The Fundamentals of Exchange Rates

POSC 1020 – Introduction to International Relations

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Puzzle(s) for Today

I hear a lot about monetary relations and exchange rates. What are those and why do they matter?

What Happened in Argentina?

Argentina seems like one of the most peaceful countries in the region. A timeline of what happened:

- Country had *severe* inflation problems.
  - Inflation even peaked at 3,000% in 1989.
- Corrections made largely came from Washington and included:
  - Convertibility Plan of 1991 that pegged peso 1-to-1 to USD.
  - Lower trade barriers, privatization of state-owned enterprises.

This made Argentina an attractive foreign market.

- Convertibility made international transactions easy.
- Also made it easier to borrow since loans were denominated in USD.

What Happened in Argentina?

However, Argentina's fixed convertibility plan soon ran into a brick wall.

- Mexican peso crisis (1995) had an observable but contained effect.
- Currency crises in Asia/Brazil led to Brazil floating its currency.
    - This depreciated the real, helping Brazil, but hurting Argentina's producers.
- USD started to appreciate in value, raising Argentina's borrowing costs.

Convertibility (i.e. pegging peso to the dollar) facilitated Argentina's earlier recovery but it soon became a straitjacket.

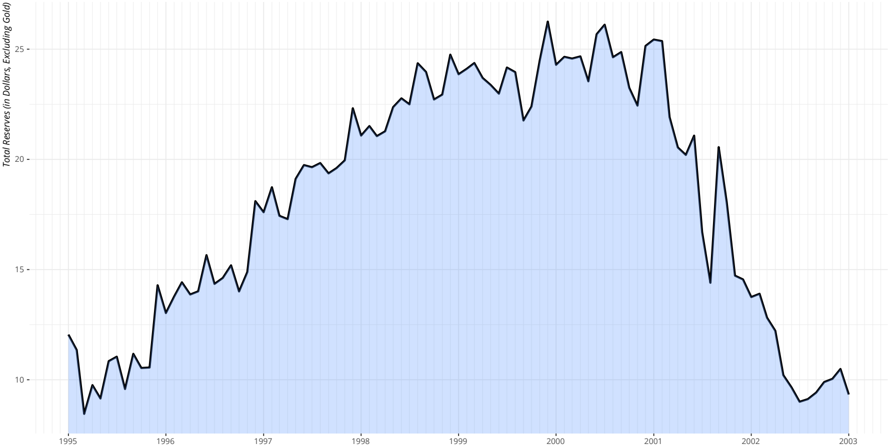
The Crisis in 2001

Argentina’s depression starts in 1998 but it become a full crisis in 2001.

- Hundreds of thousands rioted in the streets, leaving dozens dead.
  - Rioters were mostly middle-class who found their debts/expenses (e.g. mortgages) were even more exorbitant.
- President resigned and was air-lifted from his palace to avoid being killed.
- Argentina defaulted on $93-billion in debts, the largest default in history.

Argentina Lost Around 45% of its Dollar Reserves in the First Seven Months of 2001

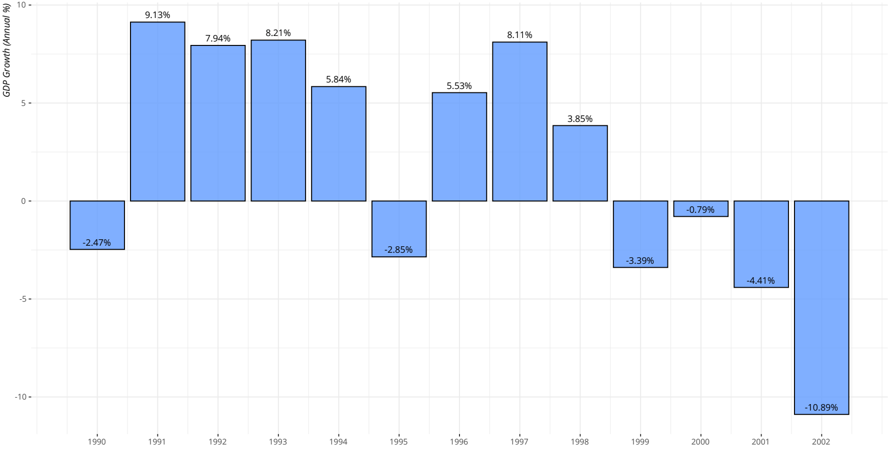
International investors started to lose faith in the dollar peg around the time Argentina's lawmakers started to tinker with the exchange rate.



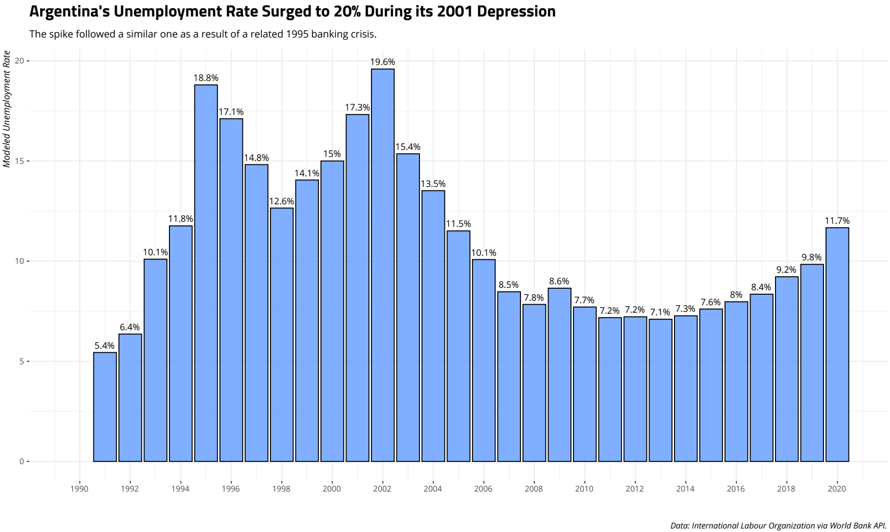
Data: International Monetary Fund via Federal Reserve Bank of St. Louis

Argentina's Depression Started in 1999 and Became a Full Crisis in December 2001

The country's GDP shrunk an astounding 67% from 1998 to 2002. By comparison, the U.S. Great Depression was a loss of about 45% of GDP from 1929 to 1933.

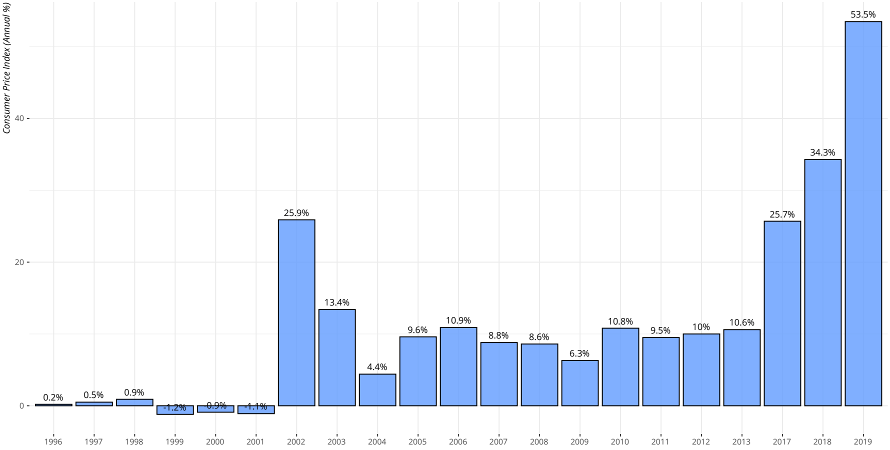


Data: OECD National Accounts Data via World Bank API.


Argentina's Unemployment Rate Surged to 20% During its 2001 Depression
The spike followed a similar one as a result of a related 1995 banking crisis.
Modeled Unemployment Rate
20
15
10
5
0
5.4%
6.4%
10.1%
11.8%
18.8%
17.1%
14.8%
12.6%
14.1%
15%
17.3%
19.6%
15.4%
13.5%
11.5%
10.1%
8.5%
7.8%
8.6%
7.7%
7.2%
7.2%
7.1%
7.3%
7.6%
8%
8.4%
9.2%
9.8%
11.7%
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Data: International Labour Organization via World Bank API.

Inflation Increased to Over 25% from the Previous Year After 2001

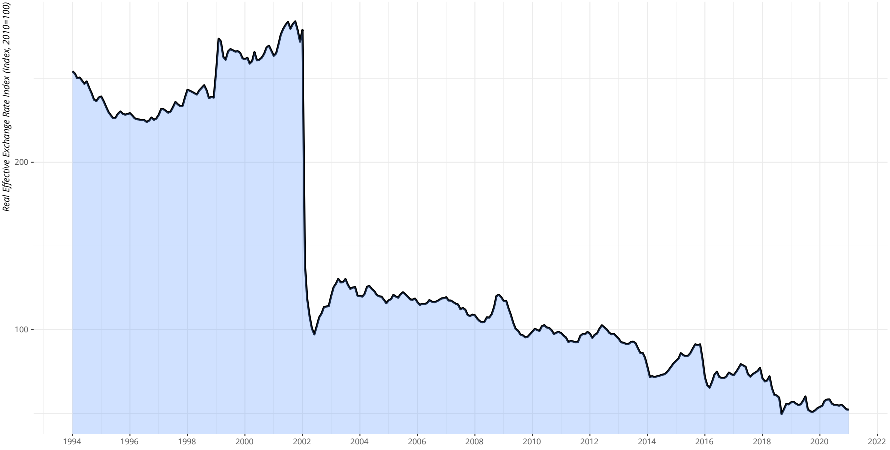
Country experts know inflation has historically been the country's most severe recurring problem.



Data: IMF via Federal Reserve Bank of St. Louis API.

Argentina's Peso Tumbled in 2001 and Has Yet to Recover

Losing access to foreign finance played a huge role in the depreciation of the Argentinian peso.



Data: Bank for International Settlements via Federal Reserve Bank of St. Louis

The Problem of Exchange Rates

The crisis has other factors (e.g. contagion, fiscal mismanagement, banking regulations) but its core is the problem of exchange rates.

What Are Exchange Rates?

A national monetary system is a classic public good.

- Allows for convenient ability to exchange goods/services.
- Little incentive for private firms to provide it.

However, it exists in relation to other national currencies.

- The **exchange rate** is the price at which one currency is traded/exchanged for another.

Appreciation and Depreciation

Exchange rates are variable.

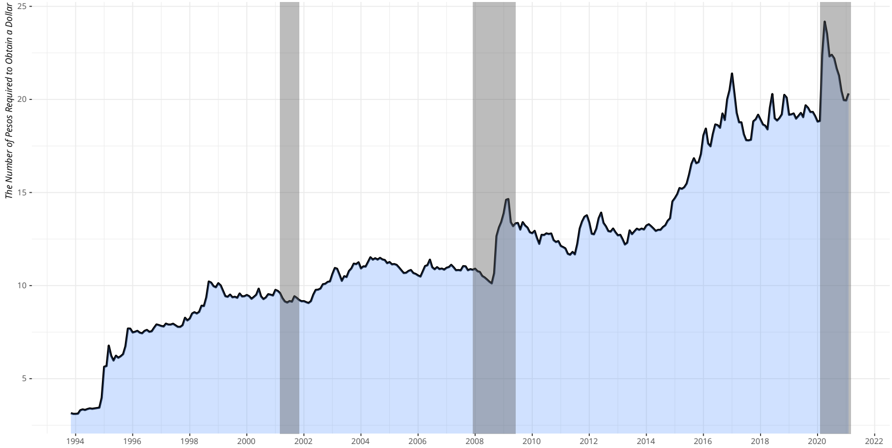
- **Appreciation**: one currency increases in value relative to others.
- **Depreciation**: one currency decreases in value relative to others.

When we say Mexico’s peso is depreciating, it means one U.S. dollar can buy more pesos.

- Alternatively: more pesos are required to buy a dollar.

The Dollar Has Always Been Strong to the Mexican Peso

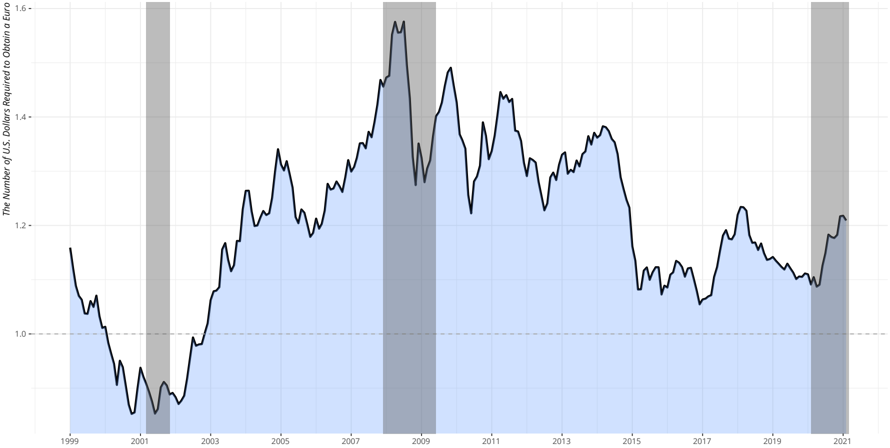
Mexico dropped its previous peg (i.e. three new pesos to one USD) in 1995, which you can see in the first few years of the data.



Data: Board of Governors of the Federal Reserve System (US). Shaded areas indicate U.S. recessions.

The Euro is Usually Worth More Than the Dollar

A dollar and 18 cents bought one Euro to open 1999 and, despite obvious fluctuation, that's about the exchange rate now.



Data: Board of Governors of the Federal Reserve System (US). Shaded areas indicate U.S. recessions.

How Are Currency Values Determined?

Generally: through familiar laws of supply and demand.

- Of note here: the importance of interest rates.
- Higher interest rates = more demand to invest
- But, to invest, you need the national currency.

Central banks (e.g. the Federal Reserve in the U.S.) regulate exchange rates through various means.

- Raising or lowering interest rates
- Changing the quantity of money in circulation

Allowing Exchange Rates to Vary

Two general strategies for exchange rates: to “fix” or “float.”

- Fixed exchange rate: government commits to keep currency at or around specific value.
    - Nowadays: usually set against another currency. Historically: in gold (i.e. “gold standard”)
- Floating exchange rate: currency changes at market value, more or less freely.

There are intermediate steps.

- Bretton Woods monetary system (1945-1973, “fixed but adjustable”)

Fixed Rate Regimes

Some fixed rate regimes are pegged to other currencies

- Bosnia (1 Bosnian mark = .5 euros, a la Dayton)
- Denmark (7 kroner = 1 euro)
- Saudi Arabia (1 USD = 3.75 riyals)

Others are on other national currencies.

- e.g. Ecuador, El Salvador, and Panama all use U.S. dollars

Who Cares About Exchange Rates?

Exchange rate policies create winners/losers. Each has tradeoffs for these actors.

1. Governments
2. Consumers/businesses

Governments and Exchange Rates

Governments must balance multiple actors in adjusting exchange rates.

- Fixed currency provides stability, which makes investment easier.
- However, a government must commit itself to that exchange rate regime.
- This hamstrings a government's ability to respond to recessions.

Floating exchange rates give more flexibility, but also volatility.

Consumers and Businesses

Even more difficulty follows in finding an ideal exchange rate in society.

- A strong currency allows citizens to buy more.
- However, a strong currency puts producers at disadvantage with foreign competition.
- A weak currency makes national products more competitive.
- However, it makes consumers worse off and contributes to inflation.

There is no particular reason why one is better for a country overall.

Consumers and Businesses

The exchange rate policies depend on the nature of the economy, interests groups, and the political system.

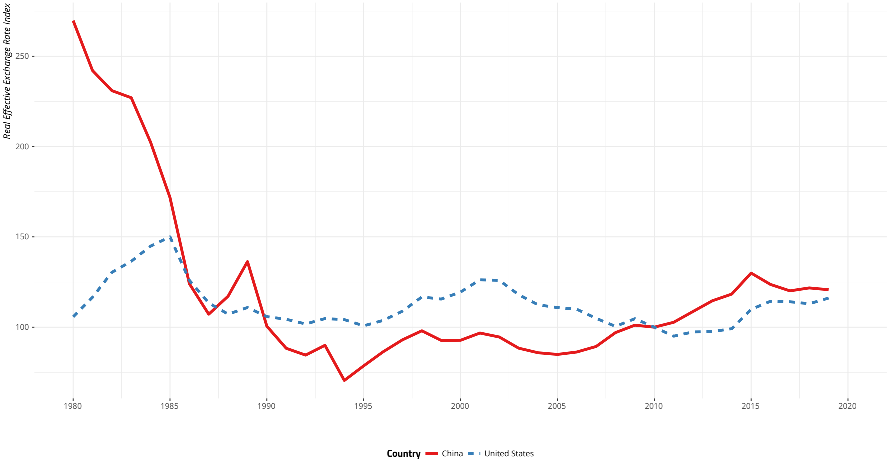
- In Europe: biggest cheerleaders for Euro came from smaller countries (e.g. BENELUX) and not the bigger ones (e.g. France, Italy)
- In Latin America: countries most indebted to U.S. trade pegged to or outright adopted the dollar.

In China: export-oriented economic planning led to overall renmibi devaluation to be competitive.

- However, this makes China's emerging middle class worse off.
- Related: China is presently pushing the value of the renmibi *up*, not *down*.

The Real Effective Exchange Rates for the Chinese Renmibi and the U.S. Dollar (1980-2017)

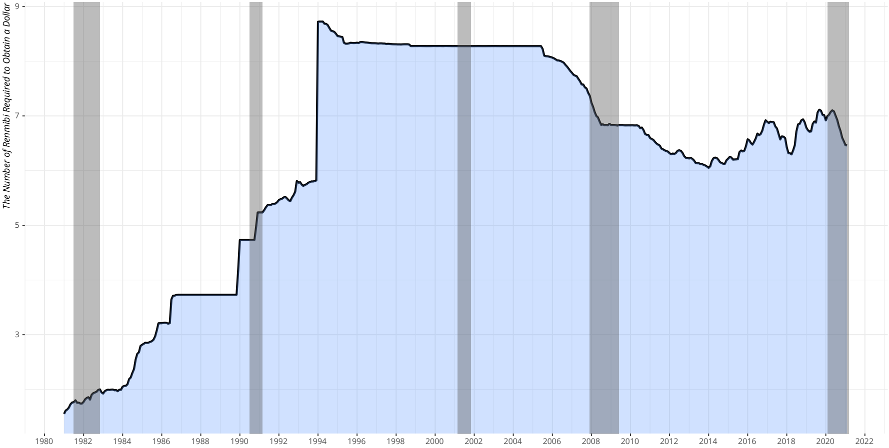
China's currency depreciation strategy was obvious in the 1980s but is less evident now.



Data: IMF via World Bank API. Base year: 2010.

China's Currency Tango With the U.S. Is Even More Pronounced in the 1990s

China pegged the RMB to the dollar at 8.28 in 1994 and held that peg until July 2005.



Data: Board of Governors of the Federal Reserve System (US). Shaded areas indicate U.S. recessions.

An Aside: A Strong Dollar or Weak Dollar?

A weak dollar is useful if you're concerned about:

- Increasing exports
- Economic recovery amid downturns
- Current account imbalances

An Aside: A Strong Dollar or Weak Dollar?

Some pitfalls of a weak dollar:

- Dollar's centrality in global finance requires faith in its value.
  - Without this, U.S. borrowing costs go up substantially.
- Weak dollars could lead to higher interest rates and raise borrowing costs.
  - i.e. it could actually slow economic recovery.
- Artificial depreciation could lead to reprisals/trade wars.

A strong dollar increases purchasing power and is arguably a critical American interest.

Conclusion

Monetary policy is an obtuse topic with important implications for your life.

- Wealthier/bigger states prefer some kind of flexibility in their monetary policy.
- Is a “strong” dollar better than a “weak” one? Depends on what you want.

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