen cointegration procedure - one cointegrating vector found between long-run euroisation and MVP

## LONG-RUN RELATIONSHIP

$$Euroisation_t = 41.7MVP + 68.2$$

(-5.92)

## VECM

$$\Delta Euroisation_t = -0.00003(Euroisation_t - 41.7MVP - 68.2)_{t-1} + 1.98\Delta Euroisation_{t-1} -$$

(-5.81) (455.67)

$$- 0.99\Delta Euroisation_{t-2} - 0.0001\Delta MVP_{t-1} + 0.0002\Delta MVP_{t-2} - 0.0001$$

(-226.60) (0.10) (0.34) (-1.92)

# Short-run euroisation determinants

Results suggest:

- High euroisation persistency
- **IR spread** significant, but with opposite sign
- **Exchange rate** not significant due to its long-run stability
- **MVP** also in line with cyclical changes of euroisation
- **Monetary policy affects euroisation in the short term**
- **Inflation** not affecting euroisation

Dependent variable: Euroization - cyclical component

Instruments: Lags 2 and 3 of the dependent variable

Period of estimation: Jan 2002-Dec 2016

Explanatory variables	Coefficient
<b>Euroisation - cyclical component (-1)</b>	<b>0.962***</b>
<b>Interest rate spread (-1)</b>	<b>0.089***</b>
<b>Exchange rate change (-1)</b>	0.854
<b>MVP</b>	<b>0.296*</b>
<b>Change in monetary policy measures (MP) (-1)</b>	<b>-1.204***</b>
<b>Annual CPI inflation</b>	-2.412
<b>Constant</b>	<b>-0.299***</b>
R-squared	0.921
Adjusted R-squared	0.918
S.E. of regression	0.141
Durbin-Watson stat	0.074
J-statistic	2.809
Prob(J-statistic)	0.094

Notes: GMM estimation method

\*\*\*, \*\*, \* indicate significance at 1, 5, and 10 percent level.

# Takeaways from Croatian case

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- ❑ Euroisation is **persistent** phenomenon – very difficult to reverse
  - ❑ You can take care of monetary and financial stability, but it's hard to change people's propensity to FX savings
- ❑ Monetary measures impact euroisation dynamics in the short run, but long-run euroisation is driven by general macroeconomic uncertainty, so policy efforts alone can only do so much
- ❑ At the end of the day, high euroisation seeks exchange rate stability, while macroprudential measures are needed to protect the financial system against FX risk
- ❑ **Euro adoption as a way forward?**

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**Thank you!**