



FX and Crypto Markets

Lecture at Fulbright University

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Outline

FX Markets

- Players and their objectives
- Peg and defence of peg
- FX and interest rates
- On/off-shore and capital control
- Soros' British Pound trade

Crypto Markets

- Blockchain technology
- Market structure
- Cross-border considerations

FX Markets

Players and their objectives

- **Sovereigns**
 - Regulate exchange rates.
 - Manage sovereign liquidity.
- **Big corporations**
 - Hedge FX exposure
 - Manage cash reserve / balance sheet.
 - Maximizing profit through financial trading.
- **Financial institutions**
 - Risk manage the balance sheet and the trading book.
 - Trading mandate, e.g. market making, risk taking activities.
- **Private entities: prop funds, family offices etc.**
 - Manage balance sheet
 - Trading and speculation
- **Individuals**
 - Saving, spending, payment
 - Speculation

FX Markets

Players and their objectives

- Sovereign states are the biggest players
- They control the money supply (via interest rate policy, QE, debt monetization or direct asset purchases), exchange rate policy (floating vs pegged), capital control policy (admissible flows of money, on/offshore markets)
- Other actors smaller in size but nonetheless collectively powerful:
- It happened that they can move market regardless of the central power's will: e.g. sudden unpeg, Soros' trade, etc

FX Markets

Peg and defence of peg

- Pegging: maintain a fixed exchange rate vs a strong currency or a basket of currencies
- In practice maintain the exchange rate in a pre-defined, relatively narrow band
- Some currencies are pegged to some others
 - SGD, HKD to USD.
 - VND soft-pegged to USD (can depreciate but in small increments and in a controlled manner).
- When a currency is pegged, there is less *marge-de-manoevre* for the central authority to manage the interest rates
 - Example: HKD in 2020 (social unrest, COVID): HKMA couldn't lower rate to stimulate as it feared losing the HKD/USD.
- Defence of peg can be realized at several levels
 - Spot market: trading the currency vs the reserve. The central bank has to maintain strong reserve.
 - Forward market guidance: intervene at the forward level to guide the spot market. Less capital intensive but also signals less confidence.
 - Not only financial but also political: market trust is key.

FX Markets

Peg and defence of peg

- When the peg can't be maintained, it's better to devalue all at once instead of gradually: market front running, uncontrolled outcome etc
- Peg can be lost in many setups
 - Weak economic or political fundamental => thin central bank reserve of political infighting prevent what needs to be done can be done quickly .
 - Market confidence crisis.
 - Incidents, flash "outage".
 - Jump-out-of-the boat: CHF lost peg, 2015.

FX Markets

FX and interest rates

- Low rates usually signal weak currency
- But not always, weak currency can go along with high rates
 - Developing / emerging economy.
 - Structurally export economy.
 - Credit (spread) market not well-developed yet.
- Central bank can influence FX rate via
 - Interest rates policy
 - Direct intervention in the FX market

FX Markets

On/offshore and capital control

- Capital control
 - Money isn't allowed to be transferred cross-border in a free manner
 - Rationale: constrain capital flights, tax avoidance, ease of setting exchange rate & maintaining peg, financial surveillance
 - Countries historically not very well integrated in the global financial system
 - Policy-oriented economy where the state needs to intervene in the currency market to direct the economy
- On/offshore currencies exist because of capital control
- Onshore: currency only exchangeable (i.e. physically deliverable) within a territory
 - Example: CNO, KRO, TWO, VNO, ...
- Offshore: the same currency but traded externally, usually settled in USD equivalent
 - Example: KRW, TWD, VND, ...
- Near-shore: CNH: Chinese yuan physically settled in Hong Kong
- Exchange rate on/offshore can diverge due to market preference, settlement mechanism etc

FX Markets

Soros' British Pound trade

- “The man who broke the Bank of England”
- The run-up: Soviet Union, Berlin wall collapsed (1990), Reunification of Germany, ERM in place
- Germany
 - Capital flow from West floods East causing high inflation.
 - Bundesbank (de facto central bank of Europe) raised interest rates to fight inflation (its domestic constitutional mandate).
 - Rate policy put pressure on other European currencies, incl. GBP while England was in a recession.
- Rest of Europe
 - ERM: other currencies soft-pegged to a basket called ECU (but D-Market was the main component).
 - Kohl, Mitterrand wanted to create European Central Bank (ECB) and subsequently EUR.
 - Thatcher against: too much advantage for Germany with a resulting weak D-Mark.
 - Bundesbank against: yet-to-be-found ECB would take over its power.

FX Markets

Soros' British Pound trade

- September 1992: the climax
- Bundesbank gave a hint that it viewed D-Mark as the ECU
- Italian Lira depreciated and out of the basket
- British pound weakened. Speculators started to pay attention
- Bank of England raised rates by 2% in an attempt to fight the currency depreciation
- It's not convincing enough to the markets.
- Soros continued to short the Pound and pocketed \$1 billion

Crypto Markets

Blockchain technology

- Multidisciplinary break-through
- Enables consensus, digital scarcity, value transfer on the Internet
- Bitcoin network
 - Currently the most valuable network
 - Allows storing and transferring value without trusted third-party, quasi-censorship-resistant

Crypto Markets

Market structure

- Due to its nature Crypto markets operates 24/7
- Currency issuance is controlled by the Bitcoin monetary policy, independent of nation states
- Infrastructural building blocks taking shape and advancing rapidly
- Fiat on/off ramp: exchanges, P2P
 - Connecting Crypto markets to fiat markets.
 - Can be easily regulated.
- CEX: Binance, Coinbase, etc
- DEX: Uniswap, Balancer, etc
- Primer brokers, pseudo-banks, OTC desks: BlockFi, Genesis Trading, Kraken etc
- Defi protocols: Aave, Compound, etc
- Native blockchains: Bitcoin, Ethereum

Crypto Markets

Market structure

- Important assets: stablecoins, Bitcoin, Ethereum, other blockchain assets
- USD stablecoins: theoretically peg 1:1 with USD
 - USD backing (USDC, USDT).
 - Synthetic via debt collateralization: DAI.
 - Algorithmic.
- Bitcoin
 - The most liquid asset, traded in spot, futures, options markets.
 - Leading indicator of the markets.
- Ethereum
 - Second most important asset.
 - Drives “alts” space.
 - Foundational to DeFi.

Crypto Markets

Market structure

- Correlation structure
 - High correlation to Bitcoin.
 - However weak co-integration.
- Beta structure
 - “Alts” high beta vs Bitcoin
- Leverage and liquidation
 - Usually high level of leverage (100x possible).
 - Leads to liquidation and gap risks.
- Orderbook
 - Microstructure dominated by High frequency Trading firms (Jump, DRW, etc).
 - Spoofing, fake orders, fake volumes, wash trading, insider trading.

Crypto Markets

Cross-border considerations

- Crypto assets and their blockchain native to the Internet
- Concept of jurisdiction is blurry
- Effective vehicle to move money cross-border
- For now only fiat on/off ramp can be regulated
- This poses challenges to authorities wishing to impose capital control

Questions?

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