

**Developing the market for
foreign exchange derivatives in Belarus:
Sequencing the reform steps**

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Structure

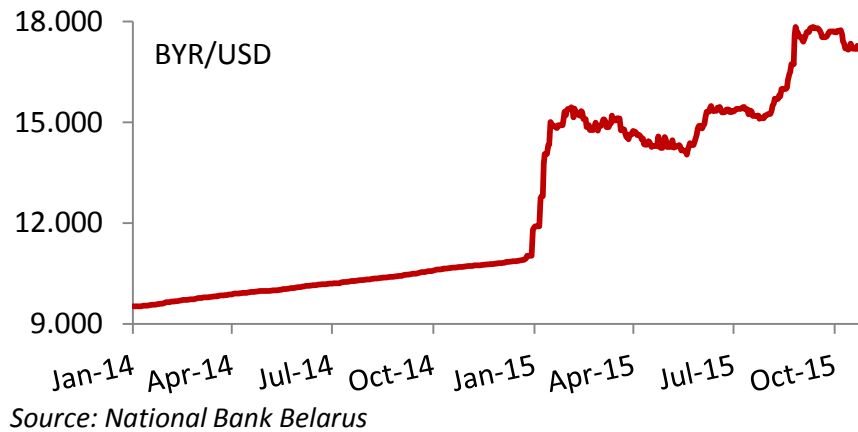
1. Introduction
2. Economic rationale of FX derivatives
3. Overview of instruments
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1. Introduction

- Since early 2015, the National Bank of Belarus allows for more flexibility in the exchange rate of the Belarusian ruble



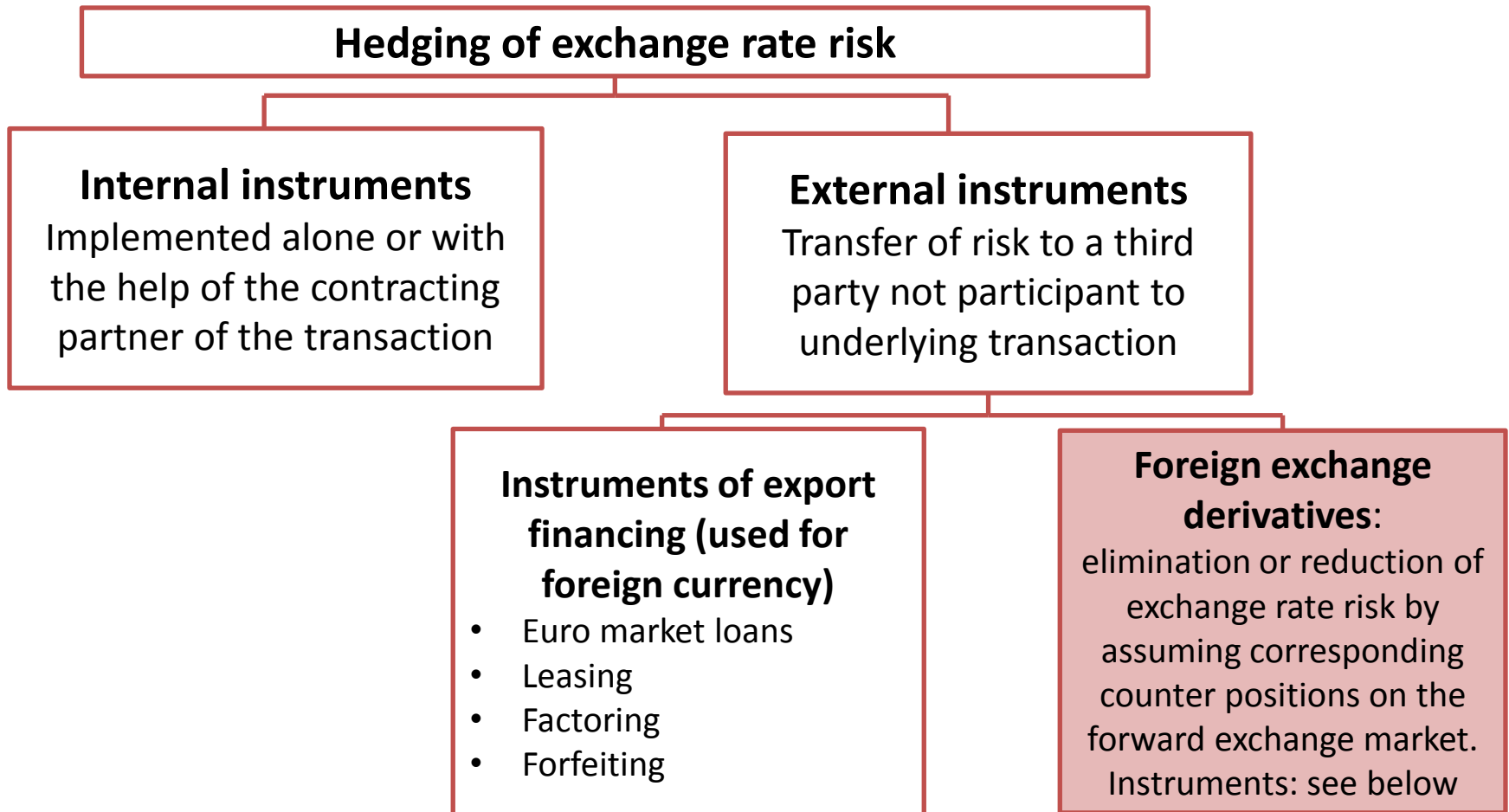
- This allows market forces to determine the exchange rate, which is positive from an economic point of view
- At the same time, foreign exchange (FX) volatility increases; instruments like FX derivatives (futures, forwards, swaps, etc.) are needed to deal with this new volatility
- Establishing a market for such instruments is a challenge; this presentation tries to structure the discussion

2. Economic rationale of FX derivatives

- **Three main motives** for using derivatives to deal with FX risk

- Hedging
 - Frequent and significant changes in exchange rates pose a real danger for export and import activities of real sector businesses
 - Such risks should be hedged but must be permanently monitored, because the exchange rate risk can change constantly

2. Economic rationale of FX derivatives



2. Economic rationale of FX derivatives

- Arbitrage
 - Economic agents exploit price differences for identical goods/assets, this is risk-free and leads to higher market efficiency (law of one price applies)

- Speculation
 - Derivatives can be used to speculate on future FX rate changes
 - Not necessarily „bad“: could be stabilizing, and provides liquidity, which in turn enhances market efficiency
 - Speculators are often the „risk-takers“, i.e. the opposing market side to hedgers from the real sector; in such a role they are crucial for the functioning of the market

3. Overview of instruments

Main types of „plain vanilla“ FX derivatives, which form the basis of the market:

Outright Forwards:

- Fixing of exchange rate for future FX transactions
- Agreement mutually obliges both parties
- Two sums of money in different currencies
- Forward rate is fixed
- Date of contract settlement is fixed
- Outright Forwards are mostly forward exchange contracts for customers of a bank
- The quote currency is predominantly the US dollar

3. Overview of instruments

Outright Forwards:

- Standard maturity: one, two, three, six or twelve months. Longer terms and „broken dates“ also possible (in which case calculation of rates by interpolation, since no money market interest rates are available for nonstandard dates)
- The interest difference between both currencies determines the difference between the forward rate and the spot rate (NOT the future expectations of the exchange rate development!)
- The forward rate may lie above or below the spot rate:
 - Report: difference between rates if forward rate is above spot rate
 - Deport: difference between rates if forward rate is below spot rate
- The value of the futures contract changes over time along with changes in the market, e.g. in the exchange and interest rates of both currencies, so the relative advantage of the position assumed may improve or deteriorate

3. Overview of instruments

Currency Futures:

- Similar in structure to Outright Forwards
- Differences:
 - Futures are exchange traded
 - In order to achieve liquidity in the products traded they are standardised with regard to volume, maturity date and term
 - The quote currency is predominantly the US dollar; quotation is a price quotation (indirect quotation for forwards)
- Usage is identical to other futures markets
 - Currency futures rates are formed according to supply and demand and represent the forward rate
 - The exchange or another service provider (often a subsidiary of the exchange) acts as clearing house and assumes the role of central counterparty for each trade

3. Overview of instruments

- Each owner of an open position must provide securities on a margin account. An adjustment of profits and losses is made for each trading day (“mark to market”)
- Margins usually lie well below the contract volume, so a large leverage occurs
- The most important exchange in this area is CME in Chicago (market segment: International Monetary Market, IMM)

3. Overview of instruments

Currency Options:

- In addition to specifications of the futures contract:
 - Decision on put or call option
 - Price of underlying asset, strike price
 - The buyer decides whether to realise the option or not (contingent forward contract)
- The last point creates an asymmetric risk/reward profile to the advantage of the option buyer (in contrast to futures, forwards and swaps).

Ergo: the buyer pays the seller an option premium; the premium rate is formed according to market supply and demand

3. Overview of instruments

Four possible positions in option contracts

Type of option	Option buyer (pays option premium)	Option seller (writer) (receives option premium)
Call	Long call (right to buy)	Short call (obligation to deliver)
Put	Long put (right to sell)	Short put (obligation to take)

3. Overview of instruments

- European style option: may only be exercised by the holder at expiration
- American style option: may be exercised at any time, by the holder, during the life of the contract (the name has nothing to do with the trading place)
- Underlying asset for foreign currency options may be:
 - Cash transactions
 - FX Futures
 - Currency Swaps

3. Overview of instruments

- Currency options may be traded on an exchange or OTC
 - Exchange traded currency options
 - Different from OTC options: standardized (→ liquidity)
 - Features such as central counterparty, margin account etc. as for currency futures
 - Most important market: Philadelphia Stock Exchange (PHLX) for foreign currency options
 - Currency options over the counter (OTC)
 - Individually structured instead of standardized
 - As with forwards and futures: OTC segment is much more significant in terms of volume
- Exotic options
 - Compared with “plain vanilla” options they have additional features, often to make hedging more cost effective

3. Overview of instruments

- FX Swaps:
 - Both counterparties exchange two currencies on a specified date at an agreed rate and conduct a reverse transaction on a future date at a rate agreed at the conclusion of the contract
 - Combination of spot/forward transaction, or two forwards
 - Short duration, sometimes very short (e.g. overnight)
 - Usage: to bring forward or delay the maturity of existing foreign exchange transactions (→ instrument of liquidity management); applied especially by banks to hedge open forward exchange positions for their customers (forwards)

- Some empirical data on FX derivatives in Annex, Tables 1 and 2

4. The current FX market framework in Belarus

Belarusian Currency and Stock Exchange

- There exist futures contracts for US dollar, Euro, Russian ruble, but apart from minor trading due to technical reasons (volume: around 1 m USD in 2015) no activity
- Lack of indicators at Belarusian Currency and Stock Exchange:
Indicative interest rate spot / forward rates
 - Lack of market rates in particular leads to inability to apply market pricing
- BCSE does not provide for options trading, which under the law can be conducted only at a stock market
- Lack of trading platform for deliverable forwards (DF)
- Low liquidity and capacity of the derivatives market

4. The current FX market framework in Belarus

Over the counter (OTC) market

- Banks offer to clients only short-term (i.e. 1-3 months) financial instruments, e.g. forward contracts
- No significant volumes according to market participants
- Lack of benchmarks yield curves for medium-term and long-term instruments hinder the correct pricing of FX forward transactions based on the principle of no arbitrage

4. The current FX market framework in Belarus:

Why Belarusian companies currently do not hedge FX risks

- **Currency restrictions:** Targeted purchase of foreign currency; use foreign currency for a specified purpose; existence of terms of use of purchased foreign currency
- **Legislative barriers:** In transactions with financial derivatives there are difficulties in defining their legal character
- **Accounting methodology:** Insufficiently developed accounting methodology of operations with derivatives, and in particular instruments for hedging currency risks
- **Taxation:** There is no clarity regarding the taxation of income obtained from hedging transactions

All above mentioned **lead to:**

- Enterprises cautious about use of instruments of hedging FX risks, especially taking into account that it may cause checks by representatives of supervisory bodies
- Enterprises do not understand the principles and basics of the derivatives' market and are afraid to work on it

5. Sequencing the next steps: Policy recommendations

In economic terms, establishing a thriving FX derivatives market is a good idea, but risks need to be managed

- Rapid and unregulated financial innovation can pose threats to financial stability

Market establishment/liberalisation should be a gradual reform:

1. End-users need to have the right risk-management capabilities in place
2. Supervisor (National Bank) should work towards:
 - a. Creation of a reporting system for FX derivatives trades (above a certain threshold) for a proper risk assessment
 - b. Creation of a clearing system for OTC derivatives to reduce systemic risk

5. Sequencing the next steps: Policy recommendations

3. Spot FX market as the underlying market needs to be liquid and free from interference
4. Domestic money market and local government bond market need to be developed in parallel
 - „Risk-free“ yield-curve is key input for pricing FX derivatives
5. Near-term focus probably on OTC-instruments, until exchange infrastructure is established; experience of the OTC-market is crucial for the alignment of both the market structure and the products
6. Participation of non-residents in the longer term to increase liquidity and market efficiency
 - See Annex, Table 3 for Asian experience

6. Conclusions

- More FX flexibility requires instruments to deal with it
- FX derivatives like forwards, futures, options and swaps can be used for hedging, arbitrage and speculation purposes
 - Contribute to FX risk transfer and a more efficient allocation of capital
- Current market framework is underdeveloped, both OTC and at the Belarusian Currency and Stock Exchange (BCSE)
- National Bank of Belarus as the future single regulator of the financial sector should pay particular attention to the development of this market
 - Benefits to be expected, but risks must be controlled
- Gradual sequencing of reform steps allows for reaping the benefits while controlling for risks

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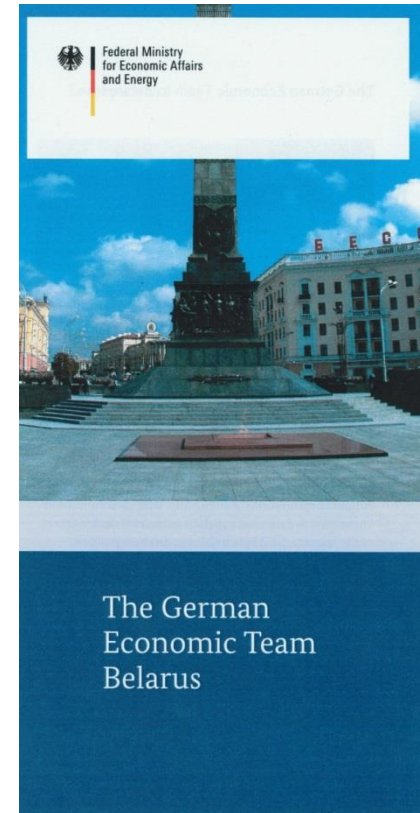
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Annex 1: Amounts of outstanding over-the-counter (OTC) and exchange-traded FX derivatives (USD bn, world-wide)

	Dec 2008	Dec 2011	Dec 2014	Jun 2015
Over-the-counter (OTC) derivatives				
Currency forwards and forex swaps	24,494	30,526	37,076	
Currency options	10,608	10,065	14,600	
Exchange-traded derivatives				
Currency futures	128	224	234	233
Currency options	129	88	143	155

Source: Bank for International Settlements

Annex 2: Emerging Europe: Availability of Local Exchange-Traded and OTC Derivatives Instruments

	Exchange-traded				OTC	
	Currency Futures	Currency Options	FX Swaps	FX Forwards	Currency Swaps	FX Option
Bosnia and Herzegovina						
Bulgaria			+	+	+	+
Croatia						
Czech Republic			+	+	+	+
Estonia			+	+		+
Hungary	+	+	+	+		+
Latvia			+	+		
Lithuania			+	+		
Macedonia						
Poland	+		+	+	+	+
Romania	+	+	+	+		+
Russia	+		+	+		+
Serbia						
Slovak Republic			+	+		+
Slovenia			+	+		+
Turkey	+		+	+	+	+
Ukraine						

Source: Iorgova/Ong (2008)

Annex 3: Overview of Foreign Exchange Risk Hedging Instruments in Asia

Country	On-shore FX forward	Non-resident access to on-shore FX forward	Off-shore market
China	Up to 12 months	No allowed	NDF liquid
Hong Kong	Liquid	No restriction	None
Indonesia	Liquid	Allowed to hedge principal and coupon	NDF liquid
Korea	Liquid	Allowed to hedge principal and coupon	NDF liquid
Malaysia	Up to 12 months	Allowed to hedge principal and coupon with onshore banks	None
Philippines	Liquid	Prior approval required	NDF liquid
Singapore	Liquid	Allowed to hedge principal and coupon	Deliverable forward illiquid
Thailand	Liquid	Allowed to hedge principal and coupon	Deliverable forward illiquid

Source: Bank for International Settlements (2006)