EC 452 International Monetary Economics

4. Government Policies towards the Foreign Exchange Market

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Outline

- Exchange rate policies
  - Rate flexibility
  - Restriction on use (Foreign exchange control)
- Floating exchange rate
- Fixed exchange rate
- Foreign exchange intervention
- Exchange control
- Past experiences
  - The Gold Standard Era
  - Interwar Instability
  - The Bretton Woods Era
  - The Worldwide Current Systems

Objectives

- Students should understand:
  - The variety of exchange rate policies countries have used.
  - How a country can respond to pressure on the value of its currency.
  - The implications of temporary versus permanent imbalances in exchange rates.
  - The benefits and costs of foreign exchange controls.
  - How fixed rates have performed in the past.
  - How flexible rates have performed in the past.

GOVERNMENT POLICIES

Reasons for government policies toward the foreign exchange market

- To reduce variability in exchange rates
- To keep the exchange rate value of its currency either high or low
- To raise national pride in a steady or strong currency

2 Major aspects of government policies toward the exchange rate

1. The exchange rate itself (What should be the exchange rate? Should the exchange rate be fixed or flexible?→ PRICE)
   - *Clean float*
   - *Managed/dirty float*
   - *Fixed/pegged*

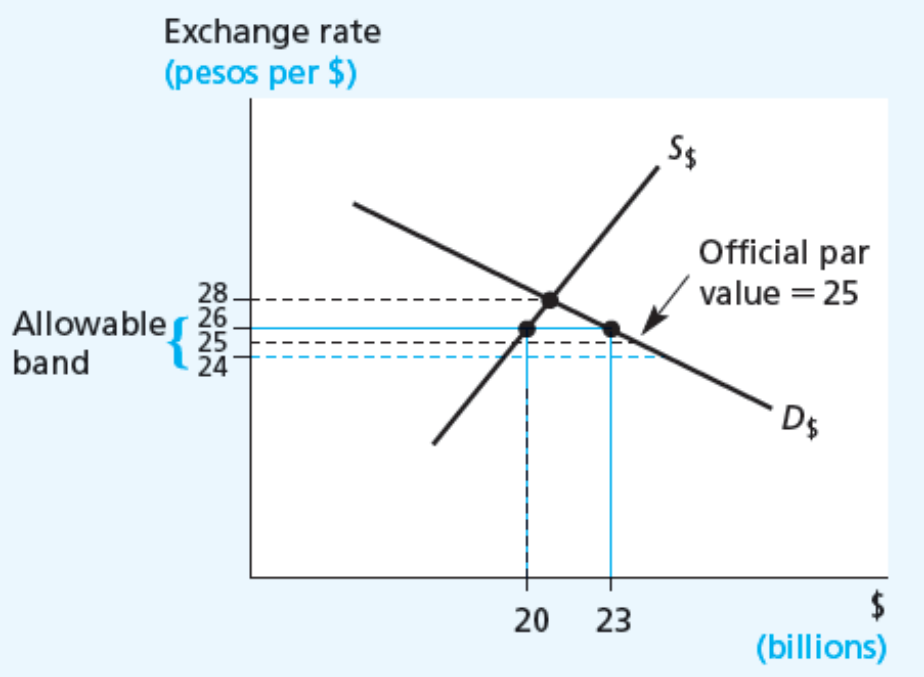
2. To permit or restrict access to foreign exchange market. (Who may use the foreign exchange market and for what purposes → QUANTITY)
   - Government-imposed restrictions on the use of the foreign exchange market are called exchange controls, which may be broad-based or may be applied only to some types of transactions such as those related to international financial activities (eg., capital controls), while permitting all payments for exports and imports of goods and services (ie., convertible for current account transaction).

In the Case of Fixed Exchange Rate:

- **What** to fix to?
  - Gold, US$, some other currency, or basket?
- **When** to change the fixed exchange rate?
  - Never (pegged exchange rate)
  - Occasionally (adjustable peg)
  - Often (crawling peg)).
  - How wide should the band around the central or par value chosen for the fix.
- **How** to defend the fixed rate?
  1. Official intervention in which the government buys and sells currencies
  2. Exchange controls in which the government tries to suppress excess demand or supply
  3. Altering domestic interest rates to influence short-term international capital flows
  4. Adjusting the country's macroeconomic position to make it fit the fixed exchange rate.
  5. Last option: to alter the fixed rate value or shift to a floating rate. (Surrender!)

DEFENSE THROUGH OFFICIAL INTERVENTION

Figure 20.1 Intervention to Defend a Fixed Rate: Preventing Depreciation of the Country's Currency



Source: Pugel (2012), p. 481

Example: Latin American county is attempting to maintain fixed rate of 25 pesos per dollar, with a band of plus or minus 4 percent (1 peso).

- Nonofficial S & D are attempting to push the exchange rate to 28 pesos per dollar, the intersection of the market would clear on its own.
- Here, central bank must sell dollars and buy domestic currency.
- To keep the currency in the allowable band, it must sell 3 billion dollars into the foreign exchange market at the rate of 26 pesos per dollar (the top of the band), so it is buying 78 billion pesos (26 x 3) from the foreign exchange market.

Where does the monetary authority get the dollars to sell into the foreign exchange market?

- A country uses its official international reserve assets (or some other similar government assets) to obtain dollars from some foreign source, most likely the US monetary authority (Federal Reserves), or it borrows the dollars.
- There are 4 major components to a country's official reserve assets:
  - foreign exchange assets denominated in major currencies
  - Country's reserve position with the International Monetary Fund
  - Special Drawing Rights (SDRs)
  - Gold

Where does the monetary authority get the dollars to sell into the foreign exchange market?

- If our country has a reserve position in the IMF, then it can obtain dollars from the IMF request.
- If the country is holding SDR, then it can use these SDRs (สิทธิพิเศษถอนเงิน) to obtain dollars from the US monetary authority or from IMF.
  - SDR (currency code XDR) is a reserve asset created by IMF. The value of the XDR is based on a basket of key international currencies reviewed by IMF every five years. The weights assigned to each currency in the XDR basket are adjusted to take into account their current prominence in terms of international trade and national foreign exchange reserves. In the review conducted in November 2015, the IMF decided that the Renminbi (Chinese yuan) would be added to the basket effective October 1, 2016. From that date, the XDR basket now consists of the following five currencies: U.S. dollar 41.73%, Euro 30.93%, Renminbi (Chinese yuan) 10.92%, Japanese yen 8.33%, British pound 8.09%. Market exchange rate can be used to compute SDR's value in terms of any specific single currency.

Where does the monetary authority get the dollars to sell into the foreign exchange market?

- Some countries maintain arrangements called swap lines with each other to facilitate official borrowing between countries.
- Special case: US, whose currency is readily held by the monetary authorities of other countries. US$ is called the reserve currency. In this case, the country can effectively borrow through official channels by issuing assets that will be held as reserves by the central banks of other countries.
  - This allowed US to run what Jacques Rueff called " Deficit in tears". In 1950 and 1960s, US was given leeway to finance its deficit.
  - Latin American countries cannot do that, of course.

Figure 20.2 Official Holdings of Reserve Assets, End of Year, 1970-2009 (Billions of US$)

	1970	1980	1990	2000	2009
Foreign exchange assets	45	381	806	1,935	8,166
Special drawing rights	3	15	28	24	315
Reserve position in the IMF	8	22	32	62	61
Gold	40	573	345	261	945
(millions of ounces)	(1,057)	(953)	(940)	(952)	(869)
Total reserve assets	96	991	1,211	2,282	9,487

- Total world holdings of official reserve assets have grown rapidly and their composition has changed.
- In 1980, gold (measured at market price) was over half of world official reserves, but then official holdings of foreign exchange assets grew rapidly.
- By 2009, foreign exchange assets were about 86 percent of world official reserves. These are mostly safe, highly liquid, interest-earning debt securities such as government bonds. Close to 2/3 are US dollar denominated assets and about ¼ are euro-denominated assets. (There are small amounts of assets denominated in GBP, Yen and few other currencies.)

International Reserves in Thailand

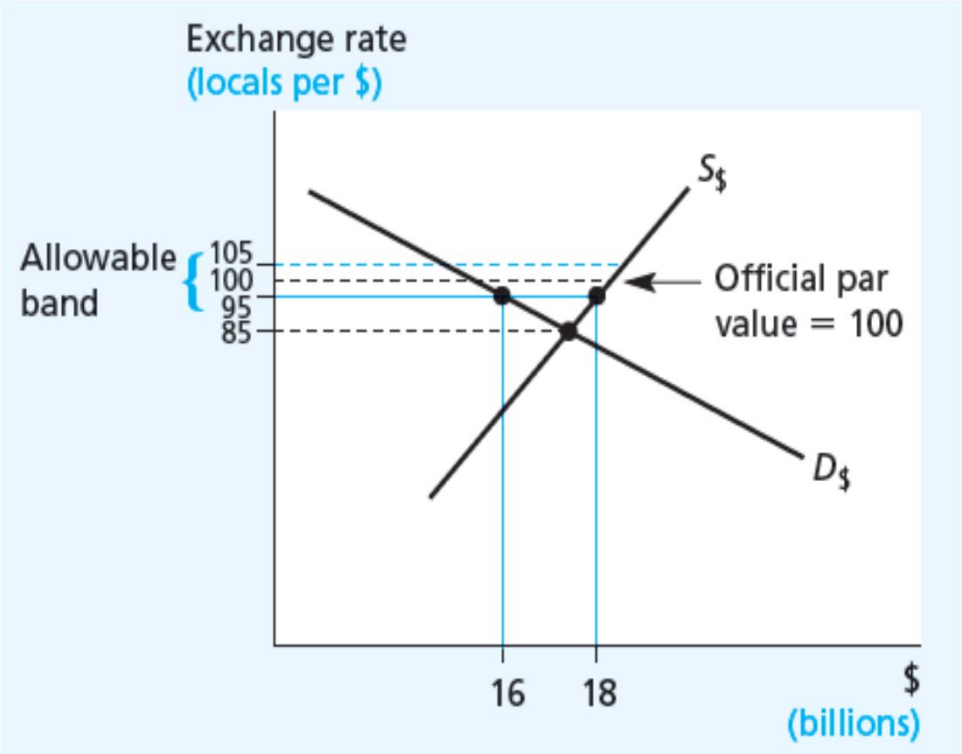
Bank of Thailand
EC_XT_030 : International Reserve

Last Updated : 10 Aug 2018 14:30
Retrieved date : 15 Aug 2018 13:55

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1 (Millions of US Dollars)										
2 Gold	2,347.12	2,934.74	4,598.56	7,734.63	8,281.74	5,960.81	5,854.20	5,247.99	5,696.04	6,441.69
3 SDRs	131.27	1,522.98	1,496.90	1,494.30	1,495.26	1,499.89	1,411.99	1,350.77	1,310.70	1,391.50
4 Reserve position in the IMF	212.51	360.68	377.42	695.22	724.98	805.70	777.16	624.28	698.06	680.69
5 Foreign currency reserves	108,317.11	133,599.17	165,656.01	165,199.60	171,105.98	159,022.34	149,064.25	149,290.91	164,148.44	194,048.43
6 Total	111,008.02	138,417.59	172,128.90	175,123.77	181,607.96	167,288.74	157,107.60	156,513.95	171,853.24	202,562.31

Source: www.bot.or.th

Figure 20.3 Intervention to Defend a Fixed Rate: Preventing Appreciation of the Country's Currency



Source: Pugel (2012), p. 484

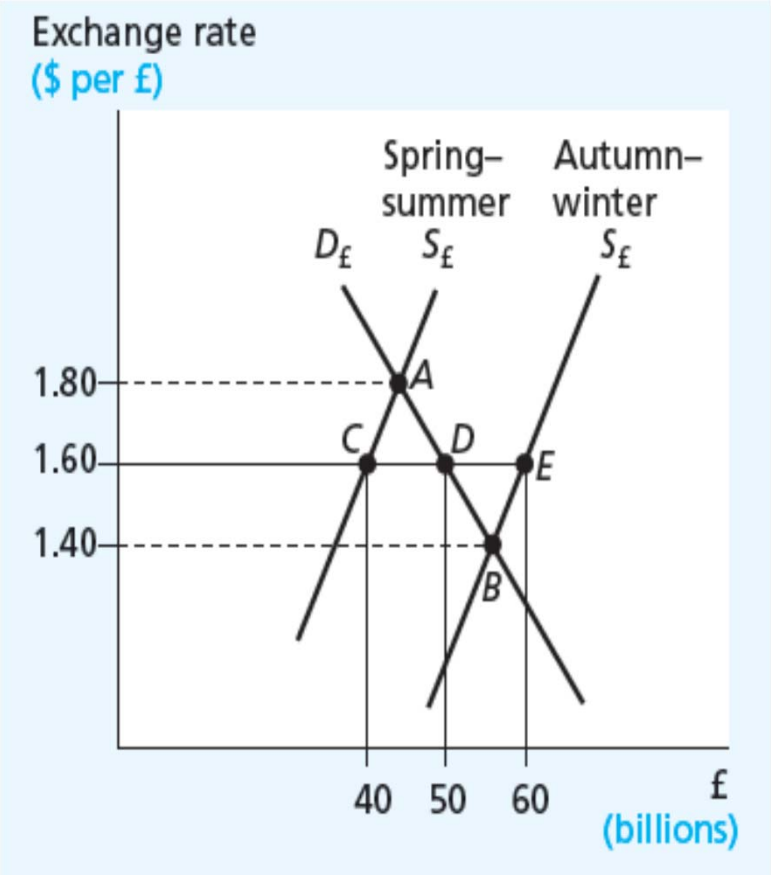
Example: Asian country attempting to maintain a fixed rate of 100 locals per dollar, with band of plus or minus 5 percent (plus or minus 5 locals).

- To prevent the market exchange rate from falling through the bottom of allowable band, the country's central bank must buy 2 billion dollars at the exchange rate of 95 locals per dollar.
- This results in an official settlements balance surplus if the country's monetary authority intervenes to defend the fixed rate.
- The country's holdings of official reserve assets increase.

Temporary vs Prolonged Imbalance

- If the imbalance in the country's official settlements balance is temporary, then official intervention that smoothes the time path of the exchange rate can enhance the country's economic well-being (although stabilizing private speculation could do the same thing without government intervention)
- If disequilibrium is on-going or fundamental rather than temporary, then intervention alone is not likely to be able to sustain the fixed exchange rate. Instead, the government must shift to one of the other defenses or devalue.
- The key problem here is that it is not easy for officials to judge whether a payments imbalance is temporary or fundamental.

Figure 20.4 A Successful Financing of Temporary Deficits and Surpluses at a Fixed Exchange Rate



Example: Canada e = canadian $/GBP.

- Seasonal patterns of exports and imports.
- Exports more during Autumn-winter harvest season. $ appreciated 1.6 to 1.4 per GBP.
- Spring-summer: off-season, $ depreciated to 1.80 per GBP.
- The officials can avoid this economic loss by stabilizing the price at $1.6, the one at which they can sell exactly as much foreign exchange during one season as they buy during the other, exactly breaking even while stabilizing the price.

Source: Pugel (2012), p. 485

Defending exchange rate through official intervention

- Official intervention in the foreign exchange market also changes the country's money supply. (because monetary authority is adding or removing domestic money as it carries out the intervention)
- The authority can use sterilization (การดูดซับสภาพคล่องภายในประเทศ) of the intervention to reverse the effect on the domestic money supply by taking some other action to remove or add the domestic money back to the economy.

Sterilization

- Using monetary policy to offset the impact of official intervention on the domestic money supply.
- For example, government might purchase its own currency to support its exchange value, but then purchase domestic bonds to restore the domestic money supply. The intent is to manipulate currency values without affection the domestic economy.

Exchange Control

- Exchange controls are used by many countries, especially developing countries.
- Exchange controls cause economic inefficiency (deadweight loss) analogous to quantitative limits (quotas) on imports.
- They also incur substantial administrative costs. Efforts to evade them lead to bribery and parallel market.

SURVEYS OF EXCHANGE RATE REGIMES IN THE PAST 140 YEARS

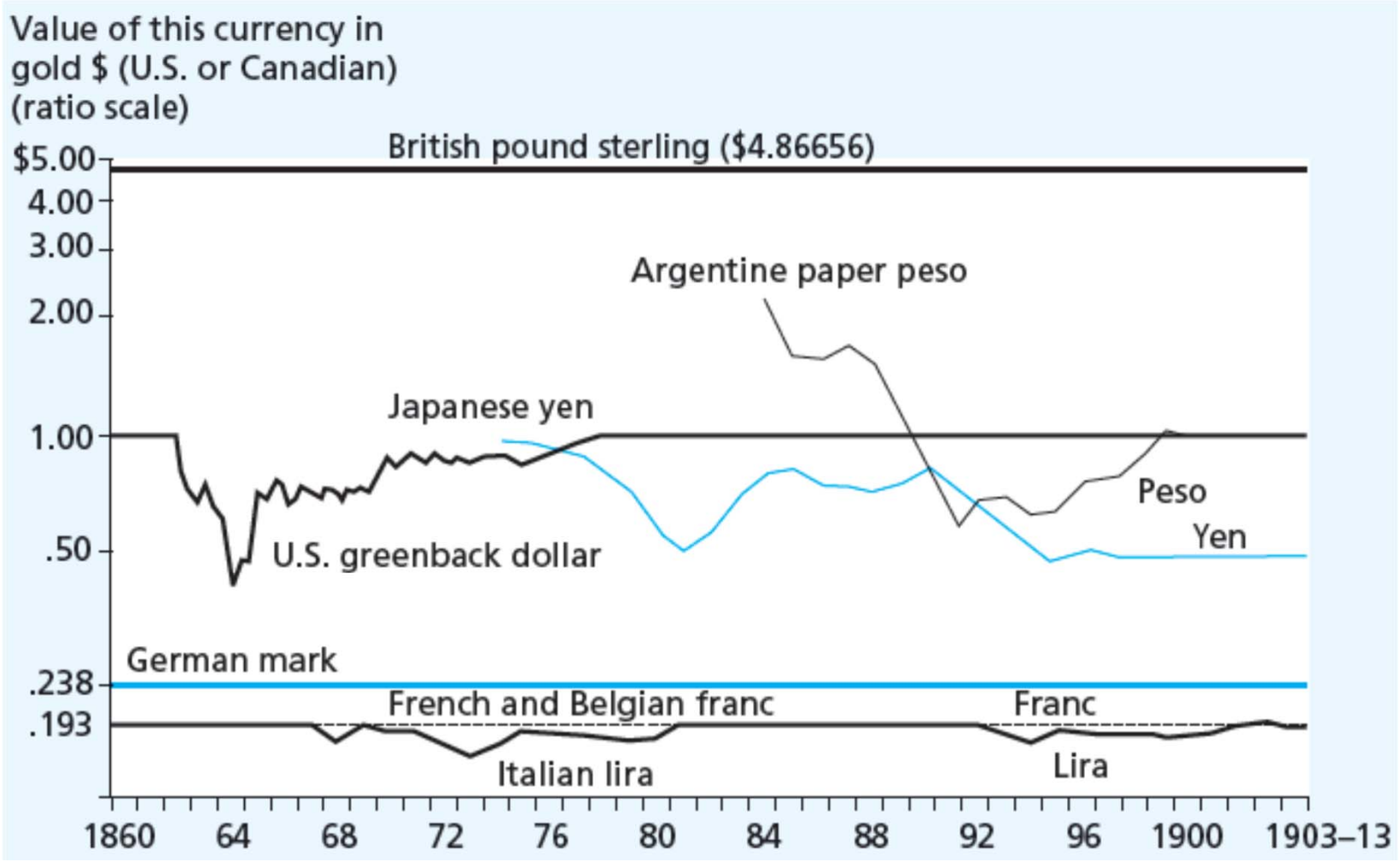
Regimes of the Past 140 years

- Gold Standard Era (1870-1914)
- Interwar Instability
- Bretton Woods (1944-1973)
- Current system

International Currency Experience

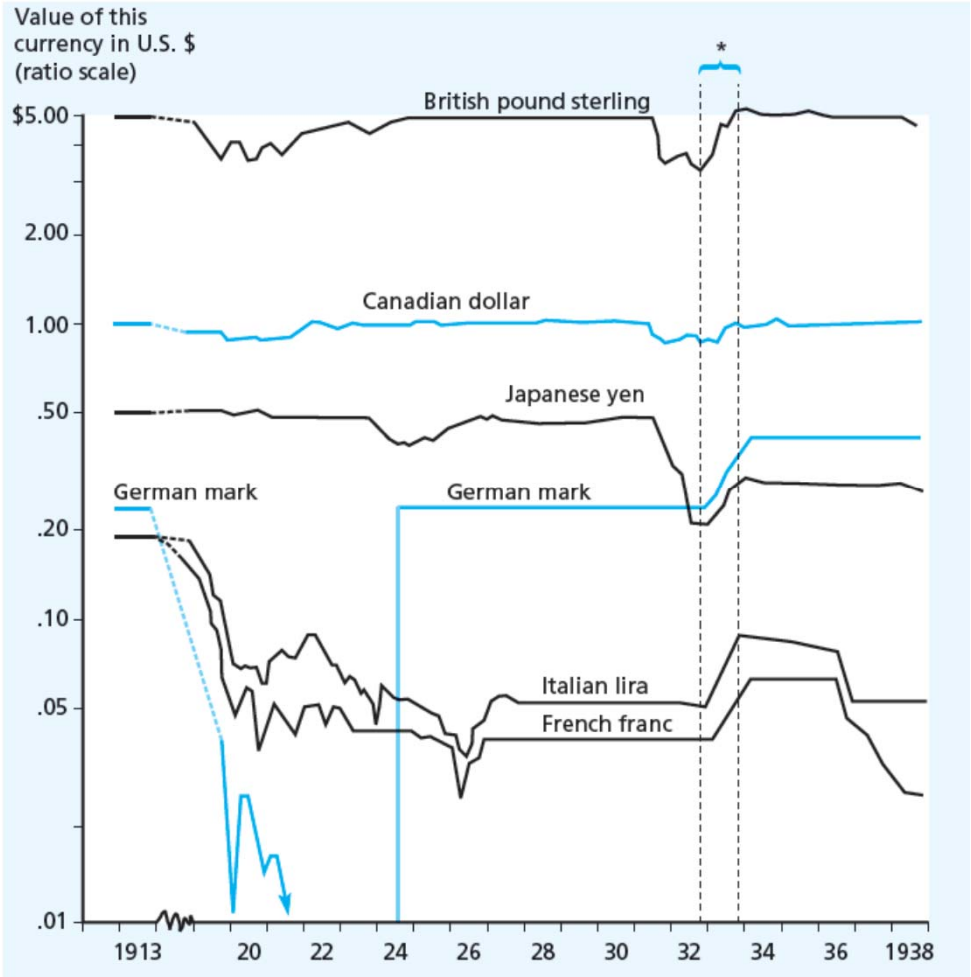
- Gold Standard, 1870-1914
  - Gold value of each currency was fixed
  - Britain was the central country
- Interwar Instability
- Bretton Woods System, 1944-1971
  - Adjustable pegged exchange rates
  - United States and U.S. dollar were at the center
  - Eventual dollar crisis
- Current System
  - A “nonsystem”—countries can choose almost any exchange rate policy
  - Many countries use managed floating exchange rates

Figure 20.6 Selected Exchange Rates, 1860-1913



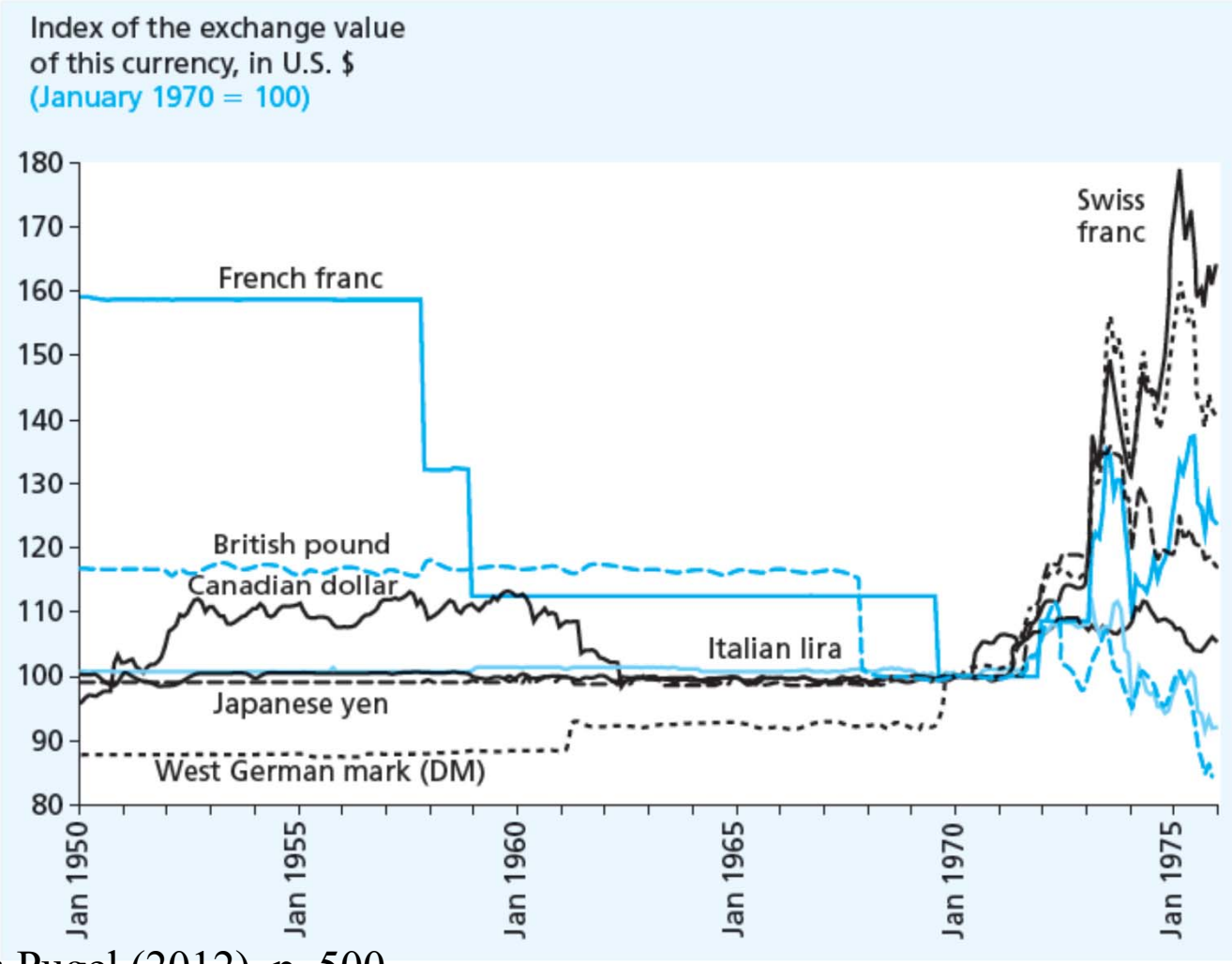
Source: Pugel (2012), p. 494

Figure 20.7 Selected Exchange Rates, 1913, 1919-1938 (Monthly)



Source: Pugel (2012), p. 496

Figure 20.8 Selected Exchange Rates, 1950-1975 (Monthly)



Source: Pugel (2012), p. 500

Gold Standard Era (1870-1914)

- Most countries pegged their currencies to gold, with each central bank willing to buy and sell gold in exchange for its own currency.
- This implies that the exchange rates between currencies are also fixed (within a band resulting from the transaction costs of moving gold).
- Britain was the center of the system.
- The gold standard looked successful because it was not subject to severe shocks (until it was suspended during World War I) and because success was defined leniently, given that governments were not so concerned with stabilizing their macroeconomies.

Inter-war Instability

- The interwar period brought instability. In the years after the World War I Britain made the mistake of attempting to return to its prewar gold parity.
- Germany suffered from hyperinflation, and other European countries also experienced substantial inflation.
- The early 1930s bought turbulence that led to the general abandonment of the gold standard.- Great Depression!!!
- Compared with the gold standard era, exchange rates were quite variable.
- Experts at the time concluded that this experience showed the instability of flexible exchange rates, so that the world should return to fixed exchange rates.
- More recent analysis of this period concludes almost the opposite- that it shows the futility of trying to keep exchange rates fixed in the face of severe shocks and unstable domestic monetary and fiscal policies.
- In addition, recent research shows that the workings of the gold standard contributed to the global spread and the severity of the Great depression.

Bretton Woods Era (1944-1973)

- A compromise between the US and Britain led to an agreement in 1944 that established the Bretton Woods System, a regime of adjustable pegged exchange rates.
- While this system looked successful for almost two decades, it also had two defects.
  - One was that it set up one-way speculative gambles when currencies were in trouble.
  - The second concerned the role of the US dollar in the system. As the system developed, other countries pegged their currencies to the dollar, and the US government was committed to buy or sell gold for dollars with other central bank.
- Continuing US balance of payments deficits in the 1960s led some other countries to amass large holdings of US dollar-denominated assets as official reserves. Confidence that the US government could continue to honor the official gold price dwindled.
- The US government was unwilling to contract the US economy to reduce the US balance of payment deficits. Instead, the private market for gold was freed in 1968 . US payments deficits continued.
- In 1971 the US government suspended convertibility of dollars into gold and imposed a temporary tariff on all imports until other countries agreed to revalue their currencies (so that the dollar would be devalued).
- The Smithsonian Agreement of December 1971 attempted to re-establish the system (with many other currencies being revalued), but the pegged rate system was abandoned by the major countries in 1973.

The current system

- The current system is often described as a system of managed floating exchange rates and the trend is generally in this direction.
- The countries of EU have attempted to create a zone of stability in Europe, first by using the snake within the tunnel, then through Exchange Rate Mechanism of the European Monetary System and now with European Monetary Union and the euro.
- However, a series of exchange rate crises during the 1990s and early 2000s show how difficult it is for a government to defend a fixed or a heavily managed exchange rate in the face of wide swings in speculative international financial flows.
- The actual current system is in many ways a nonsystem- countries can choose almost any exchange rate policies that they want, and there is much variety.

Figure 20.9 Exchange-Rate Arrangements, May 1, 2010

Currency Pegged To[1]

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Use Foreign Currency (no separate local currency)[2]	**Euro Area (use euro as currency)[2]**	**Euro[3]**	**U.S. Dollar[4]**	**Other Currency**	**Currency Basket**	**Crawling Peg[4]**	**Managed Float**	**Free Float**
Andorra	Austria	*ERM II:*	Antigua & Barbuda	Bhutan (Indian rupee)	Algeria	Botswana	Afghanistan	Australia
Ecuador	Belgium	Denmark	Aruba	Brunei Darussalam (Singapore dollar)	Belarus	Costa Rica	Albania	Canada
El Salvador	Cyprus	Estonia	Azerbaijan	Lesotho (S. African rand)	Fiji	Ethiopia	Angola	Chile
Kiribati	Finland	Latvia	Bahamas	Namibia (S. African rand)	Iran	Kazakhstan	Argentina	Czech Republic
Kosovo	France	Lithuania	Bahrain	Nepal (Indian rupee)	Kuwait	Nicaragua	Armenia	Japan
Liechtenstein	Germany	*CFA Franc Zone:*	Bangladesh	Swaziland (S. African rand)	Libya	Uzbekistan	Brazil	Mauritius
Marshall Islands	Greece	Benin	Barbados		Morocco		Colombia	New Zealand
Micronesia	Ireland	Burkina Faso	Belize		Myanmar		Congo, Dem. Rep. of	Norway
Monaco	Italy	Cameroon	Bolivia		Samoa		Egypt	Poland
Montenegro	Luxembourg	Central African Rep.	Burundi		Singapore		Gambia	Somalia
Nauru	Malta	Chad	Cambodia		Solomon Islands		Ghana	Sweden
Palau	Netherlands	Congo, Rep. of	China		Syria		Georgia	Turkey
Panama	Portugal	Cote d'Ivoire	Djibouti		Tonga		Guatemala	United Kingdom
San Marino	Slovak Republic	Equatorial Guinea	Dominica		Tunisia		Guinea	United States
Timor-Leste	Slovenia	Gabon	Dominican Republic		Vanuatu		Haiti	
Tuvalu	Spain	Guinea-Bissau	Eritrea				Hungary	
Zimbabwe		Mali	Grenada				Iceland	
		Niger	Guyana				India	
		Senegal	Honduras				Indonesia	
		Togo	Hong Kong				Israel	
		Other:	Iraq				Kenya	
		Bosnia and Herzegovina	Jamaica				Korea, South	
		Bulgaria	Jordan				Kyrgyz Republic	
		Cape Verde	Lao PDR				Liberia	
		Comoros	Lebanon				Madagascar	
		Croatia	Maldives				Malawi	
		Macedonia	Netherlands Antilles				Malaysia	
		São Tomé & Principle	Oman				Mauritania	
			Qatar				Mexico	
			Rwanda				Moldova	
			St. Kitts & Nevis				Mongolia	
			St. Lucia				Mozambique	
			St. Vincent & the Grenadines				Nigeria	
			Saudi Arabia				Pakistan	
			Sri Lanka				Papua New Guinea	
			Suriname				Paraguay	
			Tajikistan				Peru	
			Trinidad & Tobago				Philippines	
			Turkmenistan				Romania	
			United Arab Emirates				Russia	
			Venezuela				Serbia	
			Vietnam				Seychelles	
							Sierra Leone	
							South Africa	
							Sudan	
							Switzerland	
							Tanzania	
							Thailand	
							Uganda	
							Ukraine	
							Uruguay	
							Yemen	
							Zambia	

Source: Pugel (2012), p. 506