

# Derivatives Markets in Currencies: The Need for Regulation

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# Summary

- ❑ The global currency market is very large.
- ❑ It is growing exponentially and the current daily turnover is about \$5.3 trillion (9% of global GDP )
- ❑ It is expected to rise to \$10 trillion by 2020.
- ❑ The level of speculative activity is significant: only around 3% of it is related to the underlying trade flows (Das 2011).
- ❑ The currency market is highly significant economically and commercially.
- ❑ Financial institutions from almost every country are active in it, and **any problem could pose systemic risks.**

# What is “systemic risk”?

## (I)

- ❑ Acharya and I (2010) defined systemic risk “broadly as the expected losses from the risk that the failure of a significant part of the financial sector leads to a reduction in credit availability with the potential for adversely affecting the real economy.
  
- ❑ Micro-prudential view: Contagion
  - ❑ Failure of an entity leads to distress or failures of others
  
- ❑ Too-big-to-fail (TBFT) institutions
  - ❑ Regulate TBTF better
  
- ❑ Systemically Important Financial Institutions (SIFIs)
  - ❑ Regulate SIFIs better

# What is “systemic risk”?

## (II)

### ❑ Macro-prudential view:

(Diamond-Dybvig 1983 + Shleifer-Vishny 1992)

❑ Common factor exposures

❑ Runs

### ❑ Several entities fail together as

❑ Short-term creditors demand immediacy

❑ Against long-term assets

❑ But the system has limited capacity (capital?) to provide immediacy

❑ The micro-prudential and macro-prudential views are not necessarily mutually exclusive

## A Word of Caution

As far as currencies are concerned, systemic risk is not only about the failure of a significant part of the financial sector that leads to a reduction in credit availability with the potential for adversely affecting the real economy.

**The entire economy may collapse.**

## For example – Öncü (2013)

While the total foreign debt stock of Turkey in 2002 was \$130 billion with 67% owed by the public sector, the foreign debt stock in 2012 was \$337 billion with 67% owed by the private sector. In addition, while only 13% of the total foreign debt stock was short term in 2002, the short-term debt constituted 30% of the total foreign debt stock in 2012. More importantly, 88% of the short-term debt belonged to the private sector, and 66% of it belonged to the private financial sector in 2012.

This effectively turned the Turkish private sector into a shadow bank, which borrows short term in rollover debt markets, leverages significantly, and invests in long-term and illiquid assets, making Turkish corporations in general, and Turkish private banks in particular, vulnerable to currency shocks that may lead to collective bankruptcies.

# Types of Currency Derivatives by Trading

## □ Exchange Traded (ET):

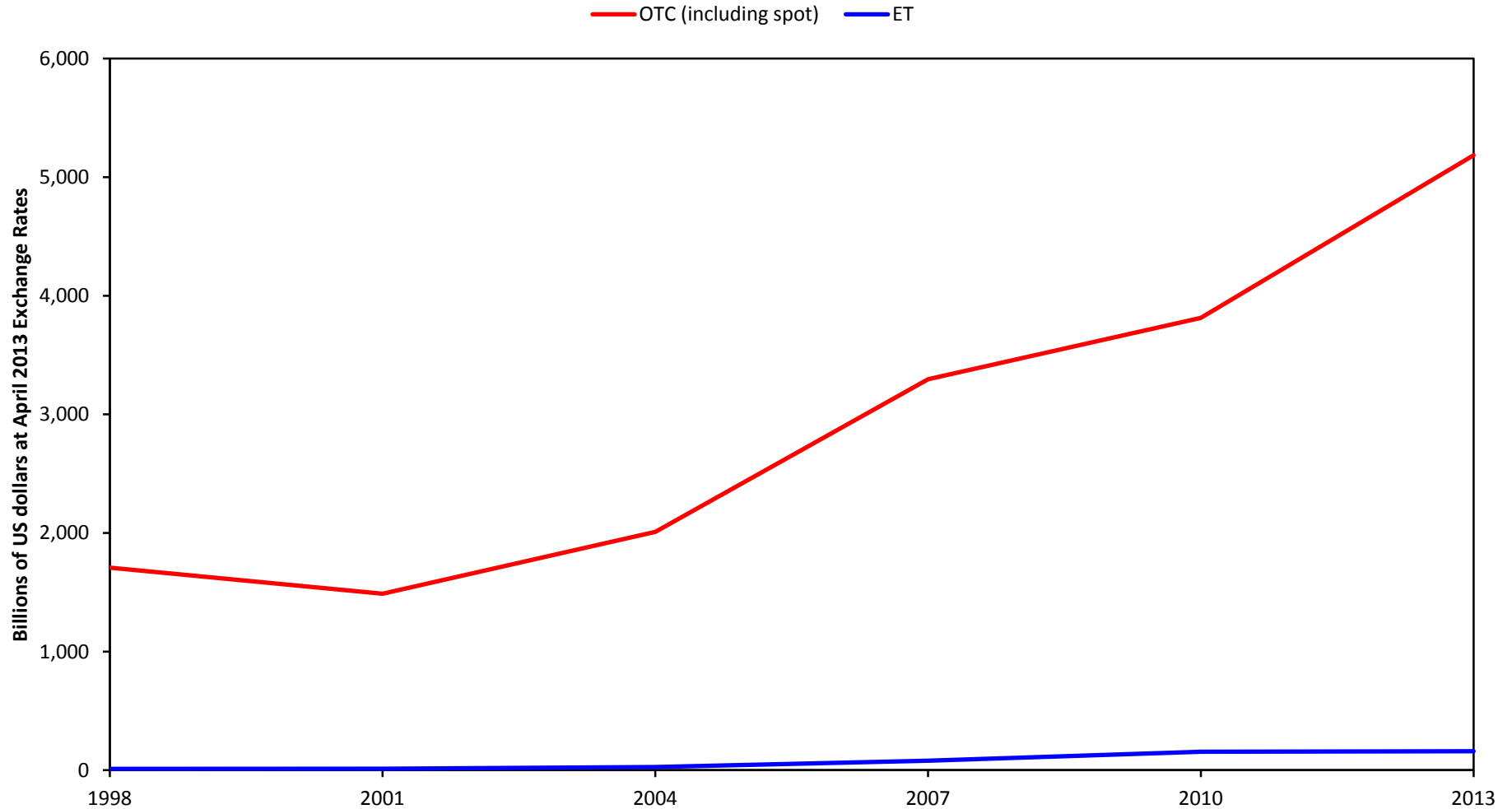
- Contingent claims that are traded on specialized exchanges;
- The contracts are standardized;
- There are margin requirements (limits to leverage);
- Trades cleared centrally.

## □ Over the Counter (OTC):

- Privately negotiated contingent claims traded directly between two parties;
- Markets made up of electronically connected dealers, brokers, banks and other “sophisticated” financial entities;
- Larger than the ET market and is largely unregulated.

# Global Foreign Exchange Market Turnover

Source: BIS Triennial Central Bank Survey – April 2013



# Take away

- ❑ The ET markets are minuscule when compared to the OTC markets in most currencies.
- ❑ But there are a few exceptions. Two examples:
  - ❑ Brazil - the ET market is bigger than the OTC market.
    - ❑ Derivatives dealers use the exchange for market making activities in trading futures, options and swaps, so most of the inter-dealer trades take place on the ET market;
    - ❑ Further, Brazil has reporting requirements for OTC transactions. Every transaction must be reported to central registration and confirmation organizations in order for it to be considered legal and enforceable.
  - ❑ India - the ET market is smaller than the OTC market, but sizes are comparable.
    - ❑ Inter-dealer transactions take place in the OTC market through the Clearing Corporation of India Limited (CCIL);
    - ❑ However, every eligible OTC foreign exchange contract, entered into between members, gets novated and be replaced by two new contracts – between CCIL and each of the two parties, respectively.
- ❑ In both countries, the reporting requirements are strict, ensuring transparency.
- ❑ Only OTC trades with overseas counterparties escape the reporting systems because they are booked off-shore.

# Types of Currency Derivatives by Function (I)

- ❑ Currency Forwards (Outright Forwards):
  - ❑ Exchange of one currency for another at a pre-specified exchange rate on some future date – **no currencies are exchanged today;**
  - ❑ Or settlement occurs in one the currencies (Non-deliverable Forward – NDF);
  - ❑ **Mostly OTC.**
  
- ❑ Currency Futures:
  - ❑ Same as forwards but **traded on the exchanges only.**
  
- ❑ Currency Swaps:
  - ❑ A portfolio of currency forwards;
  - ❑ **Mostly OTC.**

# Types of Currency Derivatives by Function (II)

## ❑ FX Swaps:

- ❑ Similar to Currency Forwards except that currencies are exchanged both in the beginning and at the end.
- ❑ Usually, but not always, a portfolio of a spot and forward transactions.

## ❑ Currency Options:

- ❑ A right to buy or sell a foreign currency at a pre-specified exchange rate on (European) or until (American) future date.
- ❑ Usually traded on the exchanges.

## ❑ Others:

- ❑ Any imaginable contingent claim traded privately!

# The NDF Market

## (I)

- ❑ The NDF Market is an OTC market outside the jurisdiction of domestic regulators;
- ❑ Began to trade actively in the 1990s;
- ❑ Developed for emerging markets with capital controls, where the currencies could not be delivered offshore;
- ❑ But not all non-convertible currencies have an NDF market;
- ❑ Most NDFs are cash settled in US dollars.

# The NDF Market (II)

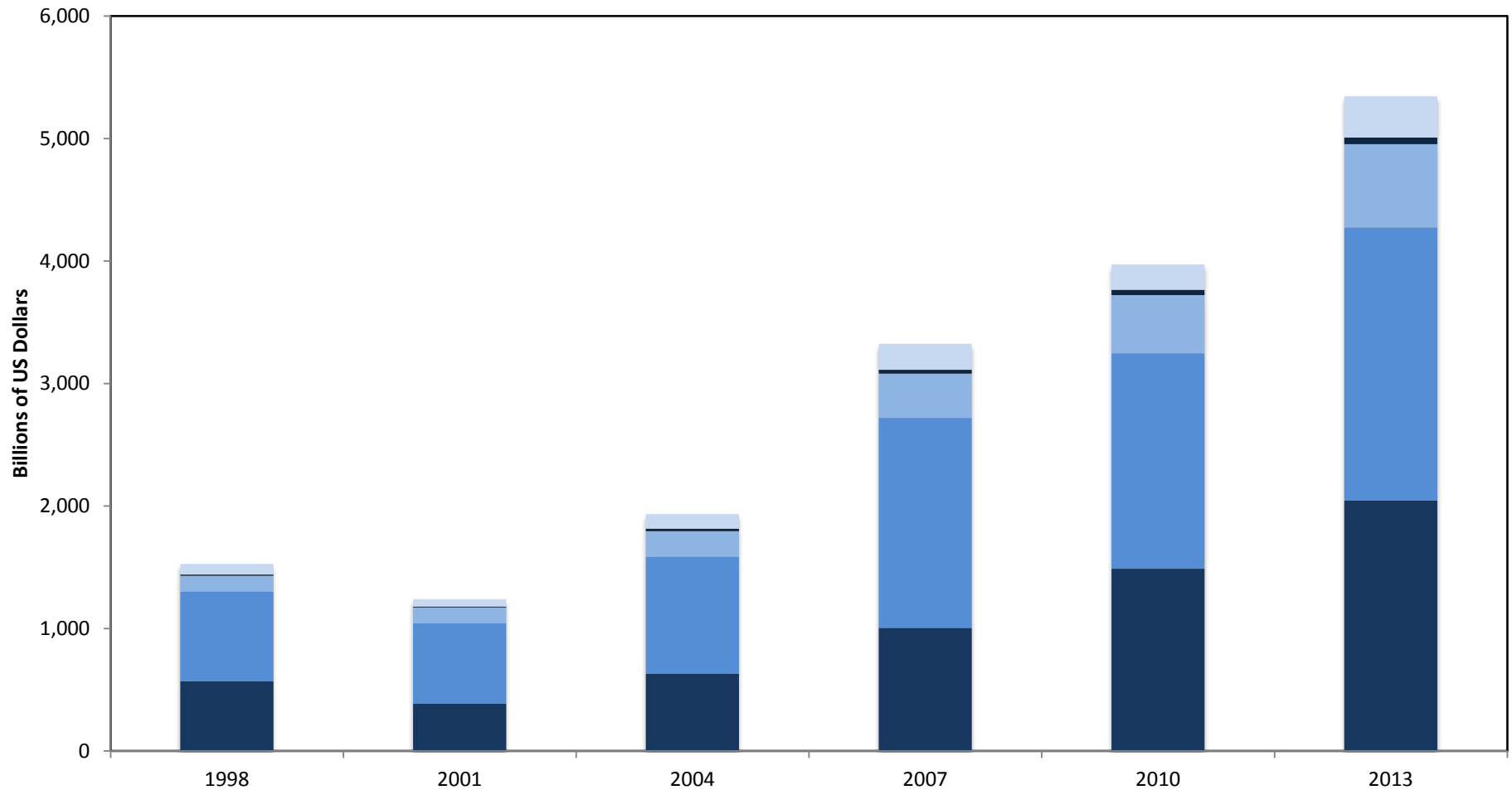
A non-comprehensive list of countries for which NDFs are traded:

<b>Asia-Pacific</b>	<b>Latin America</b>	<b>Other</b>
China	Argentina	Egypt
Indonesia	Brazil	Israel
India	Chile	Kazakhstan
Malaysia	Colombia	
Philippine	Guatemala	
Taiwan	Peru	
Vietnam	Uruguay	
	Venezuela	

# Global Foreign Exchange Market Turnover

Source: BIS Triennial Central Bank Survey – April 2013

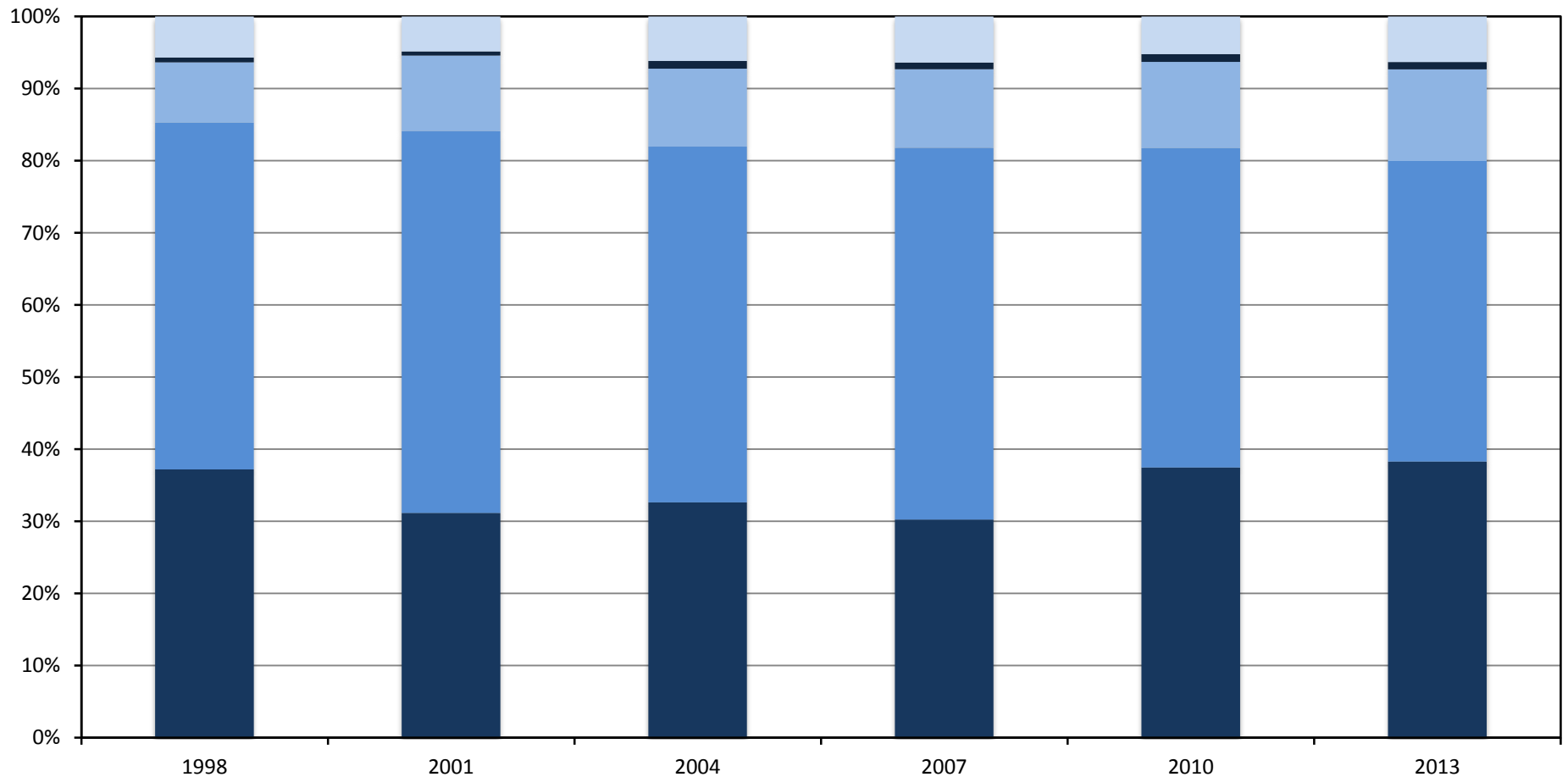
■ Spot Transactions ■ FX Swaps ■ Currency Forwards ■ Currency Swaps ■ Others



# Global Foreign Exchange Market Turnover

Source: BIS Triennial Central Bank Survey – April 2013

■ Spot Transactions ■ FX Swaps ■ Currency Forwards ■ Currency Swaps ■ Others



# BIS Triennial Central Bank Survey – April 2013

(I)

- ❑ Trading in foreign exchange markets averaged \$5.3 trillion per day in April 2013, up from \$4.0 trillion in April 2010 and \$3.3 trillion in April 2007.
- ❑ FX swaps were the most actively traded instruments in April 2013, at \$2.2 trillion per day, followed by spot trading at \$2.0 trillion.
- ❑ Altogether, derivatives trading averaged \$3.3 trillion per day while spot trading averaged only \$2.0 trillion per day.

## Conclusions:

- 1) Currency markets are growing;
- 2) Derivatives markets dominate the spot market.

# BIS Triennial Central Bank Survey – April 2013 (II)

❑ Trading increasingly concentrated in the largest centers:

UK, US, Singapore and Japan

❑ April 2013: 71%

❑ April 2010: 66%

❑ Participation (April 2013):

❑ Reporting Dealers: 39%

❑ Smaller Banks: 24%

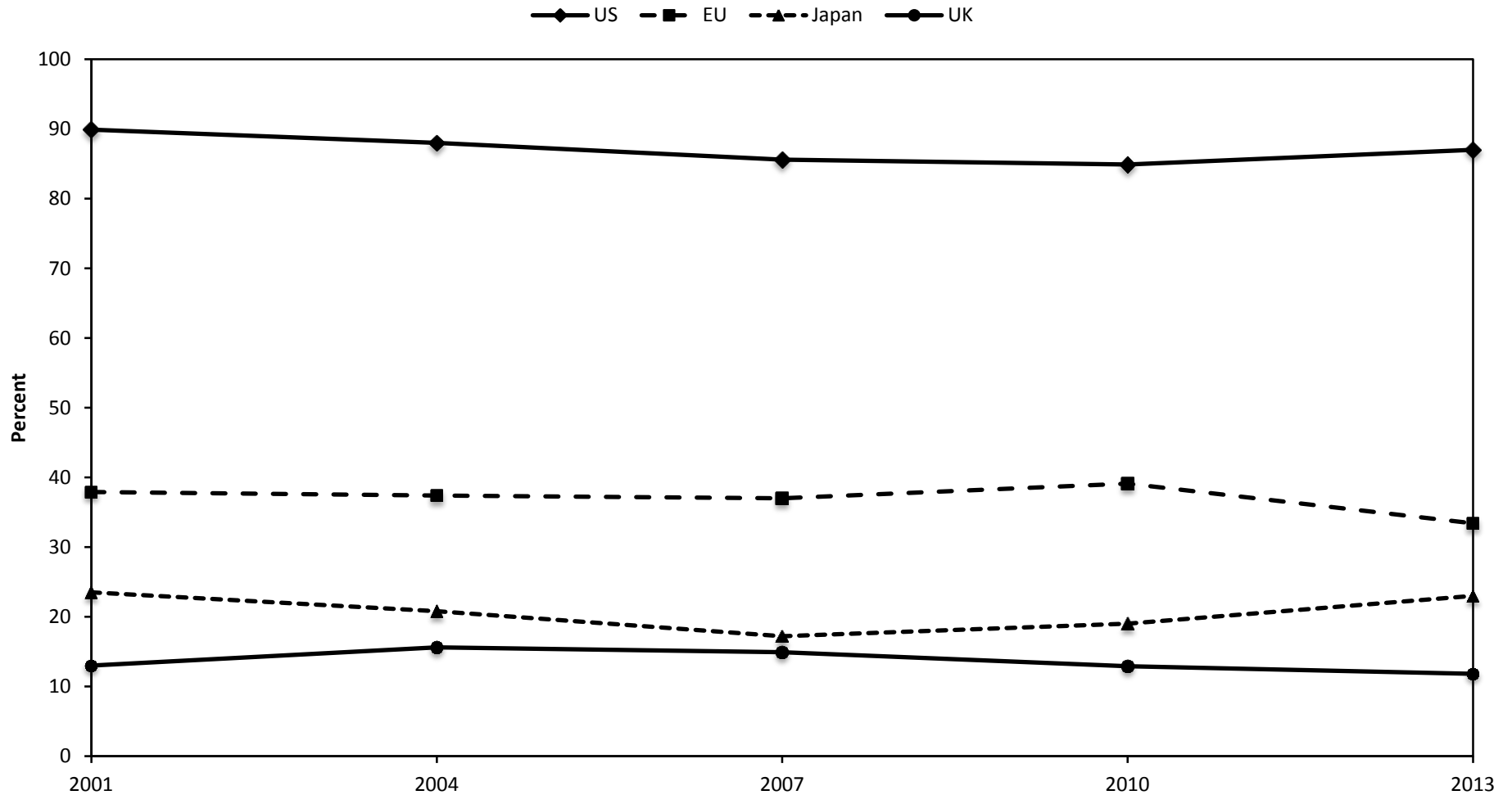
❑ Institutional Investors: 11%

❑ Hedge Funds and Prop Traders: 11%

❑ Non-financial Customers: 9%

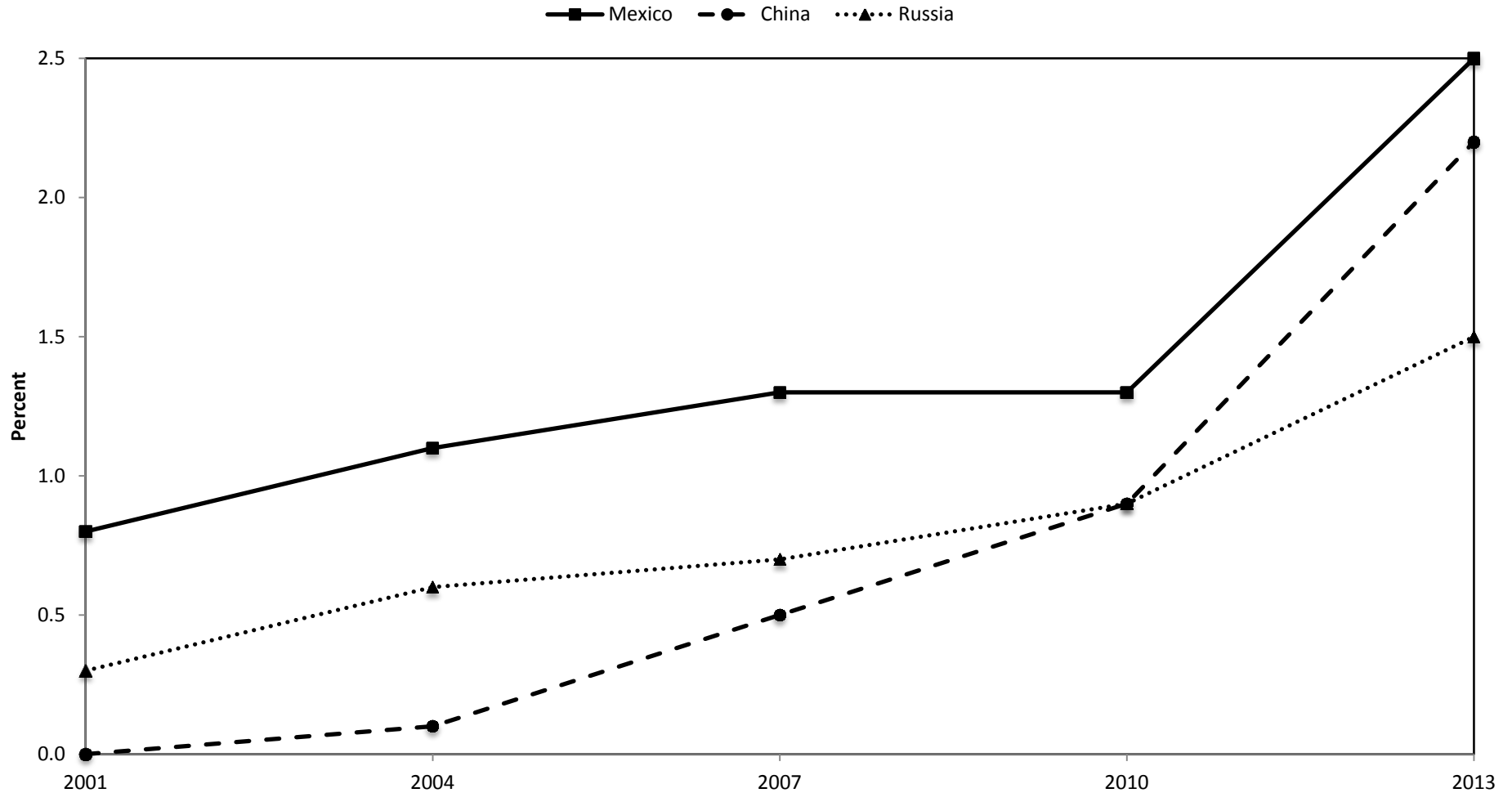
❑ Other: 7%

# Currency distribution of FX market turnover Top Four Countries



# Currency distribution of FX market turnover

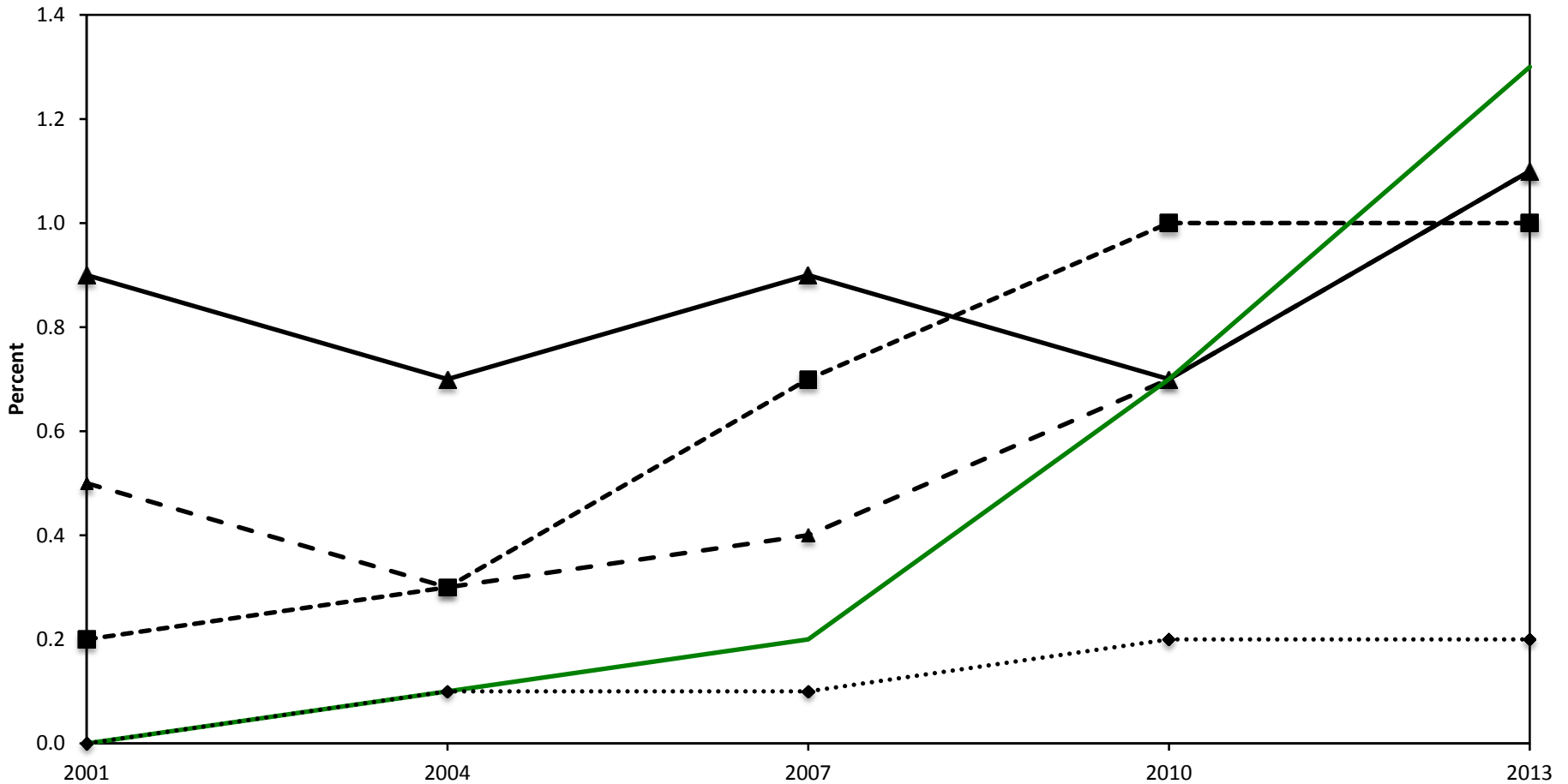
## Emerging Markets: “Stable Three”



# Currency distribution of FX market turnover

## Emerging Markets: “Fragile Five”

—▲— Brazil    -■- India    —▲— South Africa    — Turkey    ...◆... Indonesia



# Key Element of Derivative Markets Reform

## The Central Counter Party (CCP)

- ❑ The Key: **standardized derivative transactions must be cleared through a CCP that will guarantee performance.**
  
- ❑ Proponents:
  - ❑ Without full standardization markets will remain opaque and lack transparency.
  - ❑ The lack of formalized trading and poor price discovery allows dealers to earn substantial economic rents from trading.
  
- ❑ Critics:
  - ❑ The OTC format is essential to enable users to customize solutions to match underlying financial risks.
  - ❑ The flexibility of the OTC market is essential to financial innovation.

# The First Mover After the Crisis: The US with the Dodd-Frank Act

In its original form, Dodd-Frank says that the foreign exchange derivatives could be excluded from the act based on the decision of the Treasury secretary. Precisely:

“He/she may exempt FX swaps based on a) systemic risk, opacity, leverage, evasion and their consequences, b) whether existing regulations are sufficient, c) bank regulators can do the job, d) other effects.”

However, the guiding principle behind this exception is not spelled out. That is, **it is unclear why foreign exchange derivatives are singled out in the act.**

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# Banking Lobby's Case in Favor of Exemption

## Das (2011)

- ❑ FX contracts predominantly have short duration, with low risk. Industry sponsored studies argue that only 16% of FX contracts have maturities longer than 2 year, much shorter than others where the proportion is more than 40%.
- ❑ The following distinction between the FX and other asset classes:
  - ❑ In OTC derivatives generally, the primary exposure is the credit risk on the current mark-to-market value of the contract, which the CCP is designed to address.
  - ❑ The primary risk of FX contracts is settlement risk, that is, the cross border funds transfer risk on payments.
  - ❑ This risk is already mitigated by CLS Bank, an industry initiative, which since 2002 has provided central settlement in 17 major currencies.
- ❑ The FX market functioned well during the financial crisis.

## Final Remarks

- ❑ Many of the regulatory arguments are coming from the West (US, EU and the like).
- ❑ The rest is either silent or obedient, although Brazil and Korea (Prates and Blitz, 2013) and India showed some resilience.
- ❑ It is time for the rest to challenge the West.