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Current Issue

# FRM二级知识框架图



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## Summary of Readings and Framework

### Current Issues

- 1 Bitcoin: Economics, Technology and Governance
- 2 Market and Funding Liquidity—An Overview
- 3 Market Liquidity—Resilient or Fleeting?
- 4 Algorithmic Trading Briefing Note
- 5 Hanging Up the Phone-Electronic Trading in Fixed Income Markets and Its implications
- 6 How Have Central Banks Implemented Negative Policy Rates?
- 7 Corporate Debt in Emerging Economies: A Threat to Financial Stability?



# Section 1



Bitcoin: Economics, Technology and Governance

# Bitcoin: Economics, Technology and Governance

## Incentives To Use Virtual Currency

- Decentralization
- Early: illicit activities & evade international capital controls
- Current: consumer payment & hold in appreciation
- Future: general-purpose payments & other services

## Limitations

- Lacks a governance structure
- Decentralization has not fully come to fruition
- Currency exchanges: **significant regulatory requirements**
- Digital wallet services: **security**
- Mixers: **difficult, effectiveness cannot be proven, and increasing costs**
- Mining pools: **threaten the decentralization**
- Payment processors: **less clear benefits & transaction delay**

## Regulations(了解)

- Fighting crime
- Consumer protection
- Challenge for regulators

## risks

- Market risk
- Shallow markets problem
- Counterparty risk
- Transaction risk
- Operational risk
- Privacy risk
- Legal and regulatory risks



## Section 2



Market and Funding Liquidity—An Overview

# Market and Funding Liquidity—An Overview

## Funding Mechanisms

### funding liquidity

short-term financing

→ long-term investing

sell

Price ↓

### market liquidity

## market liquidity的影响因素

- direct transaction expense
- effective spread
- market depth
- immediacy/speediness

## Factors Affect Liquidity

### Regulatory Factors

- increasing capital and liquidity requirements might have **adversely impacted** market liquidity
- Supplementary leverage ratio (SLR)
- Increase in the Basel risk-weighted capital ratio

↓ 影响

#### 负面影响

- market liquidity has declined

#### 正面影响

- less volatility and stress
- innovation

### Non-Regulatory Factors

- changes in market structure
- how trade are executed
- Demand for liquidity

↓ 影响

- **decline** in secondary market trading activity
- Fixed-income market liquidity may also be declining for cyclical reasons

### *Link Between Market & Funding Liquidity*

- closely related, especially in a financial crisis
- cannot obtain funding liquidity → less transactions volume → thinner markets and **less overall market liquidity**
- Difficult to arbitrage
- Without a reliable source of short-term funding, market functioning can become **impaired**, which can further **disrupt funding and market liquidity**

### *Links Between Funding Liquidity & Capital Requirements*

- Stronger capital requirements **reduce firm's vulnerability** to runs
  - reduce the insolvent risk
  - reduce the degree of uncertainty
  - reduce the risk that the firm will have to engage in a fire sale of assets
  - time to respond to bad events
  - A lender-of-last-resort can provide a liquidity backstop



## Section 3



Market Liquidity—Resilient or Fleeting?



# Market Liquidity—Resilient or Fleeting?

## Factors Affect Market Liquidity

- **High-yield and emerging market** bonds have **lower** market liquidity than investment-grade bonds.
- **Benign cyclical conditions** are masking liquidity risks.
- **Regulatory changes** are likely to have had mixed effects on market liquidity.
- Changes in the **investor base** have likely increased liquidity risk.
- **Monetary policy** has had a positive impact on market liquidity in recent years but may have increased liquidity risk.

具体说明

## How Monetary Policy Affects Market Liquidity

- relax market makers' funding constraints
- Adding a bond in the list of eligible collateral for repo
- Quantitative easing improved liquidity, but then degraded it.
- unconventional monetary policy only affects the liquidity of investment-grade bonds
- a positive impact on the liquidity resilience of foreign currency markets

## Market liquidity 驱动因素

- Market-making and funding constraints
- Search costs
- Investor base
- Risk appetite
- Structural factors
- Cyclical factors

## 流动性可以在资产之间传递 (Liquidity Spillovers)

### could be amplified when:

- highly leveraged
- asset are correlated
- start fire sales

### 结论

- **investment-grade** bond as a **source** of liquidity spillovers
- Should monitor investment-grade corporate bonds

## Policy To Bolster Market Liquidity And Resilience

### On Market Microstructure Design

- Reforming the design of markets
  - **instrument standardization**
  - Designing circuit breakers **based on liquidity conditions**
  - **Enhancing transparency**
- Open access to **electronic** platforms
- Restrictions on the use of financial derivatives should be reevaluated.

### On The Role of Central Banks

- Central banks should **take into account the effects on market liquidity** when making policy.
- Central banks should **routinely monitor** market liquidity, especially in the investment-grade bond market.
- In period of financial market stress, central banks could use **various instruments** to enhance market liquidity.
  - By accepting with appropriate haircuts
  - By accepting a wide range of assets as collateral for repo transactions

### On the Regulation of Financial Intermediaries

- Liquidity stress testing for banks and investment funds should be conducted taking into account the **systemic effects of market illiquidity**.
- **liquidity mismatches** in the asset management industry should be **mitigated**.



## Section 4



Algorithmic Trading Briefing Note

# Algorithmic Trading Briefing Note

## Key Risks With Algorithmic Trading

- **Systemic risk** may be **amplified**
- Intraday risk
  - Unexpected conditions could force a firm to carry **significantly more risk**, and **without timely** senior risk management oversight
- Internal controls **may not** have kept pace with speed and market complexity.
- Without adequate controls, losses can accumulate and spread **rapidly**.

## Risk Mgmt. Framework

- Business-Unit/Desktop-Management level
- Control-Function and Senior-Management level
- Board and Executive level

## How To Monitor And Control Risks(了解)

- Controls must keep pace with technological complexity and trading speeds.
  - “defense-in-depth”
- Governance and management oversight can **limit exposure to losses** and **improve transparency**.
  - firm-wide governance
  - consistently applied governance
- Testing needs to be conducted during **all phases** of a trading product’s lifecycle.
  - Initial testing, controlled rollout, ongoing testing
- management should ensure **sufficient involvement** of control functions.

## Section 5

Hanging Up the Phone-Electronic Trading in Fixed  
Income Markets and Its implications



## Hanging Up the Phone-Electronic Trading in Fixed Income Markets and Its implications

### Evolution Of The Fixed Income Markets

- Trading in fixed income securities centered on dealers
  - bilaterally, OTC
  - Dealer-to-dealer & Dealer-to-customer
  - customer need to contact one more dealers
  - High search costs

演变  
→

- Electronic trading platforms (ETPs)
  - dealer-to-dealer
  - dealer-to-customer (SDPs, MDPs)
- 优点:
  - *more competition* among dealers
  - *lower search costs*
  - *automate record-keeping*

### Implications For Market Quality

- price efficiency ↑ market liquidity ↑
- During normal market conditions:
  - arbitrage opportunities more quickly, trading costs ↓, competition ↑
  - optimize the implementation
- During stressful market conditions:
  - Whether affects the ability of market robustness is hard to judge

### Drivers Of Electronification

- Technological advance
  - computing speed and capacity ↑, entry barriers ↓
- Changes in the demand for liquidity services
  - size of secondary bond markets ↑, demand for price transparency ↑, level of yields ↓ (monitor trading cost)
- Regulatory reforms

## Liquidity Qualifications In Traditional & New Market

### Dealer 依旧是流动性的主要提供者

- liquidity condition largely dependent on dealers' **capacity and willingness** to make market
- Some dealer also shifting their immediacy services from a principal- to an agency-based model

### Liquidity Condition In New Market

- More “flash crashes”
- Difficult to identify specific trigger events
- **Increasing complexity** of trading algorithms and their possible interactions **could amplify risk** in stress condition.
- Both human traders and PTFs are always **reluctant to step in** as shock absorbers **during strained conditions**

## Section 6

How Have Central Banks Implemented Negative Policy Rates?



# How Have Central Banks Implemented Negative Policy Rates?

## 背景：欧洲四家央行执行负利率

- The European Central Bank (ECB)
- The Riskbank
- The Swiss National Bank (SNB)
- The Danmarks Nationalbank (DN)

动机

- Inflation outlook
  - ECB & Riskbank
- Currency appreciation pressures
  - SNB & DN

## 如何实现负利率？（了解）

- Change terms of business
- Place individual exemption thresholds for sight deposit accounts → **Costs to banks**
- Substantial “behind-the-scenes” work
- Central banks carefully signalled the possibility of negative interest ahead of time

影响

- Transport, storage, insurance and other **costs associated with holding cash**
- The ability of the banking sector to limit the pass-through of negative rates
  - **retail** depositors **shielded** from negative rates
- Other institutional factors can broaden agents' exposure to negative rates

## 执行负利率的风险

- ECB'S **money market** volumes have **dropped**
- Lending to **riskier** counterparties
- Improved market access for banks
- Creating a risk of market **segmentation**
- Passing on the costs in form of negative **wholesale** deposit rate
- Negative rates lead to **lower lending margins**
- **Unwilling or unable** to buy negative cash flow securities



## Section 7



Corporate Debt in Emerging Economies: A Threat to  
Financial Stability?

# Corporate Debt in Emerging Economies: A Threat to Financial Stability?

## Trends Of Emerging Economics

- During 1999-2007, international financial standing of many emerging economies **improved**, the international B/S of these countries grew **stronger**.
- However, a combination of domestic and external factors may result in financial **instability** in some emerging economies.
  - **tighter funding conditions** → cost of borrowing local currency ↑
  - **Expected dollar appreciation** → the value of dollar debt ↑
- International financial position of **nonfinancial firms** have been drawing increasing attention
  - Large corporate can directly obtain funding from international banks, bond market, and non-bank intermediaries
  - Small firms borrow from their own banks in foreign currency terms, or from domestic financial sector.

macro-financial  
fundamentals have  
**deteriorated**



## Risk Factors

- Maturity mismatches
- Currency risk
- Rollover risk
  - Caused by a fickle investor base
- Speculative risk

## 风险如何传导到金融系统?

### 直接

- losses would increase the riskiness of domestic financial intermediaries.
- If it cannot rollover its foreign liabilities, the corporate may need to **withdraw liquid asset from domestic financial system**
- When large corporations lose access to bond markets, they **turn to banks**.
- If the corporate hedged its foreign currency exposure **using derivatives** in which the domestic bank is a counterparty, settlement could lead to impairment of the bank.

### Direct Policy Implications

- Risk-weighted capital requirements
- Liquidity requirements and liquidity coverage ratio(LCR)
- **Limit the exposures** of banks to large firms or subsidize lending to SMEs
- Central clearing of all derivatives contracts

### 间接

- corporates are making short-term loans to non-bank financial intermediaries that are in turn **counterparties to the banks**.
- a high stock of foreign currency corporate debt may **increase the incentive** for sovereigns to **default on domestic-currency debt** rather than engage in currency depreciation.
- **High corporate leverage** may pose macroeconomic or sectoral risks if financial losses threaten the viability of the firm

### Indirect Policy Implications

- Any entity that is providing banking services should face **the same regulations** and the same supervision as a bank.
- **less indebted** the fiscal authority, the more room for maneuver

*Thank  
You!*

