THE UNIVERSITY OF QUEENSLAND
AUSTRALIA
CREATE CHANGE

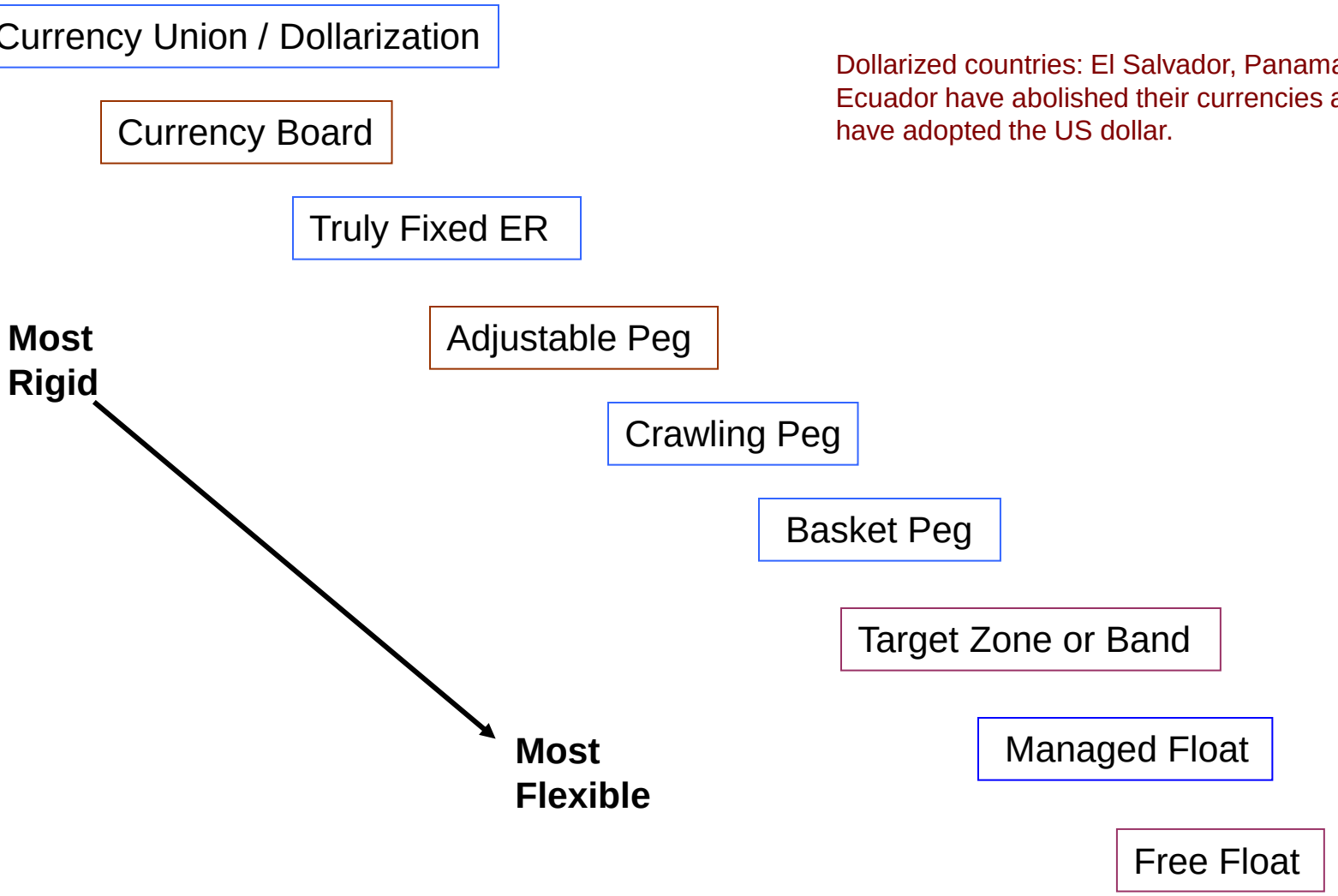
Lecture 2: International Monetary System & Balance of Payments

Reading: Eun & Resnick Chs. 2 & 3 (10th ed.)

International Monetary System

- The international Monetary System is a set of rules that governs international payments
- Historical Overview of exchange rate mechanisms
  - Classical Gold Standard: 1875 – 1914
  - Bretton Woods System: 1945 – 1972
  - Floating Exchange Rate Regime: 1973 – Present
  - European Monetary Union: 1979 – Present
- The system, or ***regime***, is classified as either a ***fixed, floating,*** or ***managed exchange rate regime***
  - The rate at which the currency is fixed, or pegged, is frequently referred to as its ***par value***
  - If the government doesn't interfere in the valuation of its currency, the currency is classified as ***floating*** or ***flexible***

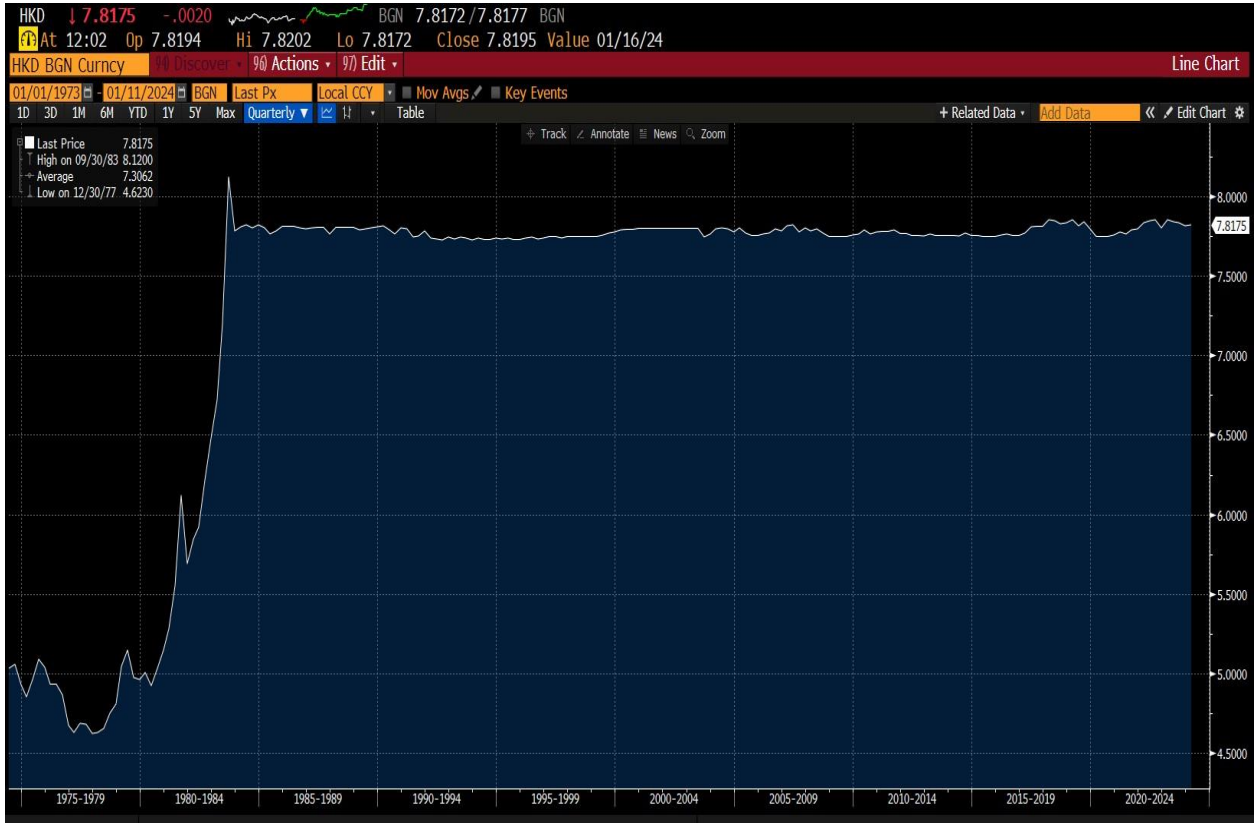
Prevalent Exchange Rate Systems



Dollarized countries: El Salvador, Panama and Ecuador have abolished their currencies and have adopted the US dollar.

Currency Board: The Case of Hong Kong

Currency Board: HKD per USD



Source: Bloomberg Jan. 11, 2024

Fixed Exchange Rate System

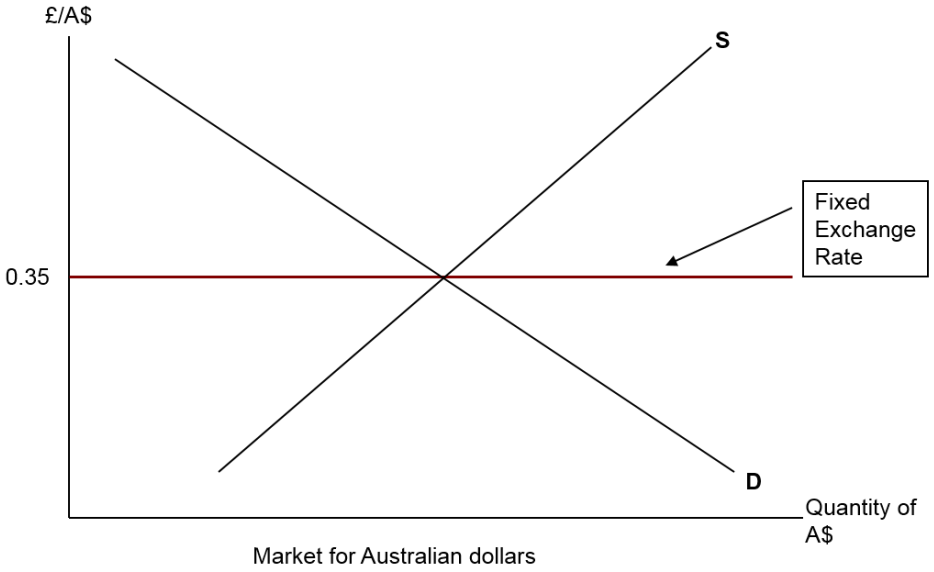


Figure 1

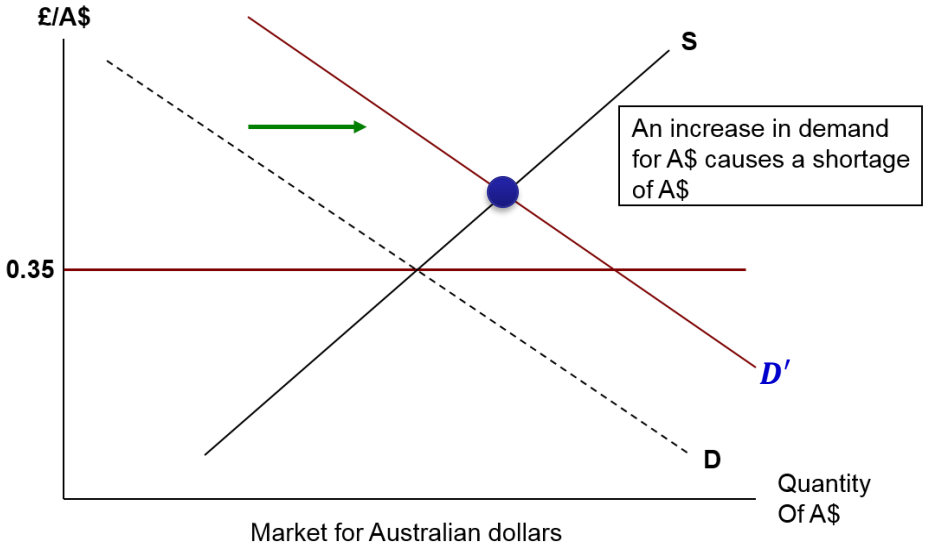


Figure 2

£0.35/$ is referred to as the “par value”

i.e., AUD is fixed relative to GBP (anchor currency) at £0.35/$.

Fig 2: The exchange rate is “undervalued” at the par value of £0.35/$.

Fixed Exchange Rate System (1)

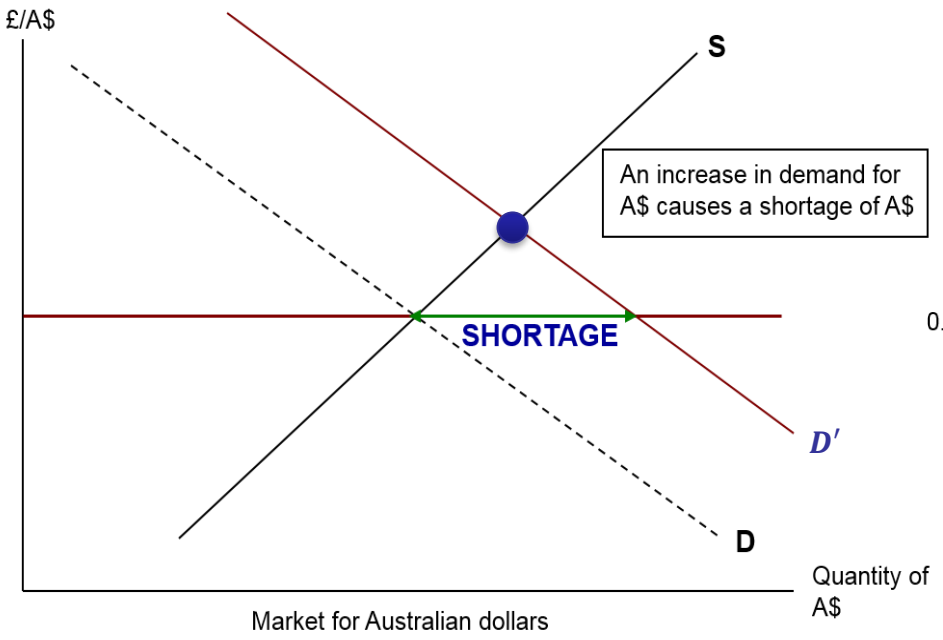


Figure 2

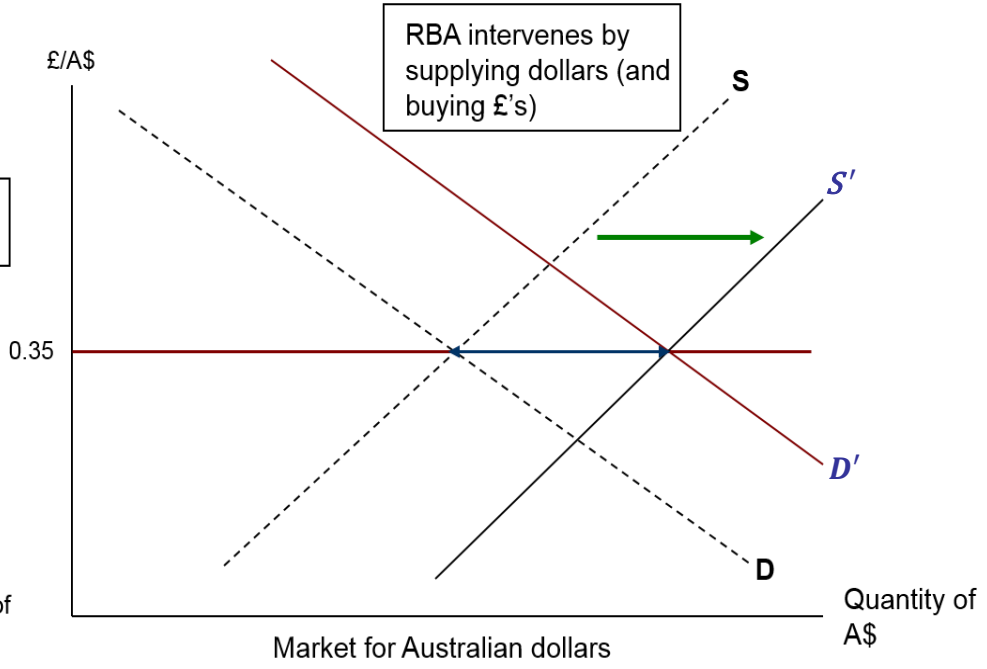
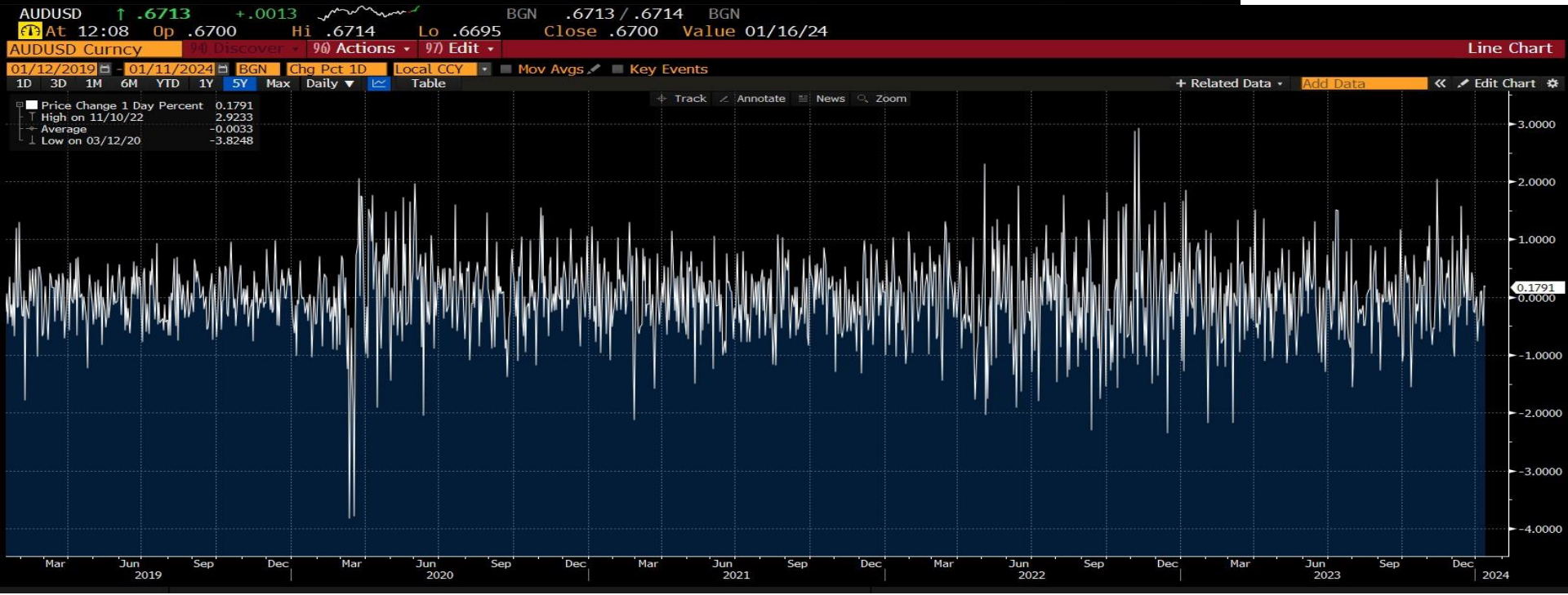


Figure 3

The Floating Exchange Rate (post 1973)

- Under the floating rate system, the exchange rate is determined entirely by forces of supply and demand
- The system that prevailed was not quite “freely floating”
- Central banks had the obligation to intervene to prevent “disorderly conditions”
- Capital controls were abolished and access to the US capital market was allowed
- Monetary and macro-economic policies were independent to that of US

AUDUSD



Source: Bloomberg Jan. 11, 2024

Advantages of Fixed Vs. Floating

Advantages of a Fixed ER

1. Reduce transaction costs and exchange rate risk which can discourage trade and investment
2. Provide a credible nominal anchor for monetary policy (importing credibility)
3. Transparency of the Regime

Advantages of a Float

1. Ability to pursue an independent monetary policy
2. Ability to use monetary policy to respond to recessionary effects on the economy

Attributes of the "Ideal" Currency

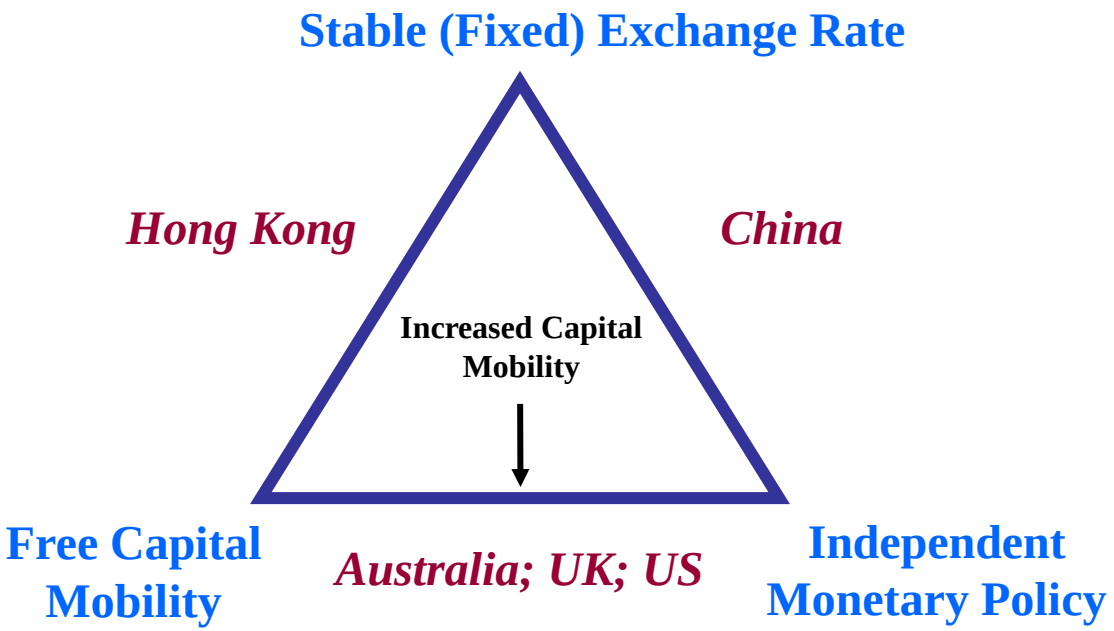
- **Exchange rate stability**
- **Full financial integration (free flow of capital)**
- **Monetary independence (of domestic policies)**

"The Impossible Trinity"

A country must **give up** on one of the three goals.

- Exchange Rate Stability
- Monetary Independence
- Free Capital Mobility

} *Cannot have all three simultaneously*



The Balance of Payments (BOP)

- The BOP is a statistical record of the **flow** of all of the payments between the residents of a country and the rest of the world in a given year.
  - Multinational businesses use various BOP measures to gauge the growth and health of specific types of trade or financial transactions by country and regions of the world against the home country
  - Monetary and fiscal policy must take the BOP into account at the national level---the BOP gives indications of the demand and supply of a country's currency.

Economic data

2 of 2

	Current-account balance % of GDP, 2023†	Budget balance % of GDP, 2023†	Interest rates 10-yr gov't bonds latest,%		change on year ago, bp	Currency units per $ Feb 14th	% change on year ago
United States	-3.0	-6.3	4.3		50.0	-	
China	1.7	-3.8	2.4	§§	-37.0	7.19	-5.2
Japan	3.9	-5.0	0.8		24.0	151	-11.8
Britain	-2.9	-3.9	4.1		62.0	0.80	2.5
Canada	-0.4	-1.3	3.6		37.0	1.36	-1.5
Euro area	2.4	-3.3	2.3		-11.0	0.93	nil
Austria	1.6	-2.2	2.9		-19.0	0.93	nil
Belgium	-1.1	-4.3	2.9		-6.0	0.93	nil
France	-1.1	-4.9	2.9		3.0	0.93	nil
Germany	5.6	-2.2	2.3		-11.0	0.93	nil
Greece	-5.7	-2.1	3.4		-92.0	0.93	nil
Italy	0.5	-5.4	3.8		-39.0	0.93	nil
Netherlands	9.4	-2.1	2.6		-11.0	0.93	nil
Spain	2.0	-4.0	3.3		4.0	0.93	nil
Czech Republic	-1.3	-3.9	3.8		-90.0	23.7	-6.8
Denmark	10.5	2.2	2.4		-18.0	6.95	nil
Norway	17.2	10.6	3.8		66.0	10.6	-4.2
Poland	1.7	-4.7	5.4		-81.0	4.05	10.1
Russia	2.5	-1.9	12.0		123	91.7	-19.7
Sweden	5.4	-0.3	2.5		2.0	10.5	-1.6
Switzerland	10.9	-0.7	0.9		-49.0	0.89	3.4
Turkey	-4.4	-5.0	23.8		1,269	30.8	-38.8
Australia	0.5	0.7	4.1		51.0	1.54	-7.1
~~Hong Kong~~	~~7.2~~	~~1.7~~	~~3.8~~		~~26.0~~	~~7.82~~	~~0.4~~
India	-0.5	-5.9	7.1		-26.0	83.0	-0.3
Indonesia	0.4	-2.5	6.6		-7.0	15,594	-2.8
Malaysia	1.5	-5.1	3.9		-3.0	4.79	-9.2
Pakistan	0.2	-8.0	14.5	†††	-27.0	279	-4.2
Philippines	-4.1	-7.1	6.3		-6.0	56.1	-2.3
Singapore	18.7	-0.7	3.1		-4.0	1.35	-1.5
South Korea	2.1	-2.7	3.5		11.0	1,335	-4.9
Taiwan	13.2	-0.1	1.2		3.0	31.4	-3.6
Thailand	0.8	-2.7	2.8		10.0	36.1	-6.5
Argentina	-3.5	-6.0	na		na	834	-77.0
Brazil	-1.2	-7.5	10.8		-268	4.97	3.8
Chile	-3.4	-2.4	5.5		-21.0	958	-17.7
Colombia	-3.4	-4.2	9.6		-266	3,915	22.8
Mexico	-1.5	-3.9	9.2		28.0	17.1	8.7
Peru	-1.0	-2.7	6.7		-116	3.87	-0.3
Egypt	-1.1	-6.3	na		na	30.9	-1.0
Israel	5.8	-4.1	4.3		85.0	3.66	-3.8
Saudi Arabia	2.7	-2.1	na		na	3.75	nil
South Africa	-2.0	-5.2	10.1		26.0	19.1	-6.0

Source: Haver Analytics. §§5-year yield. †††Dollar-denominated bonds.

Source: The Economist, Feb 15, 2024

Fundamentals of BOP Accounting

- Transactions are recorded on the basis of **double entry bookkeeping** – by definition it has to balance
  - Every “source” must have a “use”

- BOP is a statement of flows, thus like a cash flow statement, not a balance sheet.

- Every economic transaction recorded as a credit brings about an equal and offsetting debit entry.

Accounting Principles

- Any transaction resulting in a payment to foreigners is entered in the BOP accounts as a **debit** and is given a *negative sign*.

- Any transaction resulting in a receipt from foreigners is entered as a **credit** and given a *positive sign*.

- To reiterate, every international transaction automatically enters the BOP twice, once as a credit and once as a debit
  - If you buy something from a foreigner, you have to pay for it, and the foreigner has to either spend or store your payment.
  - Examples of these paired transactions will be covered in the tutorial.

The Current Account (CA)

- It is record of a country's trade in goods and services and of unilateral transfers.
- It is divided into several sub-categories:
  - Merchandise Trade: physical goods like beef, cars etc.
  - Services: tourism, education, shipping and finance etc.
  - Primary Income ("investment income"): interest income, dividends etc.
  - Secondary Income ("unilateral transfers"): Foreign aid, pensions to retired people abroad, wages repatriated etc.
- The sum of the sub-categories = **CA balance**

CA = Exports (X) – Imports (M)

The Australian Current Account

Quarter	Exports (Goods)	Imports (Goods)	Trade Balance	Net Services	Primary income	Secondary income	CA Balance
Mar-2019	90435	-76566	13869	2616	-17590	-666	-1771
Jun-2019	100489	-79069	21420	-2727	-13790	-111	4792
Sep-2019	102364	-81982	20382	-2037	-15559	-2	2783
Dec-2019	97469	-84596	12873	387	-12117	136	1279
Mar-2020	91683	-73434	18249	1458	-12240	-485	6983
Jun-2020	91533	-72062	19471	4467	-4905	-869	18164
Sep-2020	84959	-77111	7848	4231	-5224	-363	6492
Dec-2020	95722	-83556	12166	3905	-2016	-304	13751
Mar-2021	99782	-78028	21754	4337	-8600	-655	16836
Jun-2021	115372	-82713	32659	1905	-6857	-1710	25996
Sep-2021	121294	-87150	34144	467	-18001	-398	16212
Dec-2021	122110	-96279	25831	-1979	-17845	-326	5681
Mar-2022	131196	-99089	32107	-3070	-26762	-1056	1219
Jun-2022	157444	-105625	51819	-5917	-25553	-1192	19157
Sep-2022	150507	-114946	35561	-8438	-35882	-106	-8866
Dec-2022	155668	-114454	41214	-3385	-23744	-14	14070
Mar-2023	144450	-104621	39829	1947	-31698	-593	9485
Jun-2023	139981	-105898	34083	-2006	-17439	-826	13813
Sep-2023	134290	-112034	22256	-3098	-26326	-352	-7520

source: http://www.abs.gov.au

Balance on goods & services

22256+(3908)+(26326)+(352)

The Current Account (cont.)

- Current Account Deficit: $M > X \rightarrow CA < 0$

- Current Account Surplus: $M < X \rightarrow CA > 0$

➔ ***Current Account Balance = Change in Net Foreign Wealth/Assets***

Implication: *A country with a CA deficit must be increasing its net foreign debts by the amount of the deficit*

The Financial Account (KA)*

- It includes all short- and long-term financial transactions pertaining to both international trade and flows associated with portfolio shifts (stocks, bonds etc.)

KA = Capital Inflow (cr) – Capital outflow (dr)

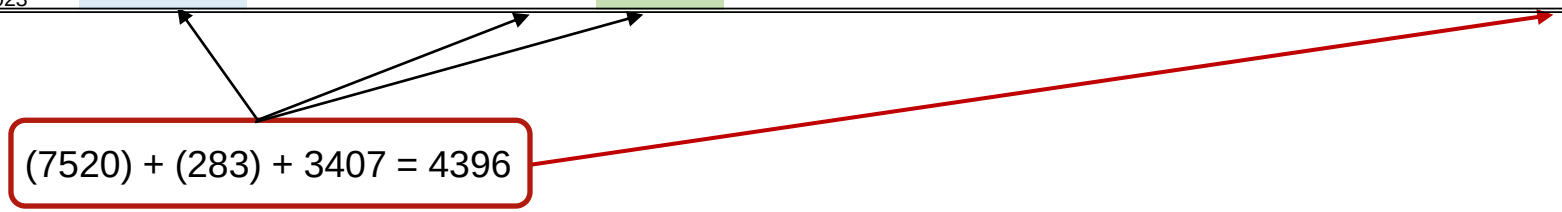
- The two main categories:
  - Portfolio investment
  - Direct investment (takeover or acquiring a substantial portion of a foreign company, i.e., > 10%)
- **KA balance** = Sum of portfolio investment ***and*** direct investment +

- The ABS classifies Portfolio/Direct investment in the **Financial Account** and this records transactions in foreign financial assets and liabilities (such as shares, bonds and loans) between residents and non-residents.
- There is also another account, the **Capital Account** and this account records "purchase/sale of non-produced, non-financial assets and capital transfers".

The Financial Account

Quarter	CA Balance	Capital & Financial Account	Capital Account	Financial Account	Direct Investment	Portfolio Investment	Financial Derivatives	Other Investment	Reserve Assets	Net Errors & Omissions
Mar-2019	-1771	5324	-200	5524	2801	-15554	-723	20846	-1846	-3553
Jun-2019	4792	-6278	-233	-6045	24606	-41966	-2380	10702	2992	1486
Sep-2019	2783	-6274	-189	-6085	17687	-2901	2021	-26430	3538	3490
Dec-2019	1279	848	-174	1022	-2204	15842	-5815	2311	-9111	-2128
Mar-2020	6983	-8124	-534	-7590	7284	-14135	-3911	2140	1033	1141
Jun-2020	18164	-15803	-218	-15585	7766	1063	-450	-47027	23063	-2361
Sep-2020	6492	-9720	-165	-9555	-3588	23030	-7590	-21913	507	3227
Dec-2020	13751	-17844	-156	-17688	968	-14074	-10704	5341	781	4093
Mar-2021	16836	-13912	-182	-13730	12181	-53024	1512	31066	-5465	-2925
Jun-2021	25996	-21966	-261	-21705	5411	-26754	-2531	1415	754	-4030
Sep-2021	16212	-12911	-163	-12748	-3570	-19826	472	27555	-17378	-3301
Dec-2021	5681	-9981	-42	-9939	13607	-12013	-5067	-4748	-1717	4299
Mar-2022	1219	-6137	-186	-5951	-55143	39108	-2805	13488	-599	4919
Jun-2022	19157	-15225	-211	-15014	-5120	47253	-1774	-54911	-462	-3931
Sep-2022	-8866	4899	-239	5138	4397	7960	5990	-11487	-1721	3967
Dec-2022	14070	-9095	-194	-8901	-20962	17514	-9961	5463	-956	-4975
Mar-2023	9485	-9781	-202	-9579	1893	707	-5478	-3904	-2798	296
Jun-2023	13813	-17137	-281	-16856	1259	-20425	-4763	6963	110	3325
Sep-2023	-7520	3124	-283	3407	1524	-5660	-3300	10220	624	4396

source: http://www.abs.gov.au



The Other Accounts

- Official Reserves: Total reserves held by official monetary authorities within a country (RBA in Australia).
  - These reserves are typically comprised of major currencies that are used in international trade and financial transactions, gold and reserve accounts (SDRs) held at the IMF.
  - Important account for fixed-rate regime countries (i.e., HK).
  - For floating rate regime countries, such as the U.S. and Australia, official reserves are relatively unimportant.

- Net Errors and Omissions: Account is used to account for statistical errors and/or untraceable monies within a country

In Sum, …

A. Current Account

A. Net exports/imports of goods and services (Balance of Trade)

B. Net Income (investment income from direct portfolio investment plus employee compensation) – This captures Primary and Secondary Income classification that the ABS now uses

C. Net transfers (sums sent home by migrant and permanent workers abroad)

B Capital Account

Capital transfers related to purchase and sale of fixed assets such as real estate

C. Financial Account

A. Net foreign direct investment

B. Net portfolio investment

C. Other financial items

D. Net Errors and Omissions

Missing data such as illegal transfers

E. Reserves and Related Items

Changes in official monetary reserves including gold and foreign exchange reserves

Σ (A:E) = Overall Balance

The Balance of Payments

- Assuming change in official reserves and errors are approximately zero:

Current Account = (-) Financial Account

This will hold **approximately** for floating rate countries.

Summary so far

- The two major sub-accounts of the BOP, the Current and Capital/Financial Account, summarize the current trade flows and international capital flows of a country.

- The Current and Capital/Financial Account are typically inverse on balance, one in surplus while the other experiences deficit.

- Although most nations strive for Current Account surpluses, it is not clear that a zero balance or a surplus on the Current Account is necessarily desirable.

Linking CA to National Income

$$Y = C + I + G + (X-M)$$

$$Y = C + I + G + CA$$

$$Y - (C + I + G) = CA$$

- Y = National **Income**
- C + I + G = Domestic Residents **Spending** / Absorption
- CA = excess of spending over income earned (Income – Spending)
- CA Deficit → CA < 0 → Borrowing from Abroad to finance domestic spending
- CA Surplus → CA > 0 → Lending Abroad

Other ways of thinking of this

National Saving = S = Y – C – G

Y – C – G = I + CA

S = I + CA

S = Domestic Investment (I) + Net Foreign Investment (CA)

Savings, Investment & the CA

- Macro identities for a country:
  - National Income = Consumption + Savings
  - National Spending = Consumption + Investment
  - ➢ National Income – National Spending

= [~~Consumption~~ + Savings] – [~~Consumption~~ + Investment]

= Savings – Investment

= Net foreign investment

- If a country's income exceeds its spending, savings will exceed domestic investment, yielding surplus capital.

  This surplus capital will be invested overseas and will be reflected as a financial account deficit for that country (more capital is flowing out of the country than into it).

Savings, Investment & the CA (2)

Conversely:

- If National **Investment** < National **Saving**, then
  Net foreign investment > 0

- **Implication:** If a country's spending ***exceeds*** its income, domestic savings is not enough to fund domestic investment, the country will need to import capital. This deficit of capital will come from overseas and will be reflected as a financial account surplus for that country.

- The link between the financial and current account:
  - National Income – National spending = Exports – Imports
  - Savings – Investment = Exports – Imports

CA & Government Deficits

- Government budget deficits and current account deficits:
  - National spending (NS) = Household (HH) spending + Private investment (PI) + Govt. spending
  - HH spending = National Income – Private Savings – Taxes
  - So, National spending = [NI – PS – T] + PI + Govt. Spending

NI – NS = **(PS – PI) + (Taxes – Govt. spending)**

= Savings surplus + Govt. surplus

= Exports – Imports (i.e., CA balance)

- Current account *deficit* implies private savings + govt. budget is in deficit

The Implications

- A current account deficit means a country is ***not*** saving enough to finance its domestic investment + government budget deficit

- A current account deficit represents a collective national decision to consume and invest ***more*** than the nation is producing.

Are CA Deficits Sustainable?

- A growing economy can expect to run a current account deficit

  Countries that have large investment opportunities can run large current account deficits. Sometimes it makes sense to borrow abroad temporarily.

- The absolute level of both savings and investment are important

  A CA deficit caused by low savings (high consumption spending) is *less* likely to be sustainable than a CA deficit because of high investment (recall CA balance = S – I)

  This is because higher investment increases future production capacity and the ability to pay back foreign liabilities

- Composition of Investment Spending is important

  The more the investment is in traded goods, then more likely to generate trade surpluses.

- The manner in which CA deficits are financed is what matters