Economic Policies in a Globalized World

Chapter 11

In this Chapter:

- The relation between the interest and the exchange rates
- The trilemma of economic policy
- Monetary and fiscal policies in an open world
- Currency crisis and stagflation
- The role of foreign saving
- Dirty floating and currency management

Chapter 11.1

Interest rate parity and monetary policy in an open world

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Interest Rate Parity

The idea behind the interest rate parity:

Given that capital is mobile, changes in interest rates reverberate throughout the world through exchange rate variations. E.g.: The Fed raising interest rates to 20% in 1981 caused massive devaluations in countries vulnerable to capital outflows.

Rises in interest rates, ceteris paribus, result in appreciation of the local currency, and expansionary monetary policy (lower interest rates) causes depreciation.

The Four Channels

Changes in the money market affect economic activity through four major channels:

- Interest Rate
- Balance Sheet
- Expectations
- Exchange Rate

Interest Rates and Exchange Rates

Changes in the yields on government bonds result in different incentives for foreign investors.

If countries become more attractive due to high yields on government bonds, capital flows in and the currency appreciates.

Conversely, during periods of economic or financial crises, capital leaves and causes the currency to devalue.

Uncovered Interest Rate Parity

The Uncovered Interest Rate Parity establishes a relationship between local and international interest rates, and the difference between those rates impact the expectations in the devaluation or appreciation of the local currency.

With “i” the national interest rate; “i^f” the foreign interest rate, “e^e” the expected exchange rate and “e” the actual exchange rate:

$$i = i^f + \frac{(e^e - e)}{e}$$

Uncovered Interest Rate Parity

- Countries can still maintain their monetary autonomy, but changes in the money supply influence the price of the currency
- Most importantly, the relationship between interest rate and exchange rate reinforces the monetary policy outcomes
- When combating inflation, a central bank raises interest rates, which leads to a currency appreciation that helps with inflationary pressures
- When facing a growth gap, the monetary authority lowers the interest rates, causing a currency devaluation that boosts net exports and aggregate demand

Covered Interest Rate Parity

If there are free capital flows and financial markets work well, there is a stronger link between interest rates and exchange rates through the covered interest rate parity.

If e is the spot exchange rate, f forward exchange rate, i domestic interest rate, and i^f foreign interest rate, then:

$$1 + i = (1 + i^f)\frac{f}{e}$$

Covered Interest Rate Parity: Future Contracts

- Agents can buy and sell currency establishing, today, that a transaction will take place at some point in the future
- Because agents can borrow or lend using the risk-free interest rates in the local and international markets, the future price of a currency has to bear a direct relation to the difference in interest rates

Covered Interest Rate Parity

$$1 + i = (1 + i^f)\frac{f}{e}$$

This has two main implications:

1. Changes in the local interest rate have an impact on the relative price of the currency
2. International central banks' decisions are transmitted to local markets through the interest rate or the exchange rate channels

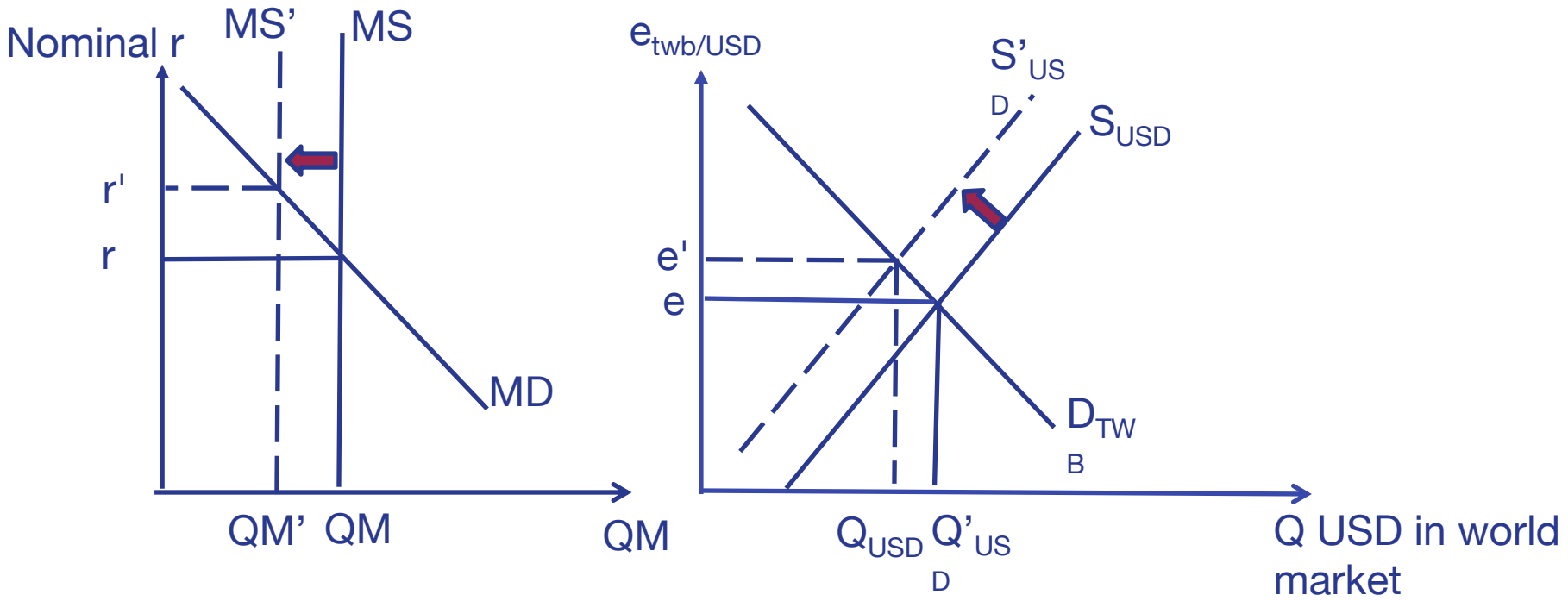
The US Example

Market agents closely follow the Fed's decisions on monetary policy.

When the interest rate is expected to increase, the dollar appreciates vis-a-vis other currencies, and a decrease in the of the target funds rate causes the dollar to devalue.

For example, an increase in the interest rate in the American Market leads to a depreciation of foreign currencies against the USD;

The US Example



The US Example

Assuming that the strength of the US dollar is measured in relation to a trade–weighted basket of currencies (TWB), then a higher exchange rate in the graphic represents an appreciation of the greenback against the currencies from the rest of the world.

An increase in the US fed funds rate will cause a surge of capital outflows to the US market (SUSD to S'USD) and a relative appreciation of the USD (e to e').

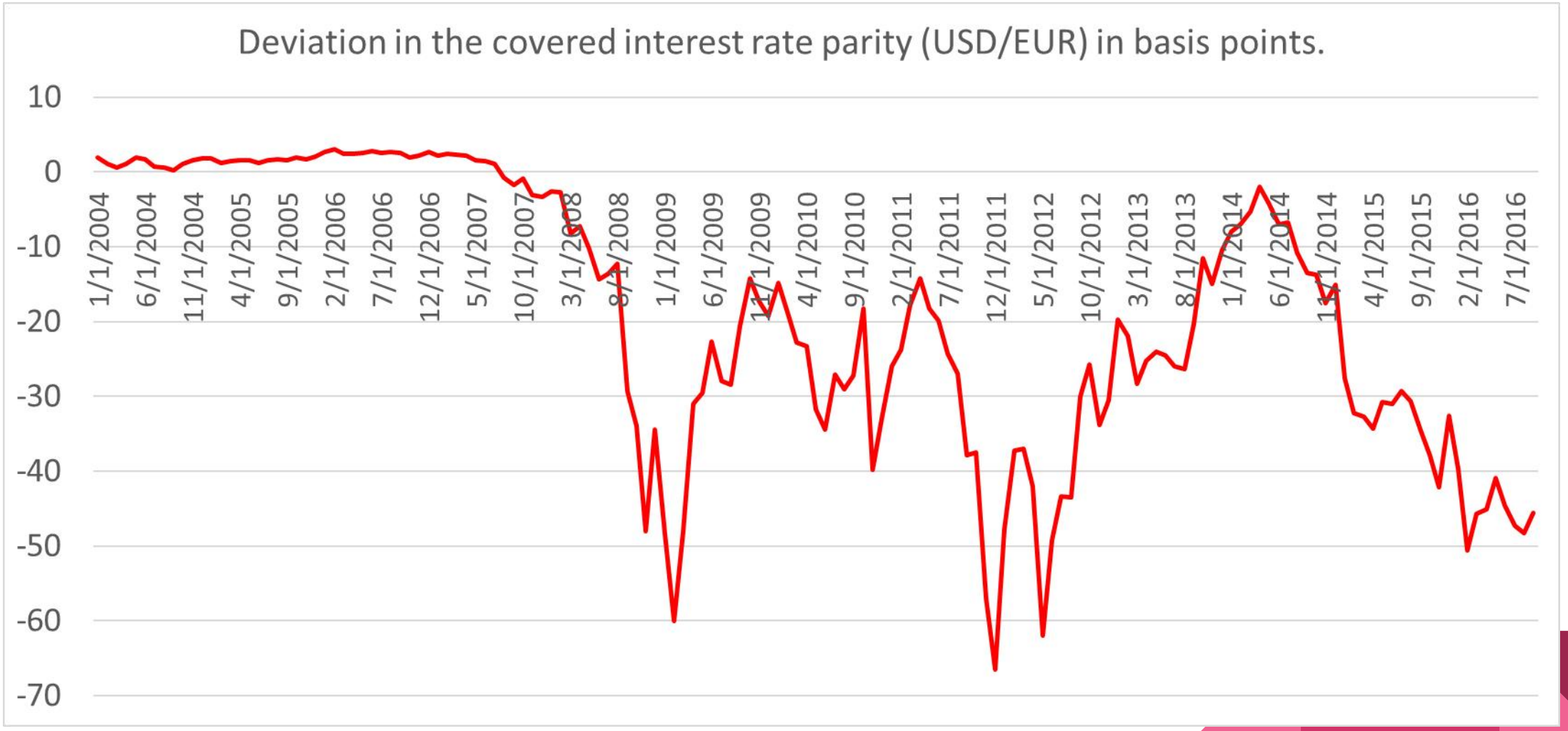
Covered Interest Rate Parity among developed countries currencies

- Recently, the covered interest rate parity, which has been a staple in international finance models, seems to be weakening among developed countries currencies.
- Quantitative easing does change the relative price of currencies, but currency manipulation is not its primary intended target.

What could explain the breakdown of the parity?

The covered interest rate parity misses one dimension: basis risk.

Covered Interest Rate Parity among developed countries currencies



Covered Interest Rate Parity among developed countries currencies

The figure shows the difference between the euro and the US dollar adjusted for their interest rate differentials since 2008.

While many economists claim that it is time to reconsider our current model, we can explain these breakdowns with two major events:

1. lack of liquidity following the financial crisis in 2008
2. increase in sovereign risk in the European debt crisis in 2011

South Africa and the currency crisis of 1998

South Africa and the currency crisis of 1998

South Africa initially had a dual exchange rate system that separated the financial market for rand from the trade account: charging customers a higher rand price for foreign exchange if the purpose was to acquire assets abroad.

With the introduction of the new democratic government, the country liberalized its trade and capital accounts, dismantling capital controls on the two rates.

By 1997, when Nelson Mandela was President, when the Asian crisis hit world markets, South Africa was the only Sub-Saharan African country truly interconnected with the global financial system.

South Africa and the currency crisis of 1998

Between the end of April 1998 and the end of August that year, the rand depreciated by 28 percent in nominal terms against the U.S. dollar.

In response, the South African government hiked interest rates by 7% (70bps), which exacerbated the crisis. This resulted in a recession starting in the third quarter of 1998.

South Africa and the currency crisis of 1998: The Lessons

South Africa's decision to liberalize the foreign currency market resulted in robust capital inflows, both though FDI and portfolio investments. However, it also made the country more prone to external shocks.

The situation highlighted the tradeoffs of global integration, and how it constrains/ influences the decisions of policymakers.

Chapter 11.2

Monetary and fiscal policies in a globalized world

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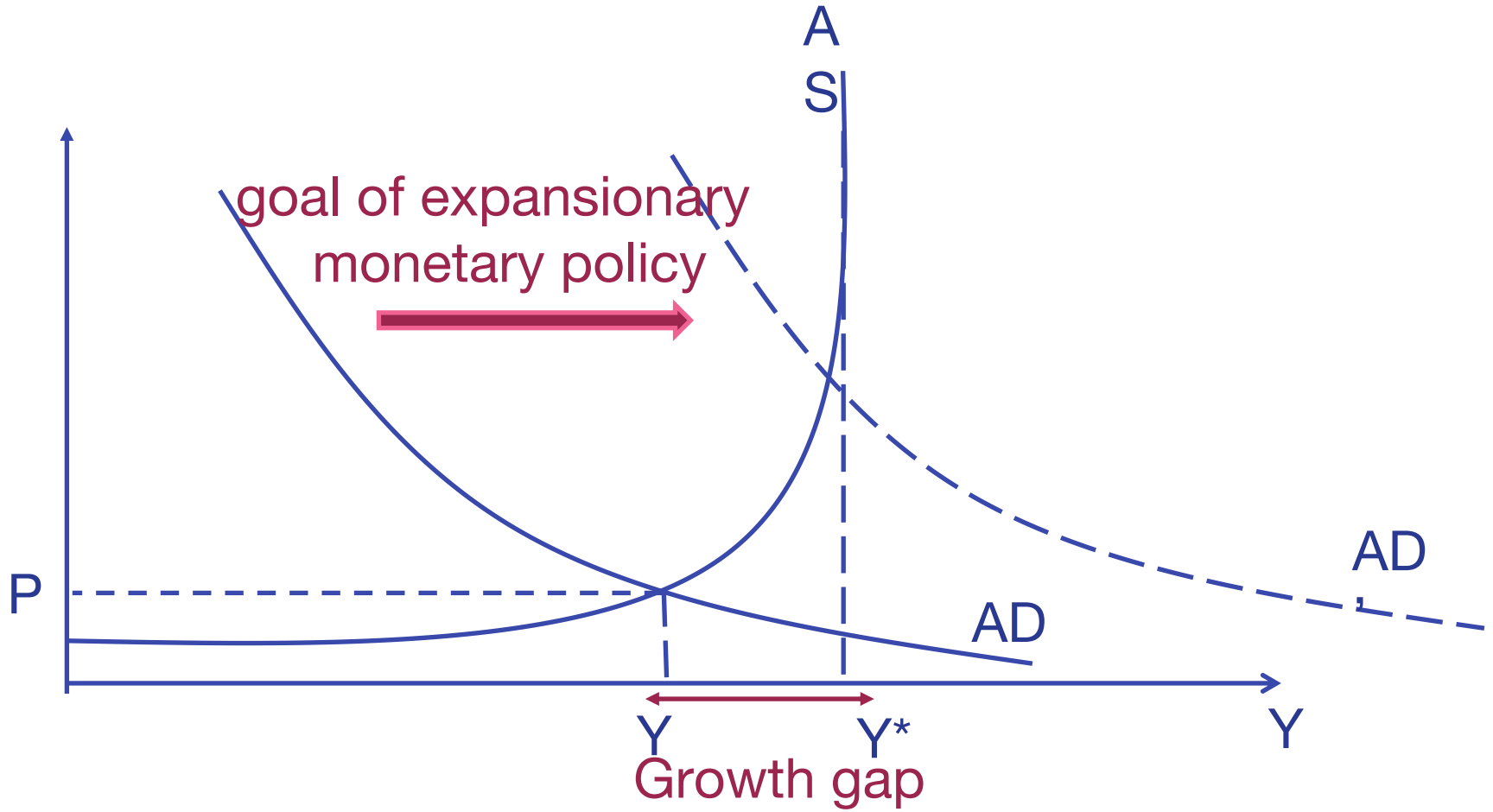
Monetary Policy and the Exchange Rate

In addition to the market for goods and services, monetary policy also has an effect on the exchange rate.

Exchange rate movements complement the action of central banks; A decrease in the interest rate should bring a devaluation of the currency as well as changes in investment and consumption decisions.

Monetary Policy and the Exchange Rate

A monetary expansion should increase aggregate demand through higher investment, consumption and net exports (the last one through the accompanying depreciation of the currency)



Fiscal Policy and Exchange Rates: Expectations

Unlike monetary policy, the relationship between fiscal policy and exchange rates is far more context-dependent, with expectations playing a crucial role in how the exchange rate moves according to changes in the government budget.

E.g.: An expansionary fiscal policy should result in a currency devaluation if market agents view it as unsustainable; there is a chance of debt monetization, capital flees the country, and the price of the local currency spikes.

Fiscal Policy and Exchange Rates: Net Exports

Net exports are another transmission mechanism from fiscal policy to exchange rates.

E.g. Assuming no Ricardian equivalence, a decrease in taxes will boost disposable income, leading to more demand for imports and thus creating an incentive for the depreciation the currency.

However, this depends on on the perception of market agents regarding the tax decrease, mainly whether its impact on the fiscal deficit is sustainable or not.

Fixed Exchange Rate Regimes

With fixed exchange rate regimes, authorities cannot freely choose the level of interest rate or fiscal imbalances, as the central bank needs to act to keep the exchange rate stable.

In fixed exchange rate regimes central banks are committed to interventions to supply liquidity in foreign currency or sterilize excess capital inflows.

Therefore, central bank passive reactions to maintain a peg may neutralize the action of other authorities in the monetary or fiscal dimensions.

Fixed Exchange Rate Regimes: Examples of neutralization

Imagine a country with an overvalued peg. A decrease in the interest rate will make the local bonds less attractive and should result in capital outflows as agents rebalance their portfolios, possibly even triggering a speculative attack.

To keep capital from fleeing the country, the central bank may need to increase the interest rate to incentivize agents to repatriate their funds.

Chapter 11.3

Currency crises

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Currency Crises

A currency crisis happens after a sudden devaluation that creates either a growth gap or an adverse supply shock.

There are many reasons for that, but all currency crises share one common trait: a rapid deterioration of expectations regarding either the management of the economy or the country's economic fundamentals.

Currency Crises and Fixed Exchange Rates

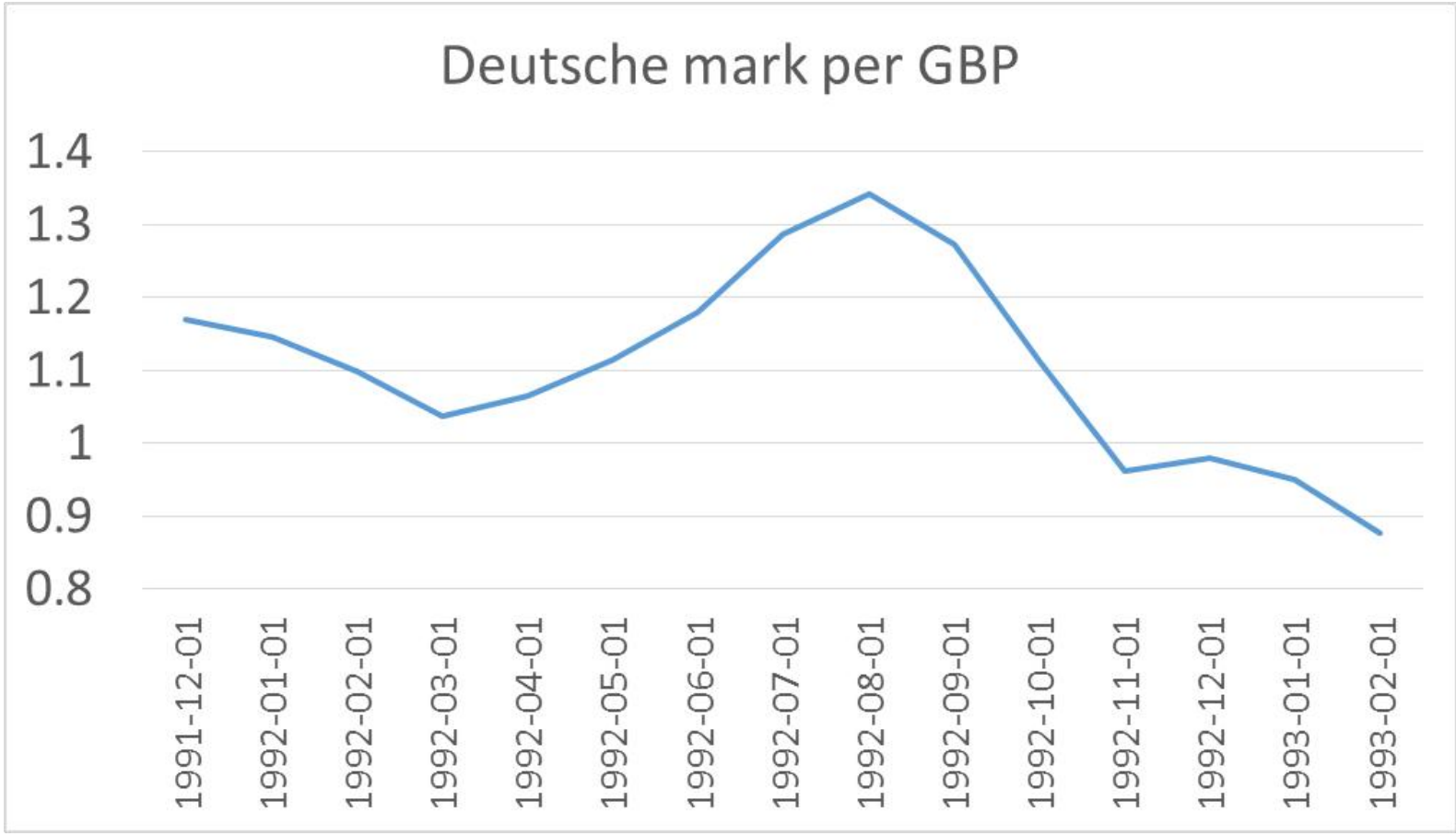
A fixed exchange regime is feasible only as long as the monetary authority has the ability to intervene in the foreign exchange market to provide or reduce liquidity in foreign currency.

Market agents can try to speculate on the strength of central banks by exacerbating the underlying weakness of the exchange rate regimes. E.g. borrowing in the local currency and fleeing the country to buy international assets in an overvalued currency, or betting in the opposite direction in an undervalued one.

Britain and Black Wednesday

On 16 September 1992, the British government was forced to withdraw the pound from the European Exchange Rate Mechanism (ERM) after it was unable to keep the pound above its agreed lower limit in the ERM.

The country suffered from a speculative attack, with short sellers profiting from the pound withdraw.



Argentina and Conjoined Crises

In 2001, following the hyperinflation of the 1980's and 1990's, Argentina suffered from a financial crisis after a currency crisis. Argentinian authorities went beyond overvalued pegs to restore confidence in the management of the economy and to induce the normalization of price processes.

They created a currency board in which a convertible peso was tied to the American dollar (it lasted from 1992 to 2002). How did it work?

Every peso in circulation had to be backed by a dollar in reserve assets. In fact, dollars were accepted as legal tender, since they were fully convertible into pesos.

Argentina and Conjoined Crises

The monetary base contracted following capital outflows, a result of the 1–1 parity between the supplies of the peso and the reserve assets.

A severe recession started in 1998 and the interest rates began to climb anticyclically, reaching 16% in 2001. In December, the Argentinian government defaulted on its external debt and, in January of 2002, it abandoned the convertibility of dollars at the rate of 1 USD to 1 peso.

A financial crisis followed, as banks' liabilities, mostly in USD, shot up in value, while the corresponding assets, in peso, stayed the same.

Argentina and Conjoined Crises

When a currency crisis leads to a financial crisis, there is a sharp reduction in both aggregate demand and supply.

In Argentina, with the USD reaching 4 pesos in 2002, a severe contraction in aggregate supply resulted in a depression that saw GDP falling over 10% and inflation shooting up to 80%. The depression of 2002 was even more severe due to the fact that the economy had already been shrinking, with an average negative growth of –3% in the 1999–2001 period.

The Asian Crisis of 1997-1998

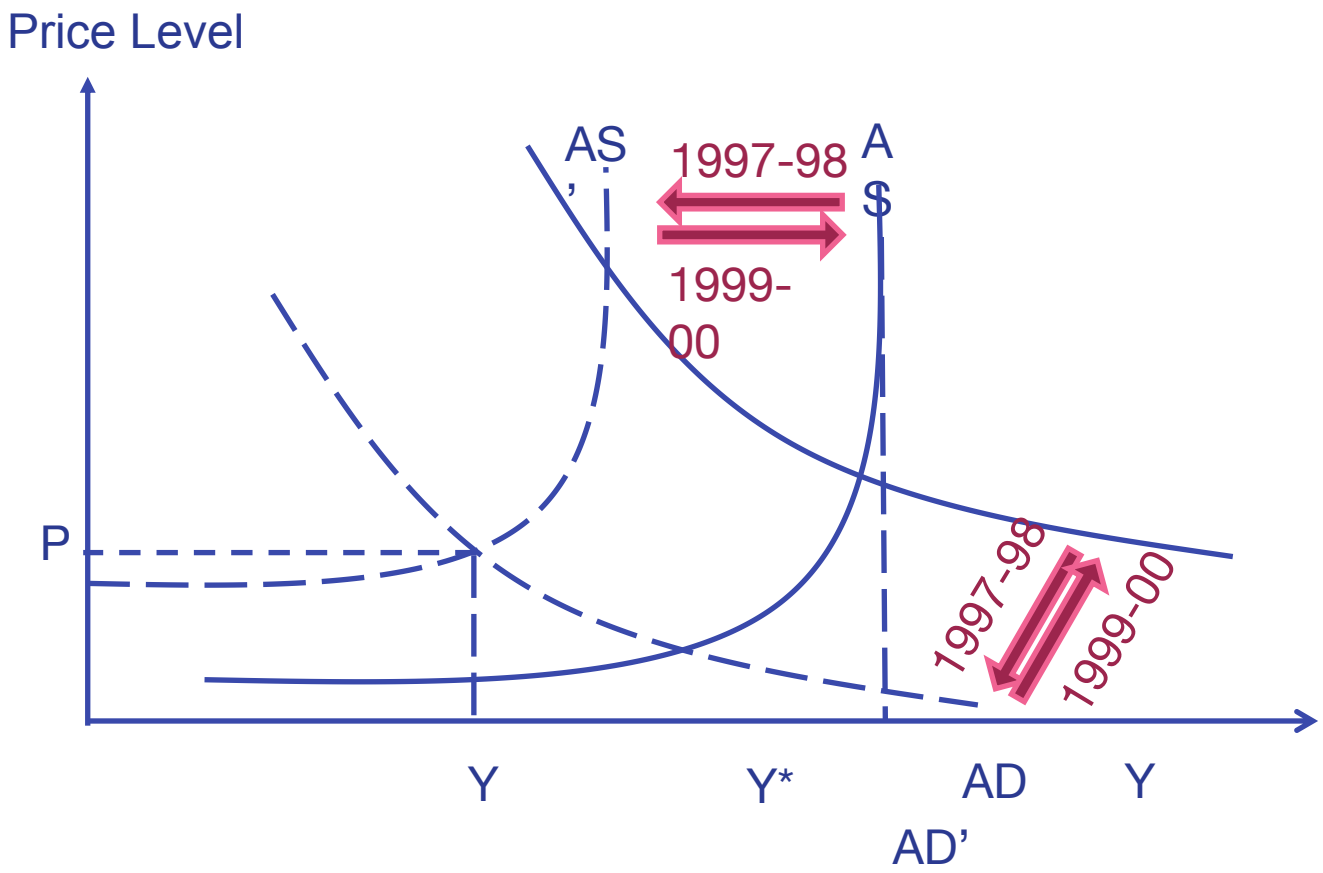
The Asian Crisis of 1997–1998

The Asian crisis began when Thai authorities let the baht float on July 2, abandoning its peg to the USD after months of fighting speculative attacks. A week later, the Philippine peso dropped significantly, while Indonesia widened the trading band of the rupiah. In August, Indonesia let its currency float, and in November the South Korean won fell below 1,000 to a dollar for the first time. Malaysia unveiled capital controls that limit capital outflows, while Hong Kong and China managed to fend off speculative attacks.

How did the Crisis Happen?

- The seeds of the crisis were in the current account, which averaged –8% of the GDP in the five years prior to the crisis. A similar pattern of current account deficits was pervasive across Asia in the mid-1990s.
- GDP contracted in all Southeast Asian countries in 1998: –13% GDP growth in Indonesia, –7.5% in Malaysia, –5.9% in Hong Kong, –5.7% in South Korea, and –0.5% in the Philippines.

Asian Financial Crisis



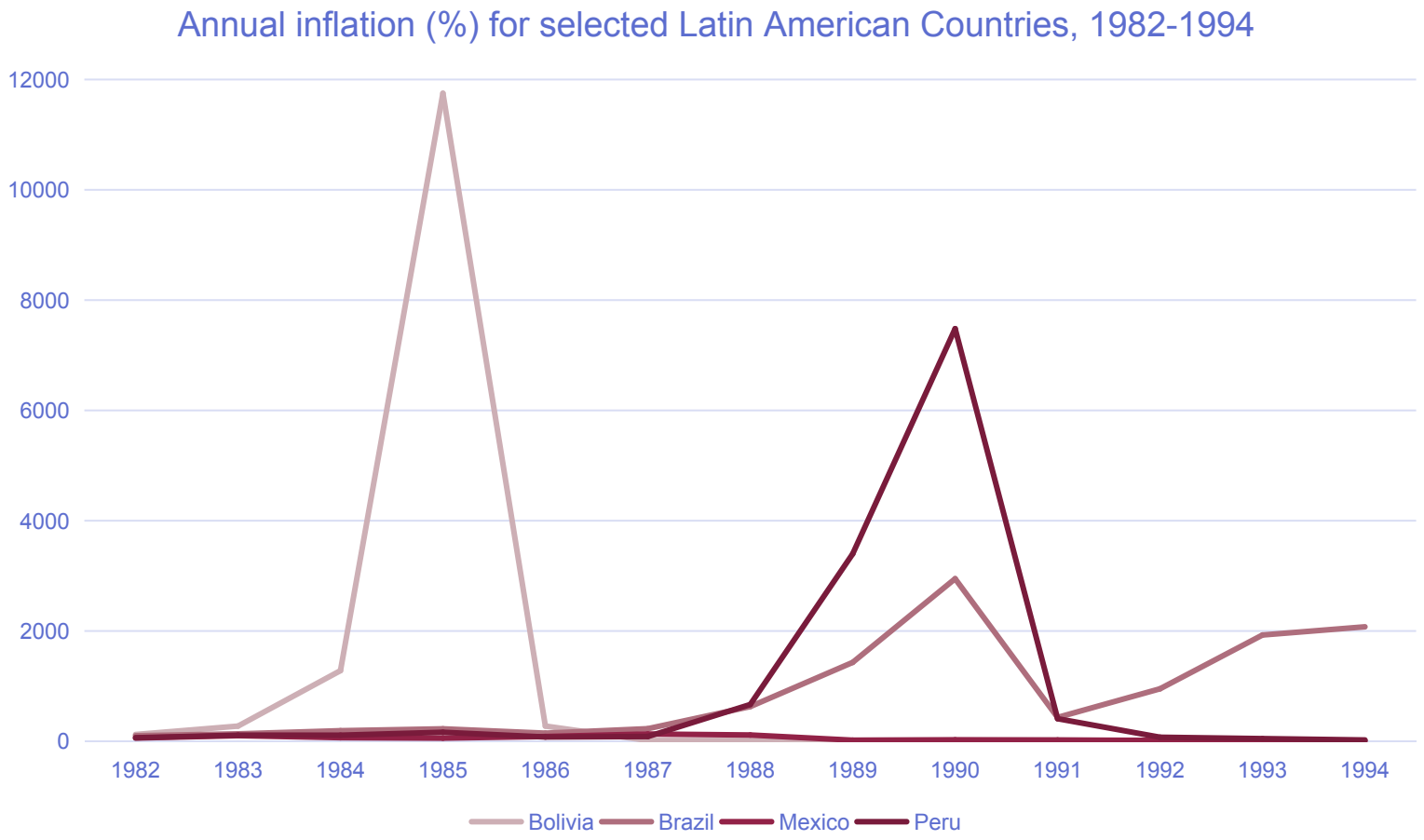
Debt crisis, the lost decade and hyperinflation in Latin America

History of the Latin American Crisis

In the 1970s Latin American countries borrowed heavily to induce industrialization. When the Fed hiked interest rates to 20% a year in the early 1980s, capital outflows caused massive devaluations in Latin American countries.

Policymakers in Latin America imposed import restrictions, tightened capital controls and asked for funds from multilateral organization, particularly the International Monetary Fund (IMF).

Because of the total lack of fiscal restraint, governments started to monetize the deficit, jumpstarting inflationary processes that resulted in hyperinflation in many countries.



Source: World Bank (2024)

The Latin American Crisis

For Argentina, Bolivia, Brazil, Mexico and Peru the annual consumer price index topped 3,000% at some point in the 1982–1994 period.

In all the countries, debt monetization –because of external restrictions and escalating fiscal deficits –caused hyperinflation.

Only after the countries committed to fiscal rectitude (at least temporarily) and enacted an overvalued peg to anchor expectations was the hyperinflation finally quenched.

All of them ended up defaulting on their external debt at some point in this period

Reforms for disinflation – the case of Israel

Israel in the 80's

- Israel went through a hyperinflation period in 1984, when annual inflation was 400% and rising
- The budget deficit was 17% of GDP, capital outflows constantly pressured the shekel to depreciate, and productivity had been stagnant for over a decade
- Israel was done with spiraling prices by 1987, when for the first time since 1972 annual inflation dipped below 20%

How did the country do it?

The case of Israel

There were significant cuts in government expenditure, and the new shekel was pegged to the US dollar. The international environment also helped: oil prices, a major import, were down and the greenback was depreciating against the rest of the world's currencies. Market reforms were credible.

Israeli institutions were stronger than those of the average middle-income country. This allowed the country to make the reforms work in the 1980s and, since then, to climb the development ladder, escaping the middle-income trap.

Rescue packages in developed countries

Rescue packages in developed countries

Ireland and Iceland were both extremely successful in the years before the great financial crisis.

From 1996–2008 GDP growth in Ireland and Iceland outpaced the world by a comfortable margin, on average. Ireland, in particular grew more than 10% a year from 1996 to 2000 and over 5% from 2001 to 2007.

The crisis revealed real estate bubbles and financial fragility that caused a systemic failure of each country's banking system and resulted in a much stronger recession than in the rest of the world.

Source: World Bank (2024)

The Crisis in Ireland

- The cost of bailing out the banks in Ireland was so high that the country was on the verge of defaulting on its sovereign debt in 2010.
- Because it is part of the Eurozone, Irish authorities could not act as lenders of last resort and relied instead on help from abroad.
- Ireland was able to stave off a full default by negotiating a financial assistance program with the International Monetary Fund (IMF) and the ECB that totaled EUR 85 billion.

The Crisis in Iceland

- Iceland, unlike Ireland, allowed its banks to fail.
- Icelandic banks were so large that their assets were 10 times the size of the island's GDP.
- Iceland was also a relatively indebted country, and in 2007 its sovereign debt totaled €50 billion, more than 7 times the country's GDP.
- Icelandic authorities negotiated a rescue package of USD 5.1 billion with the IMF.

The Crisis in Iceland

- Iceland, like Malaysia in 1998, chose a different route from most countries when faced with capital flows reversal: it instituted capital controls to maintain some measure of monetary policy autonomy and prevent the currency from plunging.
- There was no direct default regarding sovereign debt but the picture is murkier if we consider the indirect effects of the capital controls that the Icelandic authorities implemented.

Takeaways from the Iceland/Ireland Situation

The different decisions by Irish and Icelandic authorities reinforce the inexistence of a fit-for-all strategy in terms of economic policies.

Choices matter and tradeoffs are important in decision-making.

Countries take distinct paths with different costs and benefits resulting from their choices.

China, sterilization and the holdings of US debt

The Chinese Peg

- China's hard peg was in place from 1994 to 2005. Since then the country has had a crawling peg.
- In 2012 the PBOC announced a wider interval band for the trading of its currency.

During the 2000s a combination of growth and integration resulted in a jump in capital coming into the Chinese economy, despite capital controls. The monetary authority sterilized the entry of foreign money to keep its undervalued hard peg first and, later, to maintain a smooth appreciation through a crawling peg.

What happens if China dumps all of its American assets?

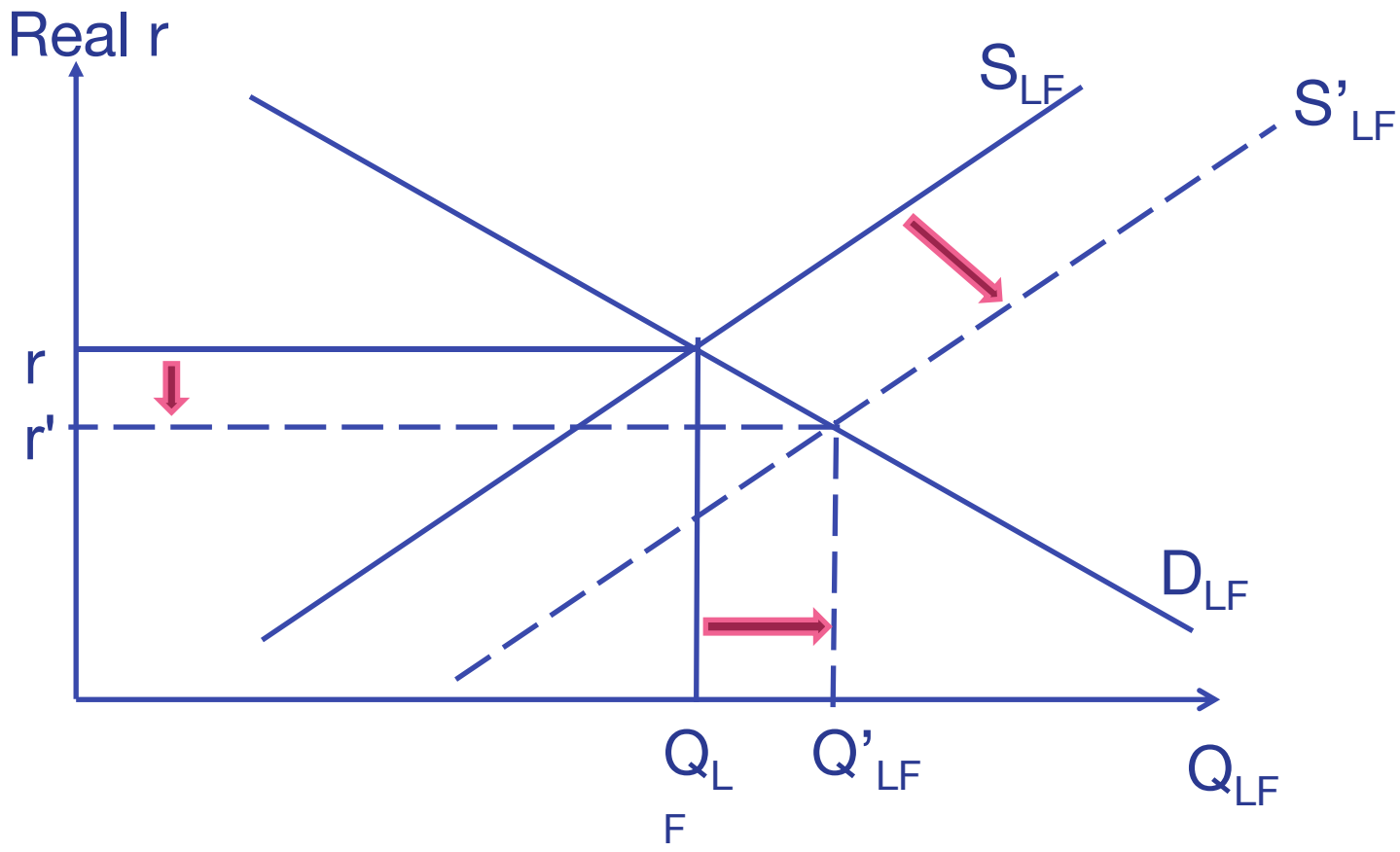
In China, there are two possibilities:

1) Purchases of other foreign assets
2) Repatriation of reserve assets

There are no macroeconomic effects in the Chinese market but given the size of China's reserve assets there will be consequences in the international public debt market, with a surge in the supply of loanable funds in whatever market the People's Bank of China decides to park its reserves.

What happens if China dumps all of its American assets?

For the foreign market there is an increase in the supply of loanable funds (S_{LF} to S'_{LF}), with a corresponding decrease in the interest rate (r to r'), with accompanying effects on the market of goods and services, specifically growth in the aggregate demand given the lower cost of capital.



What about in the United States?

In the United States, there are two immediate effects:

1) In the loanable funds market the exit of Chinese money from the bonds market would represent a decrease in the supply of loanable funds`.
2) In the foreign exchange market there would be an increase in the demand for foreign currency.

What about in the United States?

- There would be two simultaneous effects: an increase in interest rate that the monetary authority can offset by purchasing the bonds sold by China (i.e. printing money), and a devaluation of the greenback.
- Net exports would go up and the effect on the rest of aggregate demand would depend on the reaction by the Fed.
- A minor currency crisis would be likely and inflation should go up. The economy should eventually rebalance and there should be no lasting damage.
- The US government is not a hostage to Chinese policymakers who yield power by holding trillions of dollars of American securities.

Chapter 11.4

The trilemma of economic policy

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What is the trilemma?

A country can pick only two out of three fundamental options:

1) Active monetary policy;
2) Fixed exchange rate;
3) Free capital flows.

Pursuing all three eventually leads to a speculative attack and the abandoning of the fixed exchange rate regime.

The Trilemma Explained

Given the interest rate parity, if countries try to change interest rates there will be an impact on the currency markets (if there are free capital flows).

In a fixed exchange rate regime, the only way to proceed with an expansionary or contractionary monetary policy is to be able to intervene in the currency market to stem capital outflows or sterilize capital inflows.

Reserves are finite and sterilizing capital inflows has fiscal costs, thus countries cannot maintain fixed exchange rate regimes and at the same time maintain monetary policy autonomy if capital can move freely.

The Trilemma Explained

Eventually agents will start betting heavily that a country cannot maintain a peg and the central bank will capitulate

The only way to maintain a peg with free capital movements is to have an endogenous interest rate. In essence, the central bank can either have a say in the interest rate or exchange rate, but not both, unless it has capital controls.

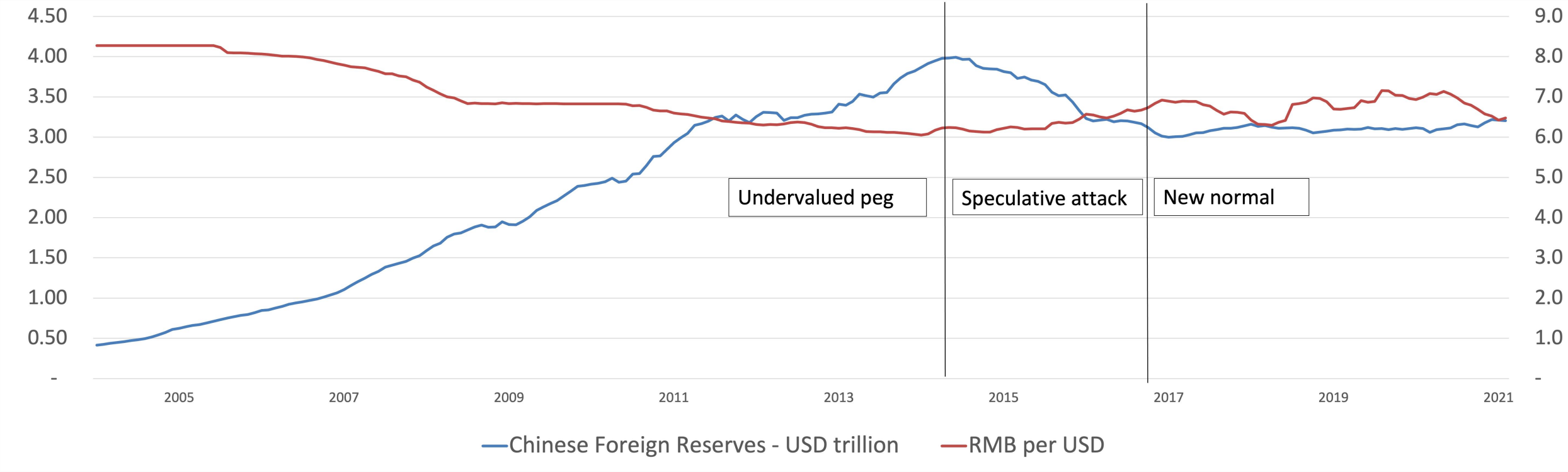
The Chinese trilemma and the speculative attack on the yuan

China’s 2015 Speculative Attack

China grappled with an indirect speculative attack on the yuan in 2015, even though the country had at that time trillions of dollars in reserve.

The country assumed it could maintain tight control over its money supply and its exchange rate and, at the same time, introduce measures to free up the flow of capital.

Chinese reserves (in USD trillions) and RMB per USD exc.rate, 2004–2021



China’s 2015 Speculative Attack

A global recession and the fear of a hard landing by the Chinese economy shifted the peg from undervalued to overvalued.

Because the PBOC kept the yuan peg relatively unchanged, the Chinese central bank had to start selling foreign currency to investors and companies that wanted to take their money out of the country.

What Were the Options?

Faced with the assault, Chinese authorities had several options:

- They could make capital controls tighter, impeding or even prohibiting different types of outflows.
- Increase the interest rate to try to bring in more foreign capital.
- Ride the crisis out, until its reserves were close to exhausted.
- Accede to the attack.

They chose the last one.

Repercussions of this Decision

On two days in August 2015 the PBOC allowed the yuan to devalue by 3%.
It started a process of mini-devaluations until there were no more net capital outflows. China slowly brought the yuan closer to its shadow price; the price of the yuan if the country had a fully flexible currency regime.

In 2016 after the equivalent of US$1 trillion was spent on thwarting the speculative attack, the Chinese economy stabilized. Capital outflows or inflows were minuscule, and confidence rebounded.

In 2018 Chinese foreign holdings stood at around $US3 trillion.

Aftermath

China continues to manipulate its currency, but without real economic effects on the rest of the world.

The yuan is still subject to PBOC's control, but its value does not influence world exporters negatively, because the PBOC keep it close to what it would be if the currency was floating.

The main reason that the PBOC does not allow the currency to completely float is to keep a hold on volatility.

Chapter 11.5

The role of foreign saving —sectoral imbalances

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The Role of Foreign Saving

Saving is a key variable to determine how likely poor countries are to emerge as developed economies.

This is the main advantage of the choice for free capital flows; with it, foreign banks and companies are more likely to commit funds to emerging markets.

Sectoral Balance

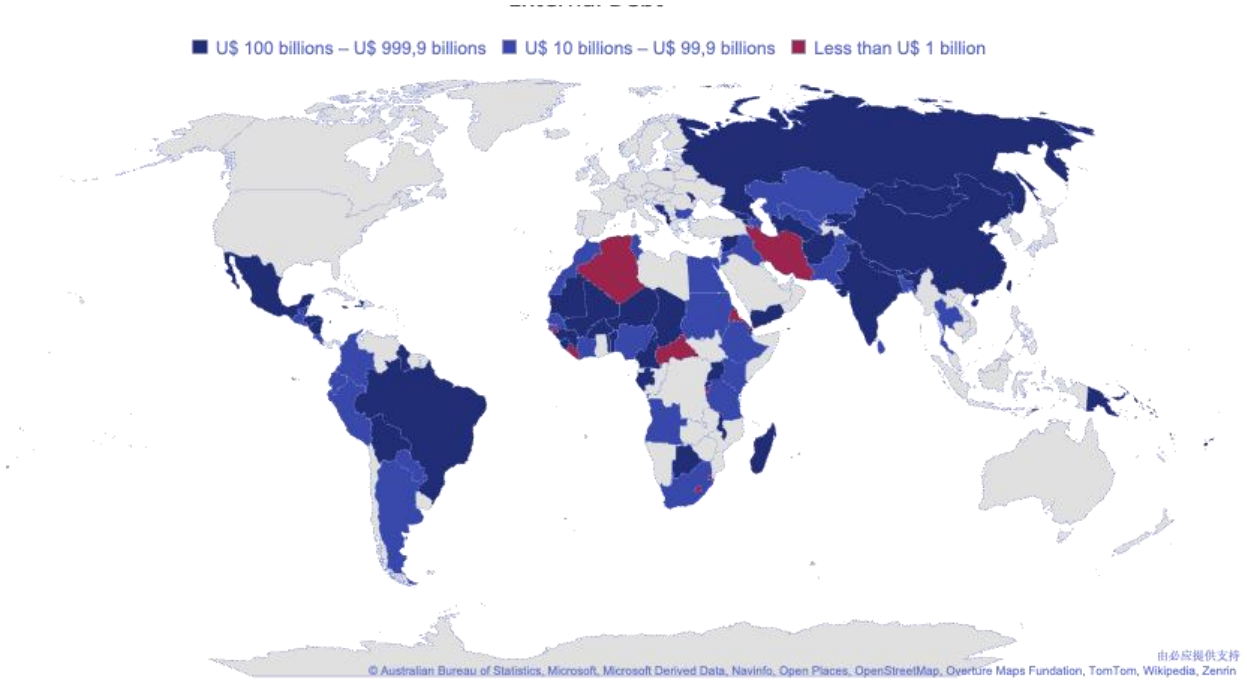
Sectoral balance analysis is a simple way to integrate the government budget as well as private and external saving. Algebraically:

$$S - I + T - G + M - X = 0$$

The first part (saving and investment) represents the balance of the private sector; the second, taxes and government expenditure is the balance of the public sector; and the third, imports and exports of goods and services (the current account), is the external balance.

Sectoral Balance

- A positive balance means that a sector has a net saving (is accumulating wealth/reimbursing debts)
- A negative balance means that a sector has a net indebtedness (is accumulating debt/dissimulating wealth)
- The balances must add to zero: it is impossible to have a situation in which all countries enjoy a surplus, or all of them post a deficit



Source: CIA (2024).

Analyzing Currency Crises Through the Lens of Sectoral Balances

Private and public debt accumulation, financed by external creditors, results in the building up of foreign debt that eventually cannot be financed anymore.

A sudden stop of capital flows and a current account reversal lead to devaluations or defaults on sovereign debt.

The public sector intervenes to sustain the private sector deleveraging and the government deficit increases. If the deficit is financed with bonds, there is an increase in public debt; if monetized, inflation.

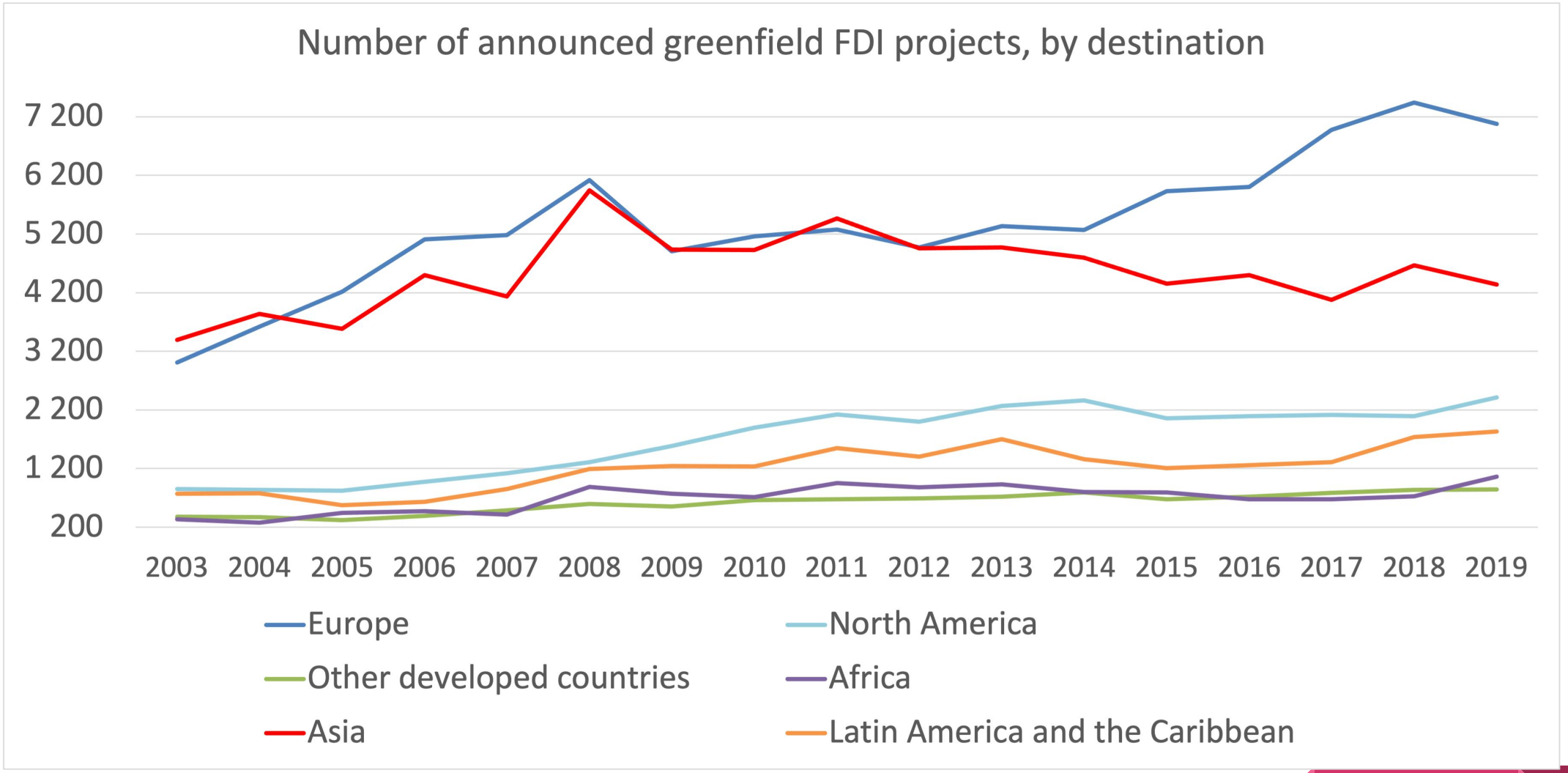
Why is the World Not Converging?

One of the reasons is that money tends to flow to more stable countries, and those tend to be rich.

Europe is the recipient of the highest number of FDIs, most are intra-European investment; an Italian company investing in Portugal, for instance.

Asia is also an important destination for new foreign investment.

Africa, however, welcomes relatively few foreign investment, and institutional instability explains most of the aversion of investors.



Source: Unctad (2017).

Currency Crises and Stagflation

Currency Crises and Stagflation

- Currency crises may cause stagflation through changes in the short-term aggregate supply.
- External vulnerability, in terms of large current account deficits, may trigger sudden stops of capital flows which make imports more expensive.
- Depending on the size of external restrictions, the productive capacity of the economy falls.

It is hard to predict a situation in which a currency crisis generates stagflation, as changes in the exchange rate affect prices through costs, but also, in normal situations, aggregate demand through net exports.

Output Through the Production Side

Remember $Y(t) = f(K(t), AL(t), AN(t))$, where Y is output, A is an index of productivity (technology), K capital, L labor, and N natural resources

Usually, production factors are fixed in the short run, and the same is true of natural resources. Countries usually have a fixed amount of natural resources in the short run, and only exploration and development can increase it in the long run

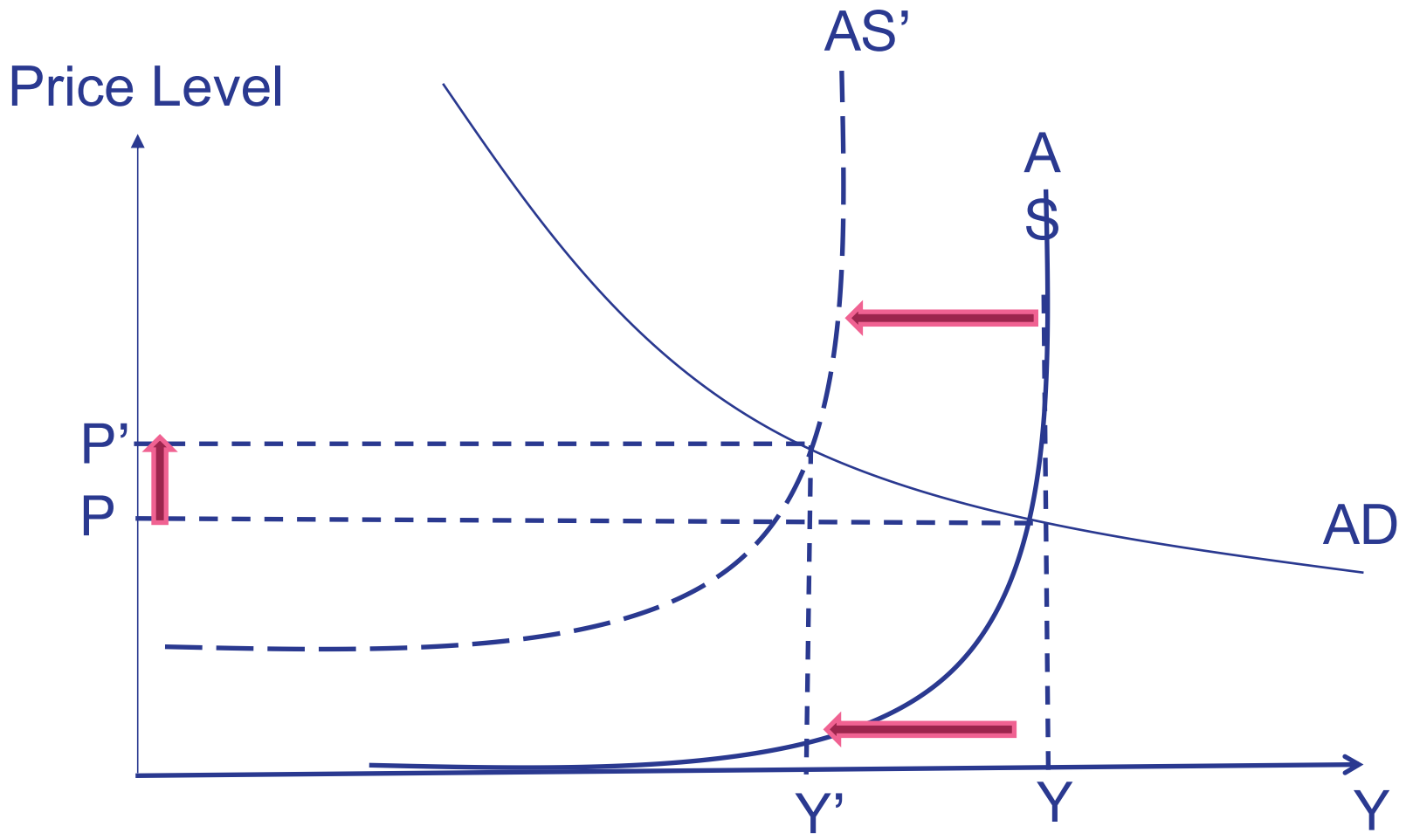
However, in some countries their natural resources increase in the short run, shifting aggregate supply to the right and creating the conditions for expansion without inflationary pressures.

Currency Crises and Output

A currency crisis following a sudden stop of capital inflows usually results in a sharp decrease in imports.

- Imports of intermediate goods, which are either natural resources or capital goods, are tied to both short and long run aggregate supply through the country's production function.
- A sudden stop of capital flows and shrinking imports may lead to a reshuffling of production factors that decreases aggregate productive capacity.
- The pass-through of massive currency devaluations to prices also reduces production.

Currency Crises and Output



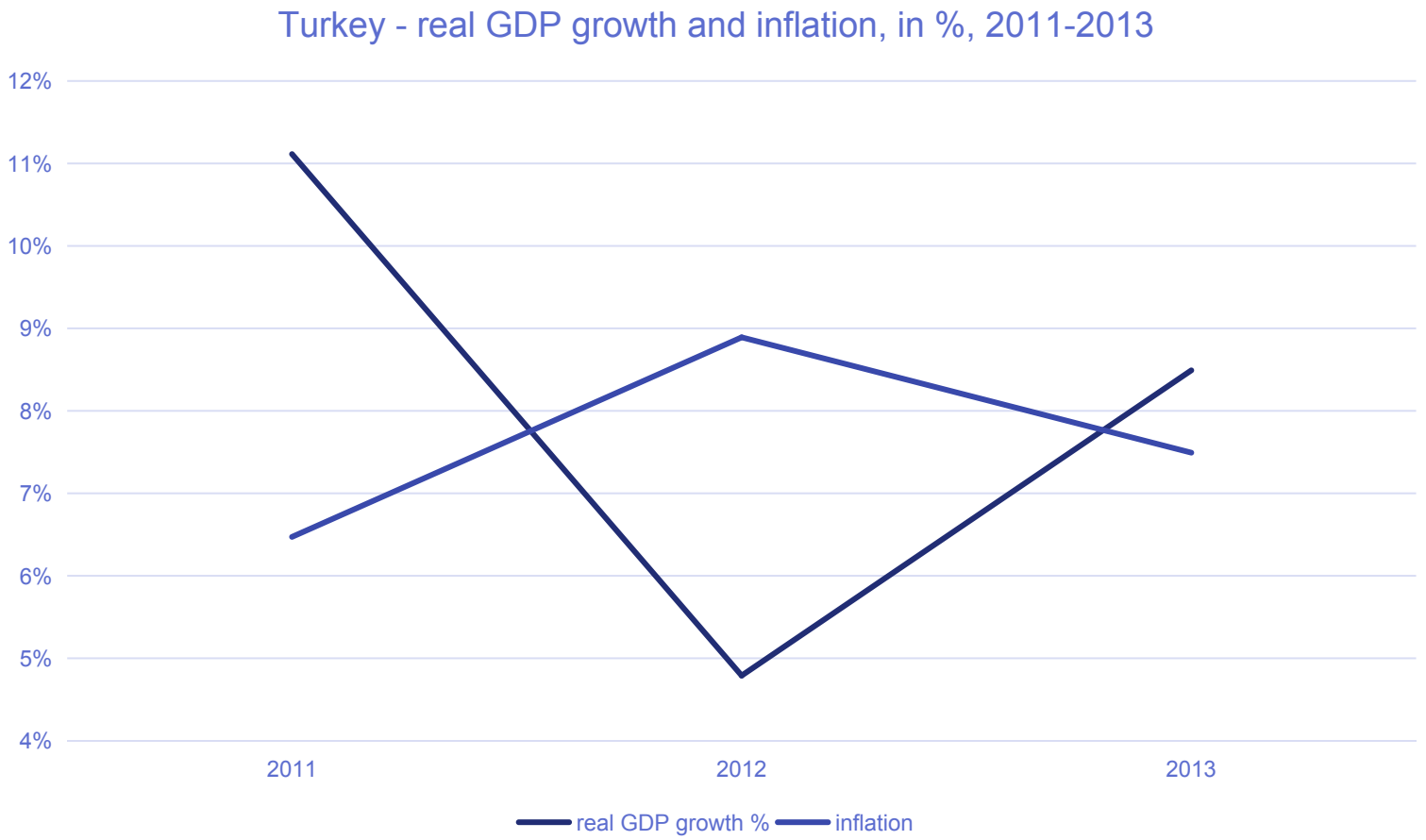
Currency Crises and Output

- In the beginning, actual output is almost at its potential level (Y), and inflation at P
- As the supply shock from the currency crisis unfolds, Output falls, to AS', and the price level increases, from P to P'
- The result is a period of recession alongside inflation

Stagflation arises from relative price changes that reduce productive capacity. Imports become much more expensive, and the marginal productivity of the economy decreases as inputs are used to substitute imports instead of their earlier more productive use.

Turkey and Stagflation

- In 2011 the Turkish lira plummeted against the major world currencies, falling over 20% against the US dollar
- The weaker lira contributed to a reduced aggregate supply, with corresponding deceleration in growth and rising prices
- Growth stalled, decreasing from almost 9% in 2011 to a little over 2% in 2012, while inflation picked up its pace, from 6.5% to almost 9% in the same period.
- The adjustment period was relatively quick and as aggregate supply started to return to its earlier path, growth increased in 2013 (4.2%) as the pressure on prices eased (7.5%).



Source: World Bank (2024)

Chapter 11.6

Dimensions of currency policy

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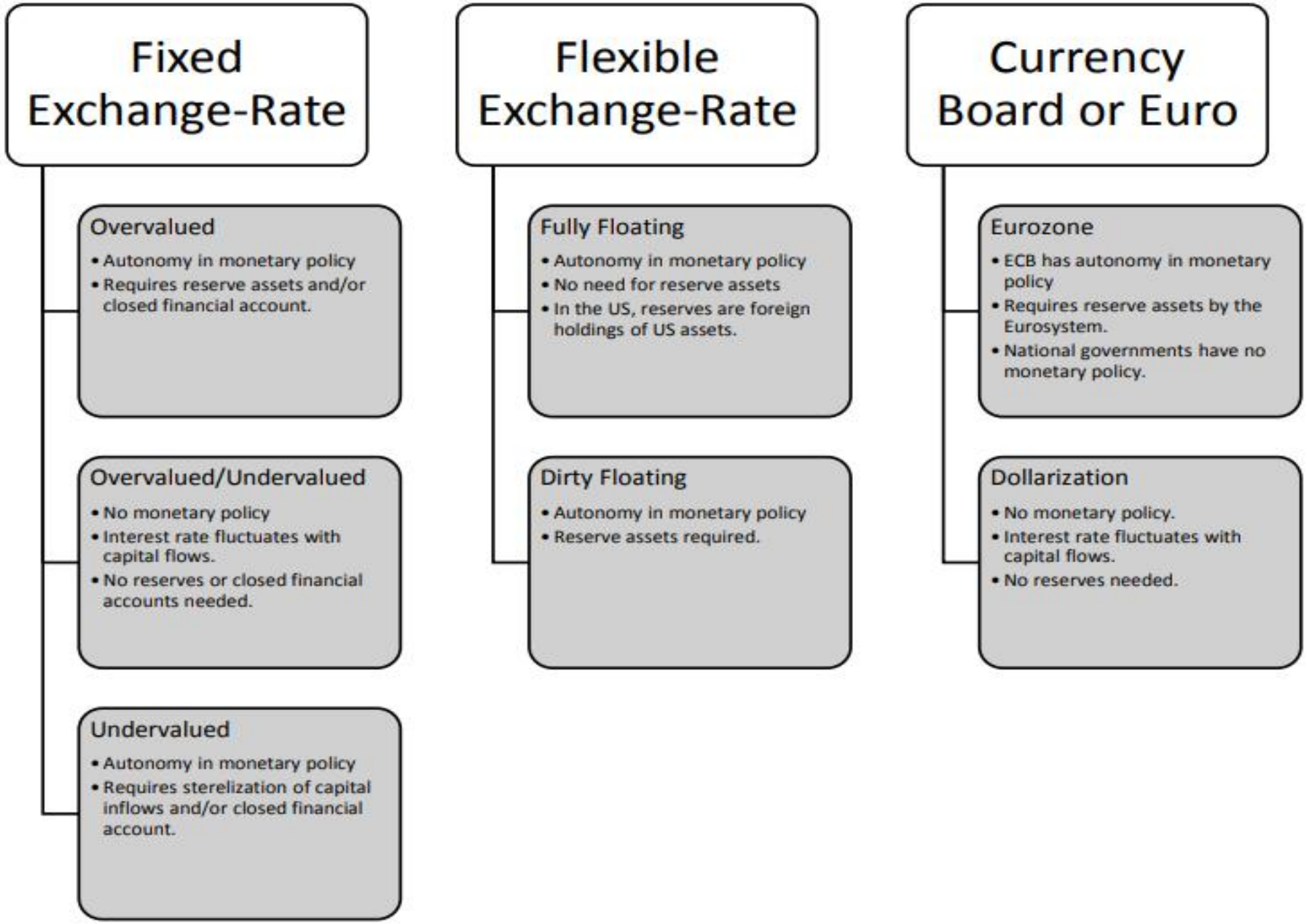
The Dimensions of Government Choices of Currency Policies

- **The type of exchange rate regime**
  - fixed exchange rate
  - flexible exchange rate
  - currency board
  - foreign currency as legal tender
- **The operationalization of currency market interventions and reserve assets building**
  - Depreciated or Overvalued peg?
  - Is the peg hard or crawling?
  - Free capital flows or autonomy of monetary policy?


Fixed Exchange-Rate
Overvalued
• Autonomy in monetary policy
• Requires reserve assets and/or closed financial account.
Overvalued/Undervalued
• No monetary policy
• Interest rate fluctuates with capital flows.
• No reserves or closed financial accounts needed.
Undervalued
• Autonomy in monetary policy
• Requires sterelization of capital inflows and/or closed financial account.
Flexible Exchange-Rate
Fully Floating
• Autonomy in monetary policy
• No need for reserve assets
• In the US, reserves are foreign holdings of US assets.
Dirty Floating
• Autonomy in monetary policy
• Reserve assets required.
Currency Board or Euro
Eurozone
• ECB has autonomy in monetary policy
• Requires reserve assets by the Eurosystem.
• National governments have no monetary policy.
Dollarization
• No monetary policy.
• Interest rate fluctuates with capital flows.
• No reserves needed.

Fixed Exchange-Rate

Overvalued
- Autonomy in monetary policy
- Requires reserve assets and/or closed financial account.

Overvalued/Undervalued
- No monetary policy
- Interest rate fluctuates with capital flows.
- No reserves or closed financial accounts needed.

Undervalued
- Autonomy in monetary policy
- Requires sterilization of capital inflows and/or closed financial account.

Flexible Exchange-Rate

Fully Floating

- Autonomy in monetary policy
- No need for reserve assets
- In the US, reserves are foreign holdings of US assets.

Dirty Floating

- Autonomy in monetary policy
- Reserve assets required.

Currency Board or Dollarization

Eurozone

- ECB has autonomy in monetary policy
- Reserve assets important for eurozone countries.
- National governments have no monetary policy.

Dollarization

- No monetary policy.
- Interest rate fluctuates with capital flows.
- No reserves needed.

The Great Financial Crisis and the Turkish Lira

In July 2008, the Turkish Government would not intervene to support the lira. As the financial crisis deepened, the government changed its stance.

The government faced three options:

1. Use of reserve assets,
2. An increase of the interest rate,
3. A combination of the two.

Turkish officials chose direct intervention with reserve assets, selling foreign currency in the local market to try and prevent further devaluation of the lira.

The Great Financial Crisis and the Turkish Lira

The Turkish intervention was not successful in staving off aggregate supply and demand shocks, and the economy contracted by more than 13%, year on year, in the first quarter of 2009.

Countries with managed capital accounts, like China, were able to keep deflationary pressures off their currency markets.

Exchange rate regimes have a major impact on the choices of economic policy. Tradeoffs determine the costs and benefits, as well as the limits of attempted interventions in foreign currency markets.

The underperformance of the Malaysian ringgit.

Malaysia in the Asian Crisis

Malaysia escaped the Asian crisis of 1997–98 faster than other Asian countries. In the other Asian countries, flight to quality engendered currency and financial crises.

The Malaysian government established capital controls to prevent capital outflows.

Malaysia's GDP contracted by 7.5% in 1998, with Indonesia (–13%), South Korea (–6%) and Thailand (–7.6%) following suit. Malaysia recovered quicker, with GDP increasing by more than 7% a year in the two subsequent years,

Current Currency Policy in Malaysia

The government still tries to maintain control over the currency policy, with one example the explicit policy of non-internationalization.

The central bank prohibits the trading of ringgit assets outside of its jurisdiction, with the aim to decrease the volatility that usually accompanies free capital flows.

Nevertheless, the ringgit is still a floating currency; dirty floating for sure, but it strengthens and weakens according to the path of the Malaysian economy.

Lessons From the Performance of the Ringgit

In 2015 and 2016, as the world economy cooled down, so did the ringgit.

The currency lost more than 20% of its value, in line with the rest of the emerging markets.

Capital controls may diminish volatility but do not change the fundamental relationship between the vigor of the economy and the relative value of its currency.

The ultimate choice of national governments is about the extent of integration with the rest of the world. As long as the economy is partially or totally integrated, authorities cannot have total control over the exchange rate.

Dirty floating and a costly lunch in Mexico

Donald Trump and the Mexican Peso

On the day that Donald Trump was elected, the Mexican peso devalued 7.3%, falling a further 6% in the next two days. By the end of 2016 the Mexican currency had devalued almost 20% against the US dollar.

History of the Peso

In the wake of the currency and financial crisis in 1994 Mexico opted for a dirty floating currency system.

This lasted until Donald Trump was elected, when Banco de Mexico started to intervene in the foreign currency market again, auctioning American dollars to contain the depreciation of the peso.

Mexico’s tradeoffs

Dirty floating systems have clear tradeoffs. In order to be able to intervene, central banks must first form reserves in foreign currency.

Reserves come at a fiscal cost equal to the differential in the interest rates of the country and the American treasury bonds.

The Mexican government decided to restart interventions after the peso had plunged on the back of uncertainties regarding trade, migration and financial policies of President Donald Trump.

Two-Money Systems

Two Money Systems

An inefficient but common system adopted, usually, by emerging countries to control currency and money markets

It was quite widespread in poor countries in the mid-20th century. It may be used as a result of civil war (as in China during the 1927–1950 period), closed capital accounts (Tanzania from the 1960s to 1990s), reunification (as in Germany in 1990), currency crises (Latin America in the 1980s), currency board system (Argentina in the 1990s), artificial trade surplus (Cuba) etc.

China's Two-Money System

China had different two-money systems during the 20th century. During the civil war period, two different currencies were issued by Communist Party and the Kuomintang. From 1978-1994 China again dabbled in a two-money system to ease the transition to a market-based economy.

Foreigners could not hold renminbi (the people's money), and used foreign exchange certificates issued by the Bank of China and accepted at designated tourist hotels and the state-run Friendship Stores. Thus the renminbi itself had two rates, one for trade and another for transactions inside China.

China's Two-Money System

In 1994, The Chinese government unified its two rates at the swap-market rate of 8.7 to the dollar —much weaker than the official rate of 5.8.

At the same time, China abolished the foreign exchange certificates. The black market faded quickly, providing a simple lesson in microeconomics: if governments try to control prices without taking care of the resulting excess demand or supply, a black market will emerge; however, it dissipates as soon as the controls are eased.

Why Adopt a Two-Money System?

There are two main reasons:

1. The home rate acts as an overvalued fixed exchange rate that keeps prices stable and inflation in check.
2. The trade exchange rate is undervalued in an effort to promote exports.

Two-Money Systems: Black Markets

Countries can have even more exchange rates for foreign currency, with distinct prices for trade, tourism etc. This was a feature of the 1980s in Latin America. If their expenses were to be higher than the official limit, travelers had to buy foreign currency on the black market, at exorbitant rates.

Nigeria, Venezuela, and Argentina in 2015 all set up artificially low rates for hard currency with significant restrictions regarding who could buy dollars at these low prices. People simply shifted to the black market. Meanwhile, multinationals had difficulties repatriating profits due to capital controls.

Main Takeaways

Multiple currency regimes have little economic benefit to offer to governments not desperate for foreign currency.

Distortions create black markets, allocate capital inefficiently from sectors that use imported factors of production to export-oriented ones, shift the incentives of individuals to acquire foreign currency, and limit FDI inflows and outflows.