

# **Currency Substitution in the Economies of Central Asia: How Much Does it Cost?**

*Aseel Isakova*  
CERGE-EI/EBRD  
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# Presentation Outline

- Recent developments in Central Asia
- Dollarization and currency substitution: definition and motivation
- Model overview
- Empirical results
- Dollarization and seigniorage revenues
- Dollarization and economic welfare
- Concluding remarks

# Central Asia: Kazakhstan, the Kyrgyz Republic and Tajikistan





# Recent economic developments in Central Asia (before the crisis)

- macroeconomic stability: stable prices and exchange rates
- rapid economic growth
- growing foreign capital inflows: foreign direct investments, crossborder interbank and intrabank lending (Kazakhstan)
- growing amount of remittances inflows (Tajikistan, Kyrgyzstan)



# Currency Substitution vs. Dollarization

## Money:

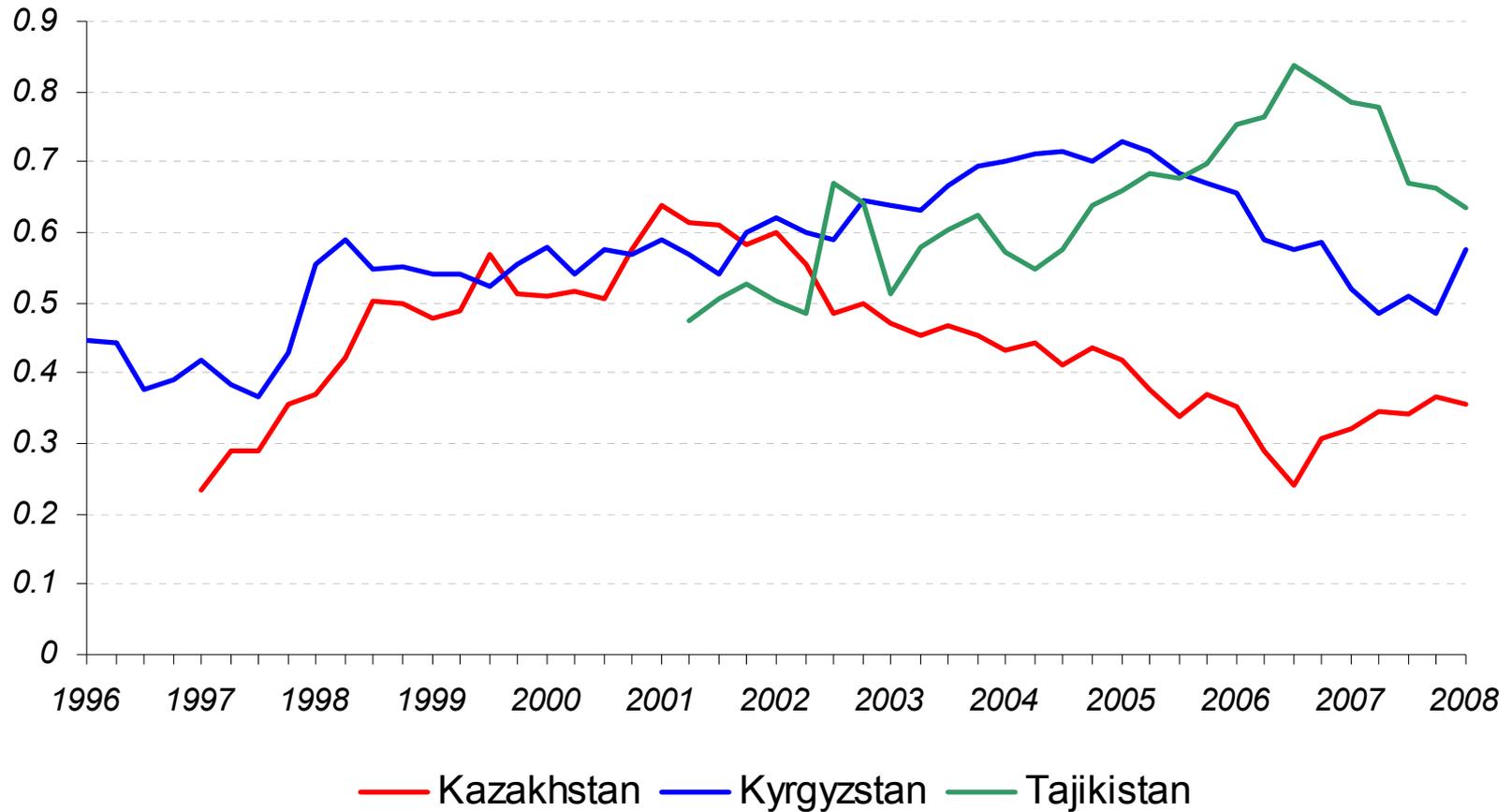
- medium of exchange
- unit of account
- store of value

Currency substitution:  
foreign currency  
used as medium  
of exchange and  
unit of account

Dollarization  
(asset substitution):  
foreign currency  
used as a store of value



# Dollarization Index: $DI = FCD / TD$





# Why Do People Hold Foreign Currency in Central Asia?

- Memory of macroeconomic instability in the 1990s
- Civil war in Tajikistan until 1997; actual stabilization has started in 1999 – 2000
- Political instability in Kyrgyzstan in 2005
- Tajikistan and the Kyrgyz Republic are the poorest economies among the former Soviet Union republics
- Underdeveloped financial markets, low confidence in local banks
- Instability of inflation, exchange rates due to recent financial crisis



# The Model

Residents are assumed:

- to get an endowment every period, receive a lump sum transfer from the government and keep some money from the last period
- to derive utility from consumption of goods and holding money (Imrohoroğlu 1994, Verbetski&Friedman 2001, Selcuk 2006)
- to diversify money holdings through holding both domestic and foreign money

Government:

- prints money and earns seigniorage
- rebates seigniorage revenue to the public as a lump sum transfer



# Dollarization (currency substitution) parameters in the model

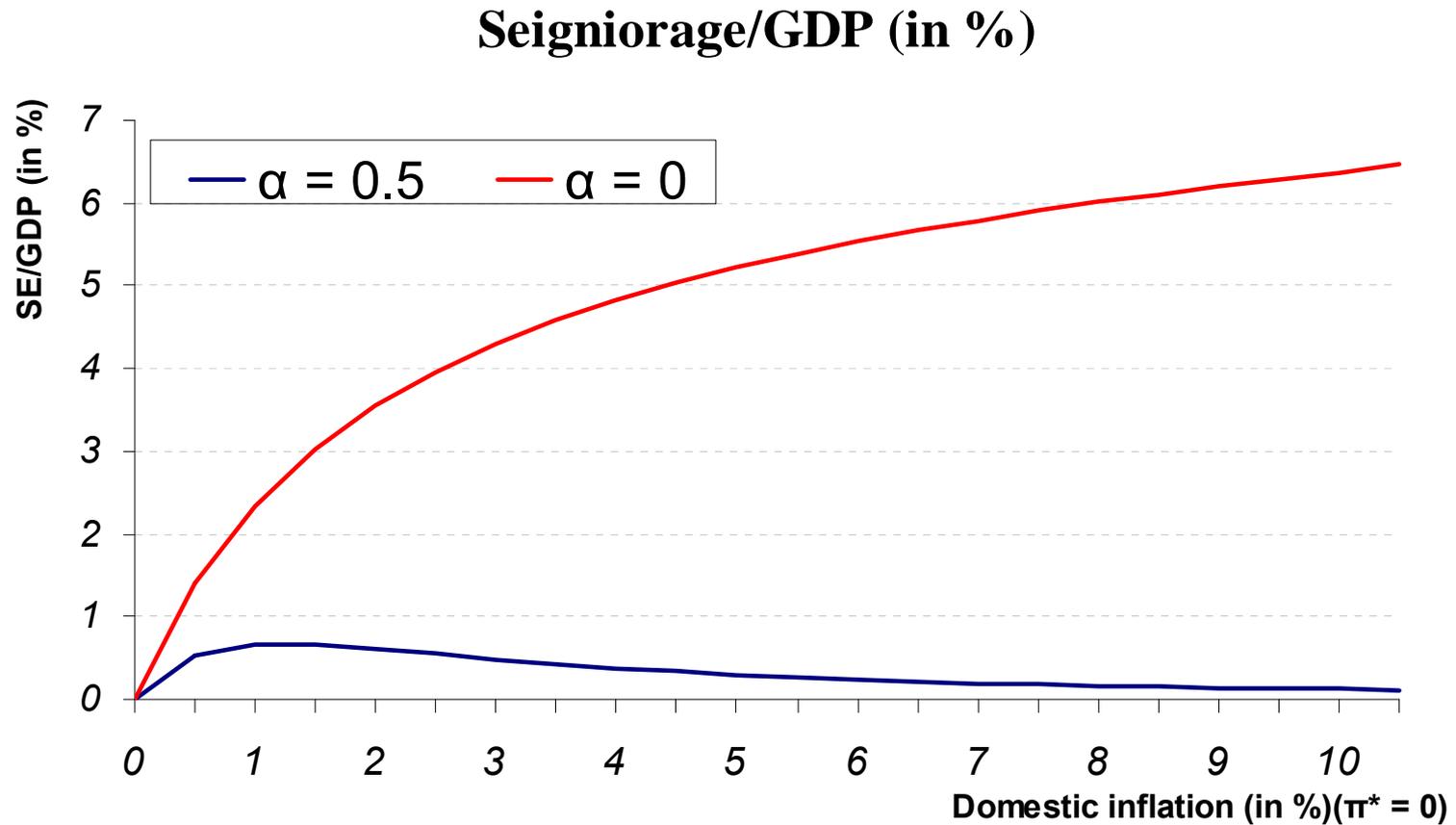
The parameters of interest are:

- the share of foreign money in providing utility, or efficiency of foreign currency in providing liquidity services ( $0 \leq \alpha \leq 1$ )
- degree of substitution between domestic and foreign money ( $s > 0$ )

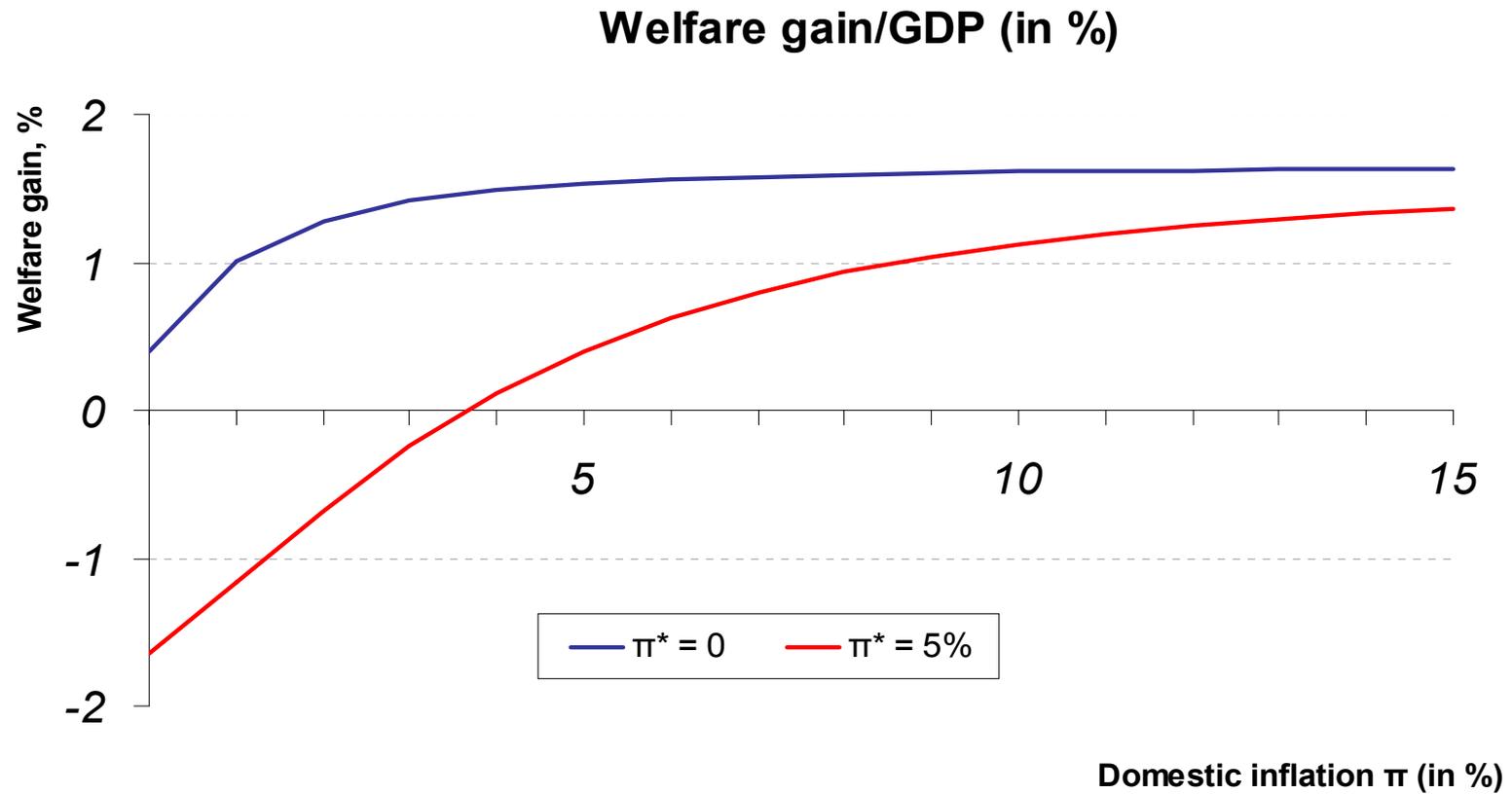
# Empirical Results

	<b>Kazakhstan</b>	<b>Kyrgyz Republic</b>	<b>Tajikistan</b>
$\alpha$	0.50***	0.55*** – 0.59***	0.46*** – 0.54***
$\rho$	-0.87*** – - 0.70***	-0.76*** – - 0.31*	-0.94*** – - 0.68***
$s = \rho/(1+\rho)$	3 - 8	1.45 – 3	3 – 17

# Seigniorage Revenue in a Dollarized Economy



# Dollarization: how costly is it ?





# Concluding remarks

- Currency substitution and dollarization have reached high levels in Central Asia
- Foreign currency is efficient in terms of providing liquidity services and has an important share in money holdings of residents
- Monetary authorities lose seigniorage revenue when dollarization is present due to substitution of domestic currency by foreign currency
- Holding foreign currency can be beneficial due to comparative stability of the foreign currency and households' perception about efficiency of foreign currency
- Policy questions: should countries de-dollarize?