

EE 452 International Monetary Economics

2. Foreign Exchange Market

(Extra: Foreign Exchange Market in Thailand)

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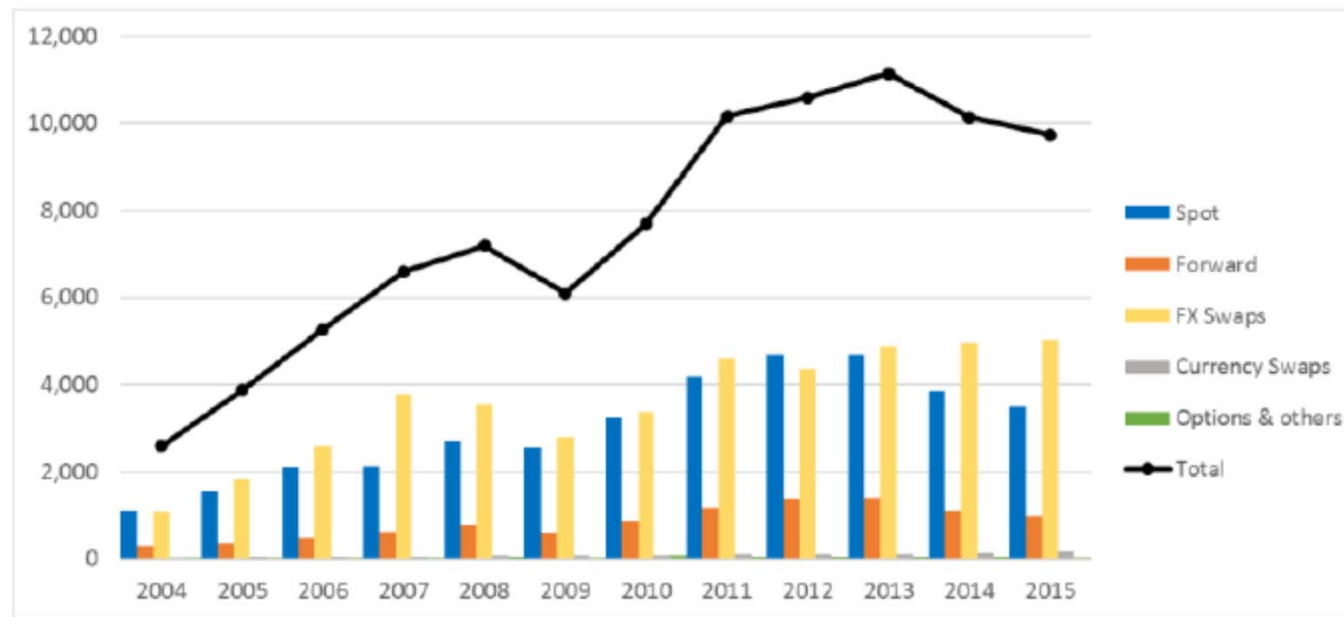
What is unique about FX Market?

- Despite data complications and high transaction values, there is limited understanding about the structure and connectedness between players in the market.
 - Most of the transactions are over-the-counter
 - No central price
 - Price at certain time cannot be accessed by players, even the big players in the market.
 - Hence, there is asymmetric information in FX Market.

Structure of FX Market in Thailand

- The transaction values of FX market in Thailand increased continuously from the past. The total trade value in 2015 was 10,000 million US dollars per day. (Civilize and Ananchotikul (2018))

(c) Historical daily averages of foreign exchange turnover by instrument (in millions of US dollars)

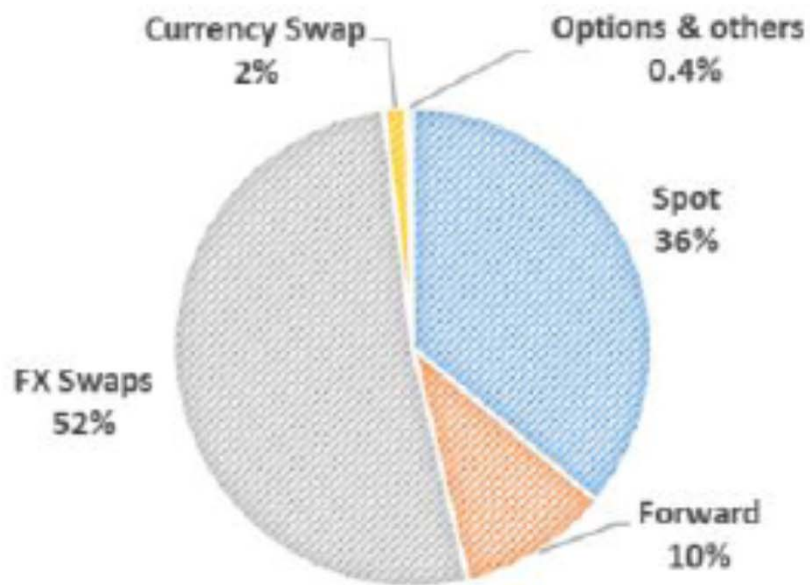


Structure of FX Market in Thailand

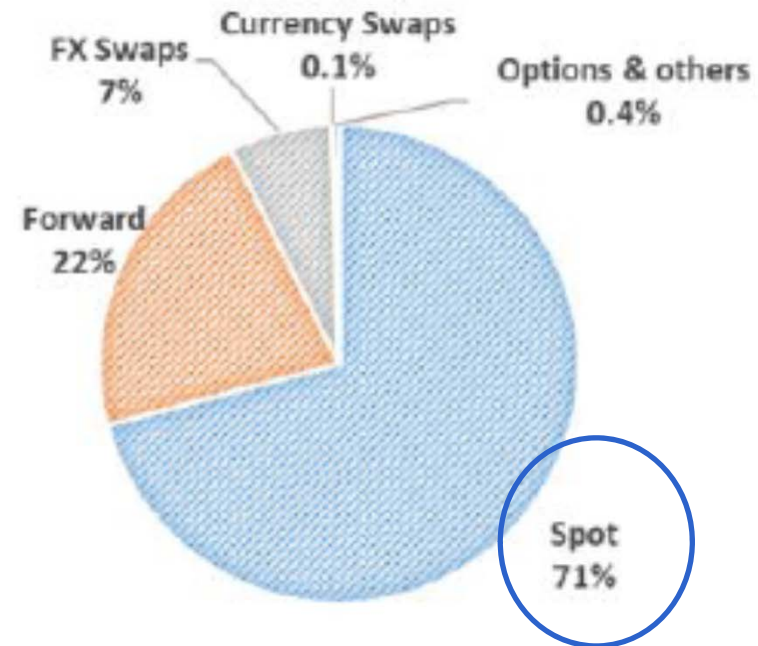
- The transaction value in Thailand's FX market is large in comparison to other countries in the region. However it comprises only 0.2% of the world's total. (Civilize and Ananchotikul (2018))

Structure of FX Market in Thailand

TRADING VOLUME



NUMBER OF TRANSACTIONS



Source: Civilize and Ananchotikul (2018)

Structure of FX Market in Thailand

- There are approximately 40 currencies traded in Thailand's FX market.
- US Dollar remains dominant in terms of trade volume (86%) in 2015, followed by Yen (5%) and Euro (4%)
- Yuan is increasing prominent in the past few years, the current trade volume is about 06% of the total.

Players in FX Market

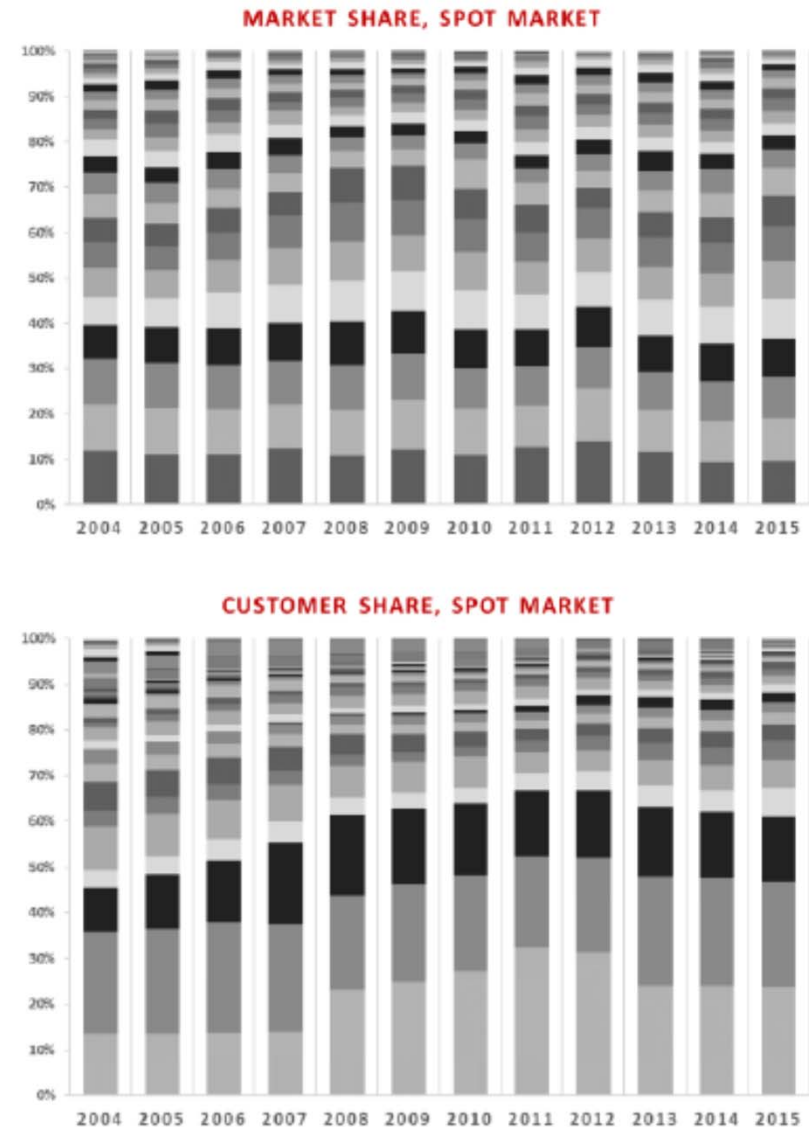
1. FX Dealers comprises mainly of 35 authorized institutions conducting FX transactions in 2015
2. Non FX Dealers comprises of approximately 50,000 retail customers each year.
 - Transaction volumes among FX Dealers in Thailand comprises 35% of the total.
 - The remaining transactions include those between FX dealers and non-resident banks (35%) and between FX Dealers and non-bank retailers (30%)
 - Non FX Dealers can be grouped into the following:
 - Non-bank institutions, eg., exporters
 - Banks, which are not FX Dealers eg., mutual funds investing abroad
 - Retailers who are non-residents, eg., Foreign banks in Thailand

FX Market Concentration

- In 2015 the transaction value is relatively widely distributed. No group of FX dealers dominated the market (which is in contrast to other money markets, eg., credits)
- However, in terms of the number of customers, the data shows high concentration in the 3 banks which holds 50% of the total number of customers in the market.

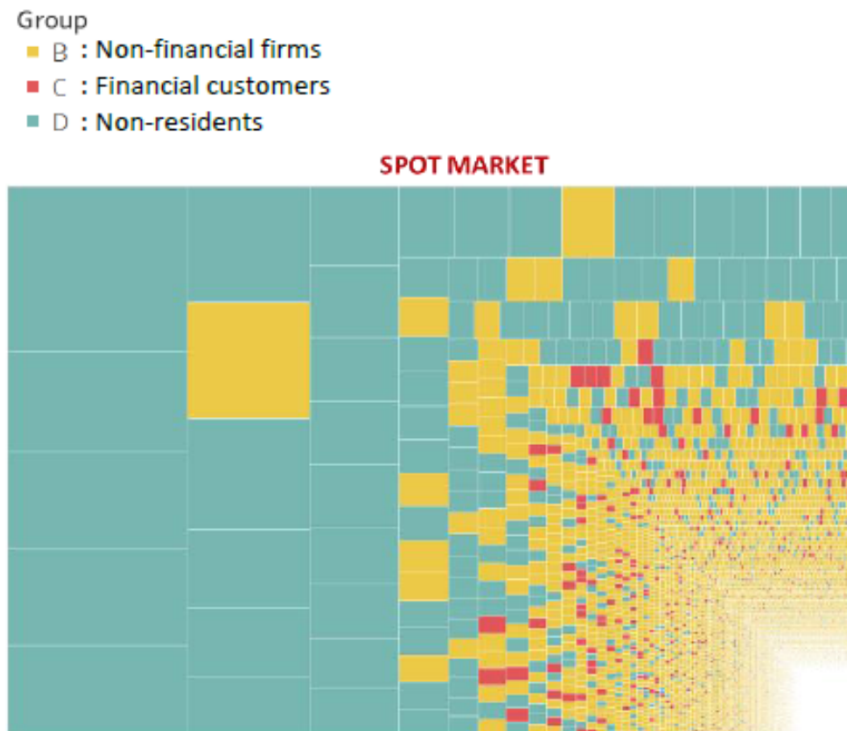
Source: Civilize and Ananchotikul (2018)

Phijaisanit (2019)



Transactions in Spot Market (2015)

- In the view of customers, the first 31 retailers traded 50% of the total transaction value in spot market. This happens in other FX Markets.



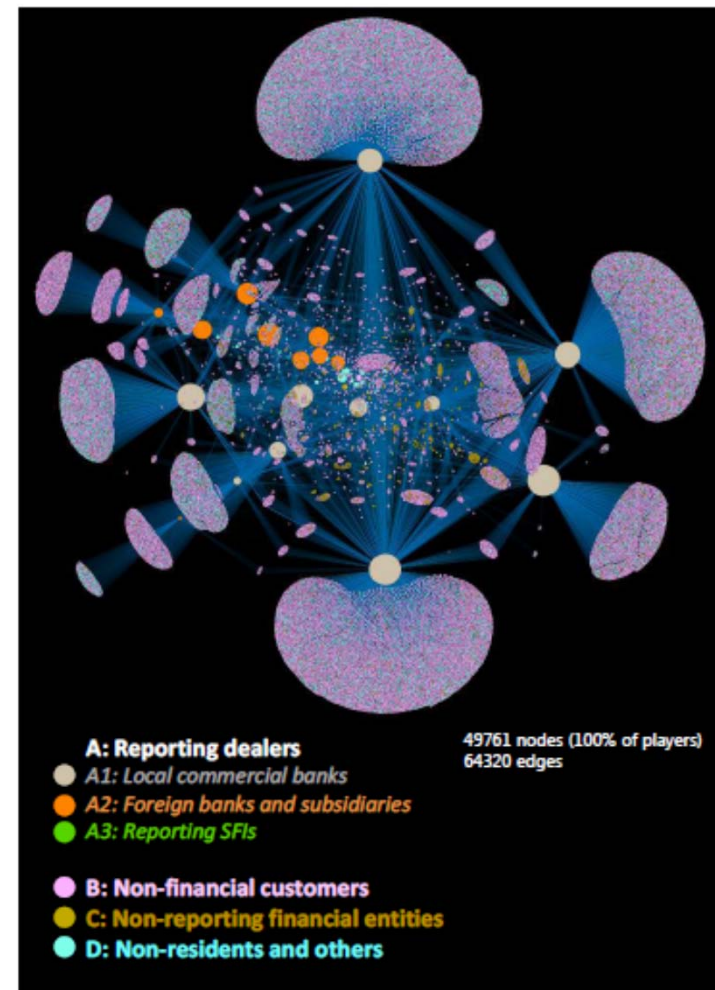
FX Network Topology

- FX Network Topology is important in understanding the relationship between players as well as the transmission mechanism of shocks. This can imply the market volatility and the ability to contain shocks in the system.

FX Network Topology

- Compositions:
 - Node represents the players
 - Edge represents transactions between players

รูปที่ 5: Thailand's FX market landscape (2015)



Network Analysis

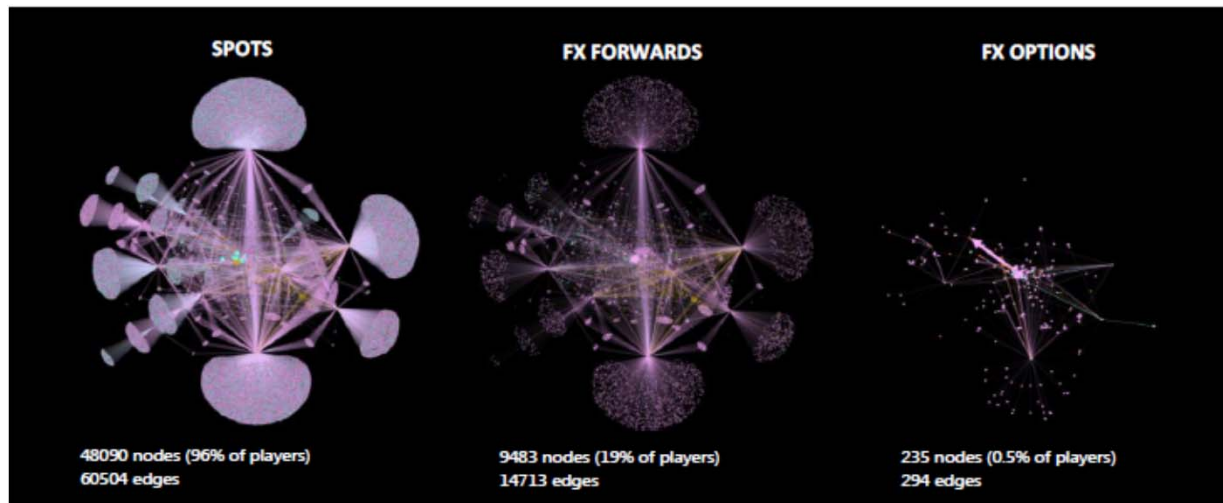
Characteristics of Thailand's FX Market

1. Two-tier structure: interbank market and retail market
 - FX dealers which are Thai banks (gray colour) is the center for transactions and connectedness.
2. Clusters – players with similar characteristics tend to stick together
 - Reflects market segmentation FX market
3. There are few large FX dealers who are both significant in terms of transaction volume and customer base
 - 6 Thai bank and 4 non-resident banks have large transaction volumes
 - However, only 3 banks have large customer bases, the same from the past. In the past few years, Thai banks have even more prominent role in the FX market while foreign banks have less prominence.
4. Different Network Structure in different FX instrument (next slide)
 - Spot Network close to overall
 - Forward Network concentration 5 times smaller than overall
 - FX Options Network has 0.5% of total players

Network Analysis

FX network Characteristics

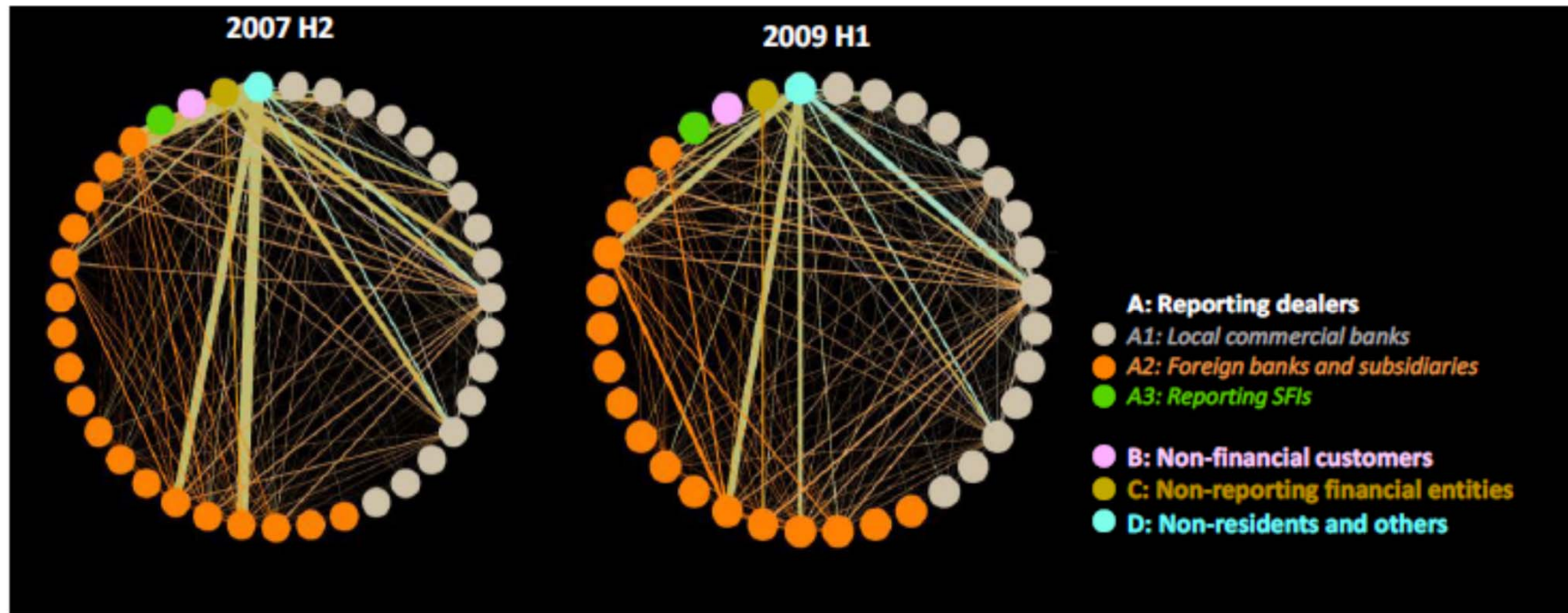
รูปที่ 6: ตัวอย่าง topological structures ของ FX instruments บางประเภท (2015)



Source: Civilize and Ananchotikul (2018)

- Small players chose to do forward contract with the banks that they conduct spot trade.
- 85% of the players conduct FX trade with one dealer, reflecting relationship-based decision as well as limited access to other banks for small players.

FX Swaps before and after crisis



FX Market and Shocks

- After the 2008 crisis, the number of FX Swaps between players had declined in comparison to those before the crisis. This is in congruent with the world's FX market.
- Change of dominance of foreign banks (orange dots) after the crisis
 - Foreign banks (esp. from US and EU) used to have higher dominance before the crisis. After the crisis these banks have lesser dominance and are replaced by other foreign banks (including those from Japan). These banks also play a role in increasing the liquidity for banks in the Thai economy.
 - This substitutability reflects the mechanism that the system is able to maintain stability to a certain degree during the shocks.