Chapter 2 - International Monetary System

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2026-01-08

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1 Chapter 2: International Monetary System

"The price of every thing rises and falls from time to time and place to place; and with every such change the purchasing power of money changes so far as that thing goes."
— Alfred Marshall

Chapter Roadmap

Major section:

1. **The History of the International Monetary System** - How did we get here?
2. **Fixed versus Flexible Exchange Rates** - What are they and how do we choose?
3. **The Impossible Trinity** - The trilemma of international finance.
4. **A Single Currency for Europe: The Euro** - How companies evolve from domestic to truly global operations
5. **Internationalization of the Chinese RMB** - The Chinese approach
6. **Emerging Markets and Regime Choices** - The Final Frontier?

1.1 Part 1: History of the International Monetary System

1.1.1 The Classical Gold Standard (1879-1913)

How It Worked: - Each currency pegged to fixed amount of gold - Example: \$20.67 = 1 oz gold (US), £4.2474 = 1 oz gold (UK) - Therefore: \$20.67/£4.2474 = \$4.87/£1 - Exchange rates FIXED through gold link

Czar Nicholas II's 1894 Bond Example: - 100-year Russian bearer bond - Payable in SIX currencies: roubles, francs, marks, pounds, florins, dollars - Possible because fixed exchange rates made all currencies predictable - Investors received interest in currency of choice

Rules of the Game: 1. Governments buy/sell gold on demand at fixed parity 2. Requires maintaining gold reserves 3. Money supply limited to rate of gold acquisition 4. Inherently anti-inflationary

Why It Failed: - WWI disrupted trade and gold flows - Countries suspended convertibility to finance war - System couldn't handle modern economic pressures

1.1.2 The Interwar Years and World War II (1914-1944)

The Chaos: - Post-WWI: Floating rates led to speculation - Weak currencies sold short, driving them lower - Britain left gold standard 1931 (couldn't maintain reserves) - US modified system 1934 ($35/oz, central banks only) - Great Depression: Trade collapsed, protectionism rose

Lesson: Flexible rates without institutions = instability and reduced trade

1.1.3 Bretton Woods and the International Monetary Fund (1944-1973)

The Debate: - John Maynard Keynes (UK): Wanted flexibility - Harry Dexter White (US): Wanted stability - Compromise: Fixed but adjustable rates

Three Pillars:

1. **Fixed Exchange Rates**
    - All currencies pegged to USD
    - USD pegged to gold at $35/oz
    - $\pm 1\%$ bands (later $\pm 2.25\%$)
    - Devaluations <10% without IMF approval
2. **International Monetary Fund**
    - Temporary assistance for currency defense
    - Pool of currencies/gold to lend
    - Monitor balance of payments
3. **World Bank**
    - Postwar reconstruction
    - Economic development

Special Drawing Rights (1969): Current basket (2016): - US dollar: 41.73% - Euro: 30.93% - Chinese yuan: 10.92% (added 2016!) - Japanese yen: 8.33% - British pound: 8.09%

Why It Failed: 1. US dollar overhang (persistent deficits) 2. 1971: Lost 1/3 of gold reserves in 7 months 3. August 15, 1971: Nixon closes gold window 4. March 1973: Currencies float

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1.2 Part 2: Contemporary Regimes (10 minutes)

1.2.1 IMF Classification (De Facto - Observed Behavior)

Four Categories:

1. **Hard Pegs (13%)**
    - Dollarization: Ecuador, Panama, Zimbabwe
    - Currency boards: Hong Kong, Bulgaria

- Given up monetary sovereignty

2. **Soft Pegs (46%)**
    - Conventional pegged
    - Stabilized arrangements
    - Crawling pegs
    - Pegged within bands
3. **Floating (34%)**
    - With intervention
    - Free floating
4. **Residual (7%)**
    - Frequent policy shifts

Key Insight: Distribution stable over past decade - no "best" system emerged

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1.3 Part 3: The Impossible Trinity

1.3.1 The Core Framework

Cannot simultaneously have: 1. Fixed exchange rate 2. Free capital flows 3. Independent monetary policy

Why Impossible? - Lower rates to stimulate (independent policy) - Capital flows out to higher rates (free capital) - Currency depreciates - Must raise rates to defend peg (lose independence) - **Contradiction!**

Three Choices:

Point A - China (traditional): - Want: Monetary independence + Fixed rate - Give up: Free capital flows - Result: Capital controls

Point B - EU Members: - Want: Free capital flows + Fixed rates (euro) - Give up: Independent monetary policy
- Result: ECB controls all policy

Point C - US, Japan: - Want: Monetary independence + Free capital - Give up: Fixed exchange rate - Result: Floating currency

1997-98 Asian Crisis: - Countries tried to have all three - When confidence collapsed: massive capital outflows - Couldn't defend fixed rates - Forced to float

Key Point: This isn't a suggestion - it's mathematical impossibility. No cheats or workarounds.

1.4 Part 4: A Single Currency for Europe: The Euro

1.4.1 Creation Timeline

- 1979: EMS (fixed rate bands)
- 1991: Maastricht Treaty
- 1999: Euro launched (11 countries, electronic)
- 2002: Physical currency
- Today: 19 of 28 EU countries

1.4.2 The Maastricht Treaty and Monetary Union

Before joining: 1. Inflation 1.5% above 3 lowest members 2. Interest rates 2% above 3 lowest 3. Budget deficit 3% GDP 4. Debt 60% GDP 5. Two years exchange rate stability

1.4.3 European Central Bank (ECB)

- Frankfurt-based
- Independent
- Primary mandate: Price stability
- Modeled on German Bundesbank

1.4.4 The Launch of the Euro

1.4.5 Benefits

1. Eliminated transaction costs
2. Reduced currency risk
3. Price transparency
4. Increased trade (5-15% boost)
5. International presence

1.4.6 Challenges

1. **Loss of Monetary Independence** (THE key sacrifice)
    - Can't use rates/money supply for local problems
    - Spain boom + Germany recession = one ECB rate for both
2. **Asymmetric Shocks**
    - Different countries, different problems
    - One policy doesn't fit all
3. **No Fiscal Union**
    - Can't print money for debts

- Each country responsible for own debt
- No central budget for transfers

4. **Labor Immobility**
    - Language/cultural barriers
    - Can't adjust like US labor market
5. **No Initial Lender of Last Resort**

1.4.7 Greek Crisis Case Study

What Happened: - Joined 2001 - Hid true deficits (12.7% vs 3% limit) - Debt >120% (vs 60% limit) - 2009: Truth revealed - Interest rates skyrocketed - Couldn't borrow

The Trap: - Normally could: devalue currency, print money - With euro: COULDN'T do either - ECB controls currency

"Solution": - €300+ billion in bailouts - Harsh austerity: - Cut spending - Raise taxes - Reduce pensions - Fire workers

Results: - 25% unemployment (50% youth) - GDP fell 25% - Social unrest - But stayed in eurozone

Lesson: Impossible trinity perfectly illustrated - gave up monetary independence, had no tools when crisis hit.

1.5 Part 5: Emerging Markets (10 minutes)

1.5.1 Currency Boards: Argentina (1991-2001)

Structure: - Every peso backed 100% by US dollars - Government can't print money without reserves - Peso pegged 1:1 to dollar

Success: - Inflation: 3,000% → single digits - Economy grew - Confidence restored

Failure: - Lost flexibility - Brazil devalued 1999 → Argentine exports uncompetitive - Couldn't devalue - 3-year recession - No lender of last resort - Political pressure

Collapse (2001-2002): - Bank deposits frozen - Riots - President resigned - Peso: 1:1 → 4:1

1.5.2 Dollarization

Ecuador (2000): - 1999 crisis: Sucre 25,000 per dollar - Adopted dollar January 2000 - Stability achieved but limited shock response

El Salvador (2001): - Lowest inflation in Central America (2%) - Extended growth period - **2021: Added Bitcoin as legal tender!** - First country ever - Highly controversial - Bitcoin volatility vs money functions

Zimbabwe: - Hyperinflation: 79.6 billion % per month (2008) - 2009-2019: Multi-currency (USD primary) - 2019: Return to zimdollar → inflation returned - 2020: Back to multi-currency - Jan 2021: Inflation >350%

Lesson: Currency regime won't fix bad fiscal/governance policies

1.5.3 Calvo & Mishkin (2003)

> "Choice of exchange rate regime is of second order importance to development of good institutions."

What Matters More: - Independent central banks - Fiscal discipline - Financial regulation - Rule of law - Open trade

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1.6 Part 6: Chinese RMB (8 minutes)

1.6.1 Two-Market Structure

Onshore (CNY): - Heavily regulated - Capital controls - PBC sets daily parity - Trading within ±1-2%

Offshore (CNH - Hong Kong): - More flexible - Less regulated - Panda Bonds issued here - Expanding to Singapore, London

1.6.2 Three Internationalization Levels

Level 1: Trade Currency - Despite being largest trader: - 93% imports in USD - 95% exports in USD - RMB use growing but LOW

Level 2: Investment Currency - Gradual opening via: - RQFII program - Bond Connect - Stock Connect - Fear of capital flight

Level 3: Reserve Currency - Added to SDR 2016 at 10.92% - 2-3% of global reserves - Forecasts: 15-50% by 2024 (huge range = uncertainty)

1.6.3 Triffin Dilemma

The Paradox: 1. World needs your currency → run deficits to supply it 2. But persistent deficits → growing debt → undermines confidence

China's Problem: - To be reserve currency needs: - Current account deficits - Free capital outflows - Policy independence loss - But China has: - Current account surpluses - Tight capital controls - Values independence

1.6.4 Currency Trading Hubs

Strategy: - Clearing centers in: Hong Kong, London, Singapore, Frankfurt, NYC, Sydney - Make RMB accessible globally - But maintain control through approved institutions

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1.7 Part 7: Reserve Currencies & Digital Currency (5 minutes)

1.7.1 Current Landscape

1. US Dollar: ~59%
2. Euro: ~20%
3. Japanese Yen: ~6%
4. British Pound: ~5%
5. Chinese RMB: ~2-3%

1.7.2 Why Dollar Dominance

1. Network effects
2. Deep financial markets
3. Rule of law
4. Military power
5. Petrodollar system
6. Inertia (switching costs)

1.7.3 Challenges

1. US fiscal deficits
2. "Weaponization" (sanctions via SWIFT)
3. Multipolarity
4. Digital currencies

1.7.4 Digital Yuan (e-CNY)

Features: - Government-backed digital RMB - Works offline (near-field communication) - Peer-to-peer transactions - No fees - No bank account required

Benefits: - Convenience + government backing - Government gains transaction data - Real-time economic monitoring

Concerns: - Privacy (government tracks all) - Control (could have expiration dates) - Surveillance - Bank disintermediation

1.7.5 Impact on International System

1. Faster cross-border payments
2. Challenge to dollar/SWIFT
3. New currency competition dimensions
4. Financial inclusion

1.8 Conclusion (5 minutes)

1.8.1 Five Key Lessons

1. **No Perfect Regime**
    - All involve tradeoffs
    - System always evolving
2. **Impossible Trinity Is Real**
    - Must choose priorities
    - No cheats around it
3. **Institutions > Regimes**
    - Strong central banks matter more
    - Fiscal discipline crucial
    - Rule of law essential
4. **Integration Requires Coordination**
    - Can't have monetary union without political cooperation
    - Greece illustrated limits
5. **Change Is Constant**
    - Gold → Bretton Woods → Floating → Digital
    - Must understand principles, not just current system

1.8.2 Discussion Questions

1. If advising emerging market on regime choice, what factors would you prioritize?
2. Will the euro survive another major crisis? What would make it more resilient?
3. Should central banks issue digital currencies? Risks vs benefits?
4. Will Chinese RMB rival US dollar? What must change?
5. Is the "impossible trinity" really impossible? Could new tech provide workarounds?

Next Class: Chapter 3 - Balance of Payments
