

# **Markets for FX Derivatives**

## **- Selected International Experience -**

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Berlin/Minsk, February 2016

## Structure

1. Introduction
2. FX derivatives and financial markets
3. EU regulatory reporting requirements / market supervision perspective
4. Corporate FX hedging decisions

Annex

Contacts

## 1. Introduction

- In previous work (PB/06/2015), we discussed the general reform steps necessary to establish a functioning market for foreign exchange (FX) derivatives in Belarus
- This presentation is a follow-up to this discussion, and focuses on international experience in a number of selected issues, which are crucial for a functioning FX derivatives market
- In the following, we concentrate on three areas:
  - Relationship between FX derivatives and other segments of the financial market
  - Regulatory reporting requirements for FX derivatives in the EU
  - International experience regarding corporate FX hedging decisions

## 2. FX derivatives and financial markets

The global FX derivatives market in a nutshell:

- Over 80 % of turnover is generated off-exchange
- 12 to 14 large banks dominate the world's electronic FX derivative market. Other banks get their liquidity and prices from them (can be expensive for customers)
- Electronic trading platforms are connected to each other using FIX protocol
- Trading is largely automated

## 2. FX derivatives and financial markets (cont'd)

Specific situation in emerging markets and transition economies:

- Deep and liquid FX markets were a key building block of the move from fixed to flexible exchange rates
  - Spot markets
  - Derivative markets/Hedging instruments
- In many emerging markets/transition countries, hedging instruments (forwards, futures, swap, options) developed only gradually, and with a lag to spot market development
  - Central banks actively promoted the development of FX derivatives markets e.g. by removing impediments and allowing non-resident access
  - Some central banks stimulated the derivatives market by actively participating (e.g. issuing instrument)
    - Israel and Uruguay, see IMF (2007)

## 2. FX derivatives and financial markets (cont'd)

- The presence of complementary financial markets is an important prerequisite for deep and liquid FX derivatives markets
  - Liquid and efficient short-term money and government treasury bill markets are necessary for pricing (arbitrage via covered-interest-parity)
    - Absence of such markets hinders derivatives markets development
  - Longer term government bond markets, but also corporate bonds and stocks are also important
  - See Annex for more information
  
- Current situation in emerging markets
  - FX derivatives trading is off-exchange throughout
  - The market is usually only used by smaller banks (niche market!)
  - Higher risks, therefore higher spreads → a product mostly for hedge funds

### 3. EU regulatory reporting requirements / market supervision perspective

- Background:
  - G20 initiative from 2009 (as a consequence of the global financial crisis) to increase the global stability of the over-the-counter (OTC) derivative markets
- EMIR (European Market Infrastructure Regulation)
  - EU Directive that became effective in 2012 implements this demand in the EU
  - Not yet uniformly applied to FX derivatives in all EU countries
  - Applies to both financial and non-financial firms using OTC derivatives
  - Contents:
    - CCP (Central Counterparties) should be used for all OTC-standardised products or products capable of being standardised
    - Bilateral clearing systems should be used in all other cases
    - These clearing systems are authorised and monitored by ESMA (European Securities and Markets Authority)
    - Further obligations introduced by EMIR are reporting obligations for OTC derivatives and measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives

- Supervisory authorities monitoring
  - National supervisory bodies
    - use reporting chains (which include the end customer)
    - have internal systems to check if reports make sense and take action in case of abnormalities
    - oblige market participants to report high risk trades
    - receive reports of bilateral OTC trades from (private) Trade Reporting Institutions
  - ESMA
    - receives data from each country's supervisory body insofar as the products concerned are subject to supervision by authorities of other EU states
    - passes this information on to other supervisory bodies (TREM = Transaction Reporting Mechanism)

## 4. Corporate FX hedging decisions

In this chapter, we try to answer two different issues that relate to corporate (i.e. real sector) FX hedging decisions:

- a. How are German/international enterprises accounting for their FX risk hedging operations? What normative documents/ regulations apply?
- b. What is the appropriate degree of risk exposure that ought to be covered by the use of FX derivatives in real sector enterprises?

## a) Accounting for FX risk hedging operations

- Companies are free to use FX hedging transactions to reduce (eliminate) FX exposure
- If the hedging transaction meets certain criteria outlined in the applicable accounting standards, there is a special accounting treatment called **hedge accounting** permitted („privilege“)
- International companies report according to different **accounting standards** (German GAAP, IFRS, US GAAP...)
  - Hedge accounting is roughly similar in different standards
  - **IFRS: IAS 39 „Financial Instruments: Recognition and Measurement“ regulates hedge accounting** (will be replaced in 2018 by **IFRS 9**).
  - US GAAP: FAS 133 „Accounting for Derivative Instruments and Hedging Activities (amended by FAS 161)

## a) Accounting for FX risk hedging operations (cont'd)

- Accounting standards allow hedge accounting for three different designated FX hedges:
  1. A **cash-flow-hedge** is designated for a highly probable forecasted transaction, a firm commitment (not carried on the balance sheet), FX cash flows of a recognized asset or liability, or a forecasted intercompany transaction.
  2. A **fair-value-hedge** is designated for a firm commitment (not carried on the balance sheet) or FX cash flows of a recognized asset or liability.
  3. A **net-investment-hedge** is designated for the net investment in a foreign operation.
- The guiding principle of hedge accounting is the recognition of the gain/loss of the hedged item and the gain/loss of the hedge into the income statement **at the same time**
- Hedge accounting requires a large amount of compliance work, involving documenting the hedge relationship and proving that the hedge relationship is effective.

## a) Accounting for FX risk hedging operations (cont'd)

Steps towards hedge accounting:



Source: Oanda, *Forex Hedge Accounting Treatment*

Note: Hedge accounting is only the last in a series of steps!

## b) Appropriate degree of risk exposure covered

- No exact answer to the question possible due to **lack of „hard data“**
- However, there are **surveys and case studies** by investment banks and other agencies about this question
  - BUT: Results often not publicly available

Some **stylised facts** can be distinguished:

- Degree of coverage depends on company type and FX-exposure (e.g. domestically-oriented, classical exporter/importer, multi-national company (MNC))
- But even among similar groups of companies, differences possible due to different financial risk management policies or difficulties in forecasting FX exposure (e.g. cash-flow stream)
- However, due to increased FX volatility and a growing trend of internationalisation for many companies, the topic of FX hedging becomes more urgent
  - For many companies, FX risk is considered a „non-core“ risk that shareholders try to avoid
- Companies with FX exposure in sectors that have narrow margins (e.g. commodities like agricultural products) typically hedge most of their exposure

## b) Appropriate degree of risk exposure covered (cont'd)

- A survey (Greenwich Treasury Advisors 2008) among clients collected the following responses:

	Domestic Company	MNC	Exporter
% who do FX hedging	10-15%	85-95%	90-95%
Hedging time horizon	Fiscal year	1-2+ years	1-3+ years

- In MNCs that operate in many countries, typically only the net FX exposure versus the reporting currency (USD, EUR) is (fully) hedged
- **Instruments used:** The main hedging instruments used are forwards and/or futures and cross-currency swaps; less so options or more sophisticated (exotic) structures
  - Bigger companies will be more likely to use options and exotic structures than smaller companies

# Annex

	Orderly Exits			Exits under Pressure		
	Chile (1984–99)	Israel (1985–2005)	Poland (1990–2000)	Brazil (1999)	Czech Rep. (1996–97)	Uruguay (2002)
<b>Ingredients of a Floating Regime</b>						
(1) FX market development						
Spot markets	√	√	√	√	√	√
Derivative markets/hedging instruments	√	√	√ <sup>2</sup>	√ (futures)	√ <sup>2</sup>	×
Complementary markets						
Interbank money market	√	√ <sup>3</sup>	√	√	√	×
Securities market	√	√ <sup>3</sup>	√	√	√	√ <sup>4</sup>
(2) FX risk management capacity	√	√	√	×	√	×
(3) Alternative monetary policy framework	√	√	√	×	×	×
Monetary policy implementation capacity	√	√	√	√	√	×
(4) Intervention strategy for a floating regime	With the float	√	With the float	With the float	√	With the float
Overall preparedness	Well prepared	Well prepared	Well prepared	Reasonably well prepared	Reasonably well prepared	Not well prepared
<b>Memo: Capital Account Liberalization</b>						
Short-term capital inflows liberalized	√ <sup>6</sup>	√	√ <sup>7</sup>	√ <sup>6</sup>	√ <sup>7</sup>	√
Capital outflows liberalized	√ <sup>6</sup>	√	√ <sup>7</sup>	√	√ <sup>7</sup>	√
Derivative transactions liberalized	√	√	√ <sup>7</sup>	√	√ <sup>7</sup>	√

Source: Detailed case studies.

Note: FX = foreign exchange.

<sup>1</sup>The years in parentheses refer to the period of transition to a full float.

<sup>2</sup>Major boom one year before the float.

<sup>3</sup>Lagged behind compared to the foreign exchange markets.

<sup>4</sup>For maturities less than 270 days.

<sup>5</sup>The prudential framework was not in place to control the overall risk exposure of banks, with identified shortcomings mainly regarding the prudential regulation of banks' exposure to FX risk. Corporates in general (and banks) were making active use of the futures markets to hedge their exposures or to take speculative positions. Market participants were not accustomed to assessing, as a matter of routine, the FX risks posed by regular market volatility.

<sup>6</sup>For Chile, all controls were removed shortly before or with the float. For Brazil, controls were liberalized gradually during the 1990s (inflow controls of 1993–96 liberalized by 1999), with further liberalization for nonresident investments after the float.

<sup>7</sup>In the Czech Republic, most inflows and outflows had been liberalized by 1997, but certain inflow transactions (including financial derivatives) were liberalized in early 1999, following a transition period to phase out the remaining controls under the agreement with the Organization for Economic Cooperation and Development (OECD), with full liberalization taking place in 2002. Similarly in Poland, full liberalization of all capital account transactions took place in 2002, until which time certain transactions (including selective derivatives operations and short-term portfolio and deposit transactions) had remained controlled.

Source: IMF (2007): *Moving to Greater Exchange Rate Flexibility*

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