

**UAA Book Club  
March 2022**

**Manuel Hinds**

***Playing Monopoly With the Devil:  
Dollarization and Domestic  
Currencies in Developing Countries***

**(2006)**

# Outline

- How Many Currencies Are There?
- Currency Types.
  - Global Reserve Currencies.
  - Mini-Currencies.
  - Alternatives to Mini-Currencies.
- Exchange Rates.
- The Case of Mini-Currencies.
- Manuel Hinds, *Playing Monopoly With the Devil*.
- Currency Integration.

# **How Many Currencies Are There?**

# How Many Currencies?

- 234 territories declare a currency as "legal tender" for their territory: ISO 4127.
- Are the legal tenders all different from one another? No.
- Some are a currency of another territory.
  - For example, EUR in French Guiana.
- Some are interchangeable with a larger currency.
  - For example: the Gibraltar pound (GIP) exists but is interchangeable with GBP.

# IMF's Currency Count

- IMF reports "exchange rate arrangements" of 192 territories.
- 13 have "no separate currency."
- Currency unions have one currency each.
  - Eurozone: 19 members.
  - Western African franc: 8 members.
  - Central African franc: 8 members.
  - Eastern Caribbean dollar: 6 members.
- Add 3 not reported by the IMF: North Korea, Cuba, Taiwan.
- Total: 146 separate currencies.
  - Note: 6 are "currency board" systems.

# Categories of Independent Currencies

- Global Reserve Currencies.
- Mini-Currencies.

# Global Reserve Currencies

## Central banks' OIRs (2018)

- USD 62%, EUR 20%, JPY 4.9%,  
GBP 4.5%, CAD 1.9%, CNY 1.8%,  
AUD 1.7%.

## Market FX transactions (2016)

- USD 88%, EUR 31%, JPY 22%,  
GBP 13%, AUD 7%, CAD 5%, CHF 5%,  
CNY 4%

## IMF's SDR basket (as of November 2015)

- USD 42%, EUR 31%, CNY 11%,  
JPY 8%, GBP 8%

# Mini-Currencies

- Of the 146 currencies:
  - USD dominates.
  - 7 others may be global or at least regional reserve currencies.
- The rest, 130+ (90%), could be called "mini-currencies."
  - About half the world's population.
  - Limited use outside home country.



# Mini-Currency: Mozambique (688)

- Population 30 million.
- Legal tender called the metical.
  - "New Metical" introduced in 2006.
- ISO code MZN.
- Not legal tender elsewhere.
- "Broad Money" end 2017
  - MZN 384 billion.
    - Or USD 6 billion (@ 63.6).
    - 0.036% of USD.

# Mini-Currency: Macedonia (807)

- Population 2 million.
- Legal tender called the denar.
- ISO code MKD.
- Not legal tender elsewhere.
- "Broad Money" end 2016
  - MKD 354 billion.
    - Or USD 6.4 billion (@ 55.73).
    - 0.038% of USD.

# Mini-Currency: Nicaragua (558)

- Population 6.2 million.
- Legal tender called the córdoba.
  - Córdoba Oro introduced 1988.
- ISO code NIO.
- Not legal tender elsewhere.
- "Broad Money" end 2017
  - NIO 174 billion.
    - Or USD 5.6 billion (@ 30.79).
    - 0.034% of USD.

# Mini-Currency: Czechia (203)

- Population 10.6 million.
- Legal tender called the koruna.
- ISO code CZK.
- Not legal tender elsewhere.
- "Broad Money" end 2017
  - CZK 4,227 billion.
    - Or USD 180 billion (@ 23.376).
    - 1.08% of USD.

# Mini-Currency: The Philippines (608)

- Population 105 million.
- Legal tender called the peso.
- ISO code PHP.
- Not legal tender elsewhere.
- "Broad Money" end 2017
  - PHP 12,486 billion.
    - Or USD 250 billion (@ 49.9).
    - 1.5% of USD.

# Alternatives to a Mini-Currency

Most countries can't have a global reserve currency, but there are potential alternatives to a mini-currency.

- A "Currency Board" system.
- A foreign currency.
- A regional currency.

# Currency Boards

- Local currency can be redeemed whenever you want for a global reserve currency at a permanently fixed rate.
- 100% OIR relative to central bank's local-currency obligations:
  1. Deposits (reserves) of commercial banks.
  2. Central bank's circulating notes.
- To expand credit, more FX reserves are needed, since local currency reserves can't be created by "fiat."
- Examples: Hong Kong (HKD-USD); Bulgaria (BGN-EUR)

# **Adopt a Foreign Currency (vs. Alternative)**

## With Local Currency Notes

- Gibraltar (GIP-GBP) vs. Seychelles (SCR)
- Bermuda (BMD-USD) vs. Haiti (HTG)
- Panama (PAB-USD) vs. Nicaragua (NIO)
- Namibia (NAD-ZAR) vs. Botswana (BWP)

## No Local Notes

- Kosovo (EUR) vs. Macedonia (MKD)
- El Salvador (USD) vs. Costa Rica (CRC)
- Kiribati (AUD) vs. Vanuatu (VUV)



# **Unified Regional Currency (vs. Alternatives)**

- European Monetary Union (EUR) with 19 members vs. Denmark (DKK).
- West African Union with 8 members (XOF) vs. Guinea (GNF).
- Central African Union (XAF) with 8 members vs. DRC (CDF).
- Eastern Caribbean Currency Union (XCF) with 8 members (6 of which are IMF members) vs. Jamaica (JMD)

# People vs. the Government

- People use the currency they want.
- "Legal tender" laws don't (necessarily) exclude other means of payment.
- Border areas often use both currencies.
- Households and firms keep funds in both local currency and a global reserve currency.
  - "Dollarization."
- Modern U.S. experience with multiple currencies is unique.
  - It has none.

# Exchange Rates

# Currency Markets

- Wholesale trading "over-the-counter" (OTC).
  - Prices negotiated for each trade.
  - Not listed publicly.
  - Retail sales prices include a markup.
- Traders mainly in London and New York.
- Ten banks handle over half of the trading.
- 88% against USD.
- Volume in April 2019: USD 6.6 trillion daily.
  - Global exports of goods and services: about USD 22 trillion annually.
  - 90+% of currency trading is not trade.

# Predicting Exchange Rates

- Need a predictive theory ("positive economics") to know which policy is best ("normative economics").
- Two main economic variables whose changes should, theoretically, explain changes in exchange rates.
  1. The monetary theory: interest rates.
  2. The real theory: price levels.

# (1) Interest-Rates

Krugman, Obstfeld, & Meltzer (KOM), ch. 14.

- Page 363: "Our main conclusion will be that exchange rates always adjust to maintain interest parity."
- Page 367: "An increase in the interest rate paid on deposits of a currency causes that currency to appreciate."

# Interest-Rates: Evaluation

KOM 260 pages later (ch. 20, p. 627):

- "Statistical studies of the relationship between interest rate differences and later depreciation rates show that the interest difference has been a very bad predictor, in the sense that it has failed to catch any of the large swings in exchange rates. ... Even worse, ... the interest difference has, on average, failed to predict correctly the direction in which the spot exchange rate would change." [Emphasis added.]

## (2) Price Levels

Theory: KOM ch. 16, page 415:

- "The theory of purchasing power parity [PPP] states that the exchange rate between two countries' currencies equals the ratio of the countries' price levels."
  - In other words, if average price of goods & services goes up 10%, the theory says the currency should depreciate by 10% to maintain parity with prices of goods & services in other countries.



# Price Levels: Evaluation

KOM page 423 (8 pages later):

- "How well does the PPP theory explain actual data on exchange rates and national price levels? A brief answer is that all versions of the PPP theory do badly. In particular, changes in national price levels often tell us relatively little about exchange rate movements." [Emphasis added.]

Example: EUR value in USD was USD 0.84 in October 2000 and USD 1.57 in April 2008.

- Did the U.S. price level double relative to the EU's in less than eight years??

# **In sum:**

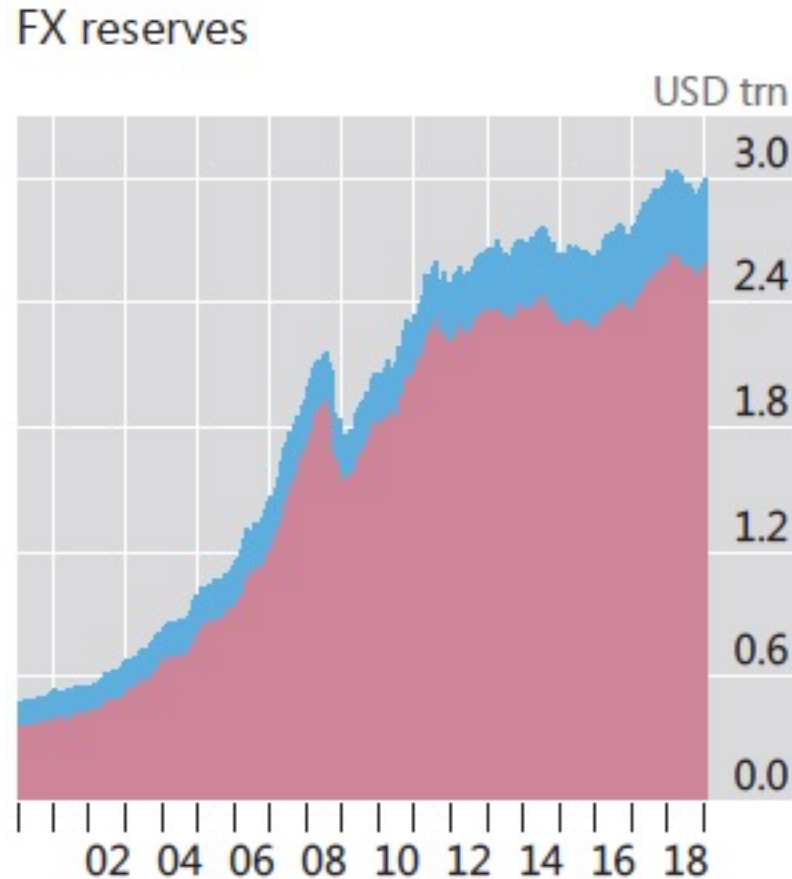
## **No positive theory of FX rates**

- Paul Krugman, blog entry of 3/14/2015, "A Note on Dollar Strength":
  - "Asset price moves often have no clear cause — they're bubbles, or driven by changes in long-term expectations."
- KOM page 586:
  - "Financial markets were [1975-2013] evidently capable of driving exchange rates far from values consistent with external balance."

# Decentralized Efforts to Manage Exchange Rates

- Allow private FX markets to determine currency exchange rates.
- Macroeconomic management to prevent unwanted changes in exchange rates.
  - Avoid excessive borrowing in FX.
    - "Capital controls"?
  - Control inflation.
  - Build FX reserves.

# FX Reserves of Inflation Targeters



Red: emerging-market economies

Blue: advanced economies

Source: BIS Annual Economic Report, April 2019, page 32.

# FX Market as Safety Net?

- Will market-driven changes in exchange rates naturally correct for macroeconomic shocks or structural BOP deficits?
  - If so, there would be a correspondence between exchange-rate changes and macroeconomic variables that, as KOM reports, is not seen in the data.
- Exchange rate changes played a "limited role" in adjustment to 2009 crisis.
  - Exchange rates sometimes moved in the wrong ("perverse") direction.
  - FX rate changes had little impact on BOP.

# IMF Is Neutral on ERAs

Why?

1. Economics: Unable to predict relationship between ERAs and other outcomes.
  - Exchange rates are unpredictable.
  - Differences between currencies (global reserve currencies vs. mini-currencies).
2. Politics: Neither the U.S. nor the EMU coordinate on exchange rates.
  - Each has a "free floating" ERA with flexibility on monetary policy target.
  - Having global reserve currency makes it easy.

# **The Case of Mini-Currencies**

# Mini-Currencies Are Neglected

Most people live in territories with mini-currencies, but their particularities tend to be neglected, because they're poor.

- KOM p. 670: "Until now, we have studied macroeconomic interactions between industrialized market economies like those of the United States and Western Europe."
- Global reserve currencies fluctuate, but citizens tend to notice less.
  - Economies bigger, more self-contained.



# Mini-Currency Origins

Eric Helleiner, *The Making of National Money: Territorial Currencies In Historical Perspective* (2003).

- Old currencies tended to be commodity currencies.
  - Commodity's inherent value was universal.
- New currencies get their value from the issuer.
  - Creature of the 1800s.
    - Nationalism; mercantilism.
  - Technological enablers.
  - Newly independent countries: more nationalism after 1945.

# Mini-Currency Characteristics

- Many are small jurisdictions, dependent on cross-border access.
- Exchange-rate changes affect internal price levels.
- Shift in investor sentiment quickly affects exchange rates.
- The central bank can provide local currency, but the market also wants a global reserve currency.
  - BOP (change in OIR in terms of global reserve currencies) is important.

# Mini-Currency Management

- Falling reserves increases risk of payments crisis.
  - Public can see indications of risk.
  - Public reacts in ways that accelerate loss of reserves.
- Independent monetary policy: Be careful what you wish for!
  - Directed credit.
  - Administrative exchange controls.
  - Multiple exchange rates.

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# Hinds: Themes

- Manipulating local currencies to get their promised benefits makes people want to shift to global currencies, resulting in economic dynamics that are contrary to what you might expect.
- Currency depreciations.
  - Large economies: alternatives available locally at similar prices.
  - Small economies: income falls due to lack of substitutes. Big changes in relative prices, broiling incentives.

# Hinds: Prologue

- Illustrates the worst-case slippery slope that some countries have gone down.

# **Hinds, Part I: Unfulfilled Promises of Local Currencies**

- Three promises.
  1. Cheap credit (even when global interest rates are high).
  2. More exports (via lower real wage).
  3. Faster growth (via more exports).

# Hinds, Part II: Financial Crises

- With mini-currencies, financial crises mainly originate as currency crises.
  - Residents sell local currency to buy FX.
  - Depleted FX reserves gets international attention.
  - Depreciation of FX rate balloons debts.
- Cases: Chile, Venezuela, Mexico, Dominican Republic, Thailand, South Korea, Indonesia, Argentina.



# Hinds, Part III: The Choice of Currency

- "Optimal" currency is the one that provides the best service.
  - Dependable prices for firms.
  - Many alternatives available for the same currency in the goods market.
  - Savings preserved for households.
  - Deep financial markets.
- Local currency usable only in relatively small developing-country markets and depreciating secularly does not fit the description of "optimal."

# Currency Integration

# Integration vs. Pegging

- Integration changes the institutional form of the monetary authority.
  - Requires a change in law.
- Not the same as discretionary policy of a monetary authority to "peg" the exchange rate.
  - Removes some policy options.
    - Not popular with economists.
  - Perceived as permanent.
    - Stabilizing effect on expectations.
- Eliminates costly fees on currency exchanges.

# Types of Currency Integration

## **Unilateral.**

- Currency board.
  - Hong Kong, Bulgaria.
- Adoption of a foreign currency.
  - El Salvador, Ecuador, Kosovo.

## **Cooperative:** currency union.

- European Monetary Union, German mark.
- Union's central bank serves all regions.
- More stable than unilateral integration.

# Unilateral Adoption of Foreign Currency

## Local Currency Notes

- Gibraltar (GIP-GBP) vs. Seychelles (SCR)
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# **"Push" Factors for Unilateral Integration**

- How small is your economy?
- How constraining is your currency to your residents?
- How vulnerable is your currency to crises?

# "Pull" Factors for Unilateral Integration

- How much private "dollarization" are your citizens and banks already doing?
- How close are you to other countries: geographically, economically, socially, politically?
- Can you get cooperation from the foreign central bank? From the IMF?

# "Optimal Currency Area" Theory

- Benefits of a common currency depend on integration in other dimensions: "pull" factors.
  - Labor mobility.
  - Trade volume.
  - Fiscal relations.
  - Banking relations.
  - Social, cultural, political relations.
- Complementarity: integration in one dimension makes integration in other dimensions more beneficial.
  - A virtuous (upward) spiral.



# Cooperative Integration

# A Shared Currency

- Multinational currency backed by common reserves.
- Single authority sets monetary policy.
- Unified support mechanism serves banks in all the union's regions.
- Every person gets to use a multinational currency at home and abroad.

## Problem

- Member political authorities can't finance initiatives through their own fiat currency.
  - Need fiscal or monetary resources from the center.

# Trade and Currency Integration

Tendency to integrate currencies in customs unions and free-trade areas.

- German mark: currency unification of 1871 started under the Zollverein (K&M p. 83).
- Euro (KOM, ch. 21): "What Has Driven European Monetary Cooperation? ... European officials believed ... that exchange rate uncertainty, like official trade barriers, was a major factor reducing trade ... . They also feared that exchange rate swings causing large changes in intra-European relative prices would strengthen political forces hostile to free trade within Europe."

# **Internal Integration: The U.S. Dollar**

# Early 1800s: Fragmentation

- Common unit of account but fragmented system for providing the means of payment.
  - Banks (which provided the main means of payment: checking deposits and notes) were state chartered.
  - Banks not always well supervised, sometimes they failed.
  - Banknotes sometimes discounted because of risk of non-acceptance or bank failure.
- Idea of a central bank and unified national currency was a controversial, partisan issue.
  - Early efforts were dismantled by Pres. Jackson in the 1830s.

# 1860s: Unification

- National Bank Acts of 1863, 1864.
  - "National" banks chartered by the USG.
  - National banks could emit banknotes and, by law, had to accept others' banknotes at par: no discounting (fixed exchange rate).
  - USG taxed notes of state banks, to make state banks switch to national charters or stop issuing notes.
  - All national banks' banknotes printed by USG Bureau of Engraving and Printing.
- Still no lender of last resort.
  - Like the EUR from 1999 to 2012.

# U.S. Currency Now

Federal Reserve Act of 1913.

- Created 12 regional Federal Reserve Banks.
  - Serve as lenders of last resort.
- National banks became Fed members and hold reserves in their regional Fed.
- Each Federal Reserve Bank issues notes that are its liabilities (and USG "obligations").
  - Printed by USG Bureau of Engraving.
  - National banks' banknotes retired from circulation in the 1930s.
- Law forbids discounting of Federal Reserve Banks' notes.

# **Global Currency Integration?**



# Regional vs. Global Integration

- Countries who integrate with a global reserve currency are still affected by other currencies' fluctuations.
  - Ex: Argentina's USD-based currency board in the 1990s had no cooperation from the USG and was undercut by fluctuations in Brazil's currency.
- Fallacy of composition.
  - Potential performance of global integration can't be inferred from experience with regional integration.

# International Cooperation for Currency Integration?

- Geopolitics.
  - Territories with global reserve currencies are satisfied with existing system.
  - Zero-sum game: global reserve currency countries vs. mini-currency countries?
- Forces disruptive of the current state of play.
  - The euro.
  - East Asian integration.
  - Dissatisfaction with IMF.

**Thanks!**

**Questions?**