



Australia's trade and financial flows

- Value, composition and direction of Australia's trade and financial flows
 - trends in Australia's trade pattern
 - trends in financial flows – debt and equity

Chapter 5

VCD TRADE AND FINANCIAL FLOWS



Overview

Remember that a key construct in the Year 12 course is the relationship between **trade** and **financial flows**. Trade involves the sale of goods and services (**exports** and **imports**), and financial flows involves flows of **money** - specifically:

- **debt flows** (a loan, interest payments and then repayment of the loan),
- **equity flows** (purchase of assets (including shares), dividend flows, and perhaps the sale of the asset), and
- **other financial flows** (foreign aid, foreign workers sending money home etc).

These trade and financial flows are important in the Australian context for two reasons.

Firstly, X, M and I are all components of AD ($C + G + X - M$), and will therefore impact the level of GDP via a shift in the AD curve in an ADAS diagram. Since economic growth is the most important economic objective, this is significant. Secondly, imbalances between the level of exports and imports may prove unsustainable, where for example a country has had to borrow from overseas in order to afford to purchase the imports which may be far higher than their exports. In this way, the level of trade and financial flows will affect economic growth (and external stability), and will affect the external stability of an economy (the ability of that economy to meet their financial obligations to the rest of the world).

There are a range of global, and domestic factors which impact Australia's trade and financial flows. One way of examining those influences, and their impact on the economy, is by considering the **value**, **composition** and **direction** of trade and financial flows, which is the subject of this chapter.

A SMALL OPEN ECONOMY

In the global economy, Australia is a relatively small economy (ranked 18th by forecast 2021 GDP (purchasing power parity) at US\$1.4 trillion: IMF World Economic Outlook Apr 2021), and is a relatively open economy. "Open" refers to the extent to which an economy trades with the rest of the world. Total imports and exports are 44.0% of GDP in Australia, compared to the United States 26.3%, and Brasil 32% (2020, 2019, data.worldbank.org). As a small, open economy it follows that Australia's aggregate demand will be significantly influenced by the prices, and volumes, of trade and financial flows in our relationship with the rest of the world. To understand those influences on trade and financial flows we analyse **value** (V), **composition** (C) and **direction** (D) (VCD).

Be careful

When talking about trade flows here we are not talking about the movement of the goods, but the movement of the **money to pay for the goods**. So even though an imported good comes into Australia, as economists you are concerned with the flow of the money, so an import is actually a trade flow where the money **leaves** Australia.

VCD

This is a shorthand way of referring to **value** (the dollar value of exports and imports), **composition** (the types of goods being exported and imported), and **direction** (where the imports are coming from and the exports going to). This construct of analysis is used in Topic 2 in relation to VCD of Australia's trade and financial flows, and in Topic 1 in relation to the VCD of global trade and financial flows.

RBA resources

As part of its commitment to, and investment in, education, the RBA has produced some excellent explanatory resources in relation to a range of economic concepts.

These can easily be located by googling RBA education.

Students should read the Explainer on:

- Trends in Australia's Balance of Payments



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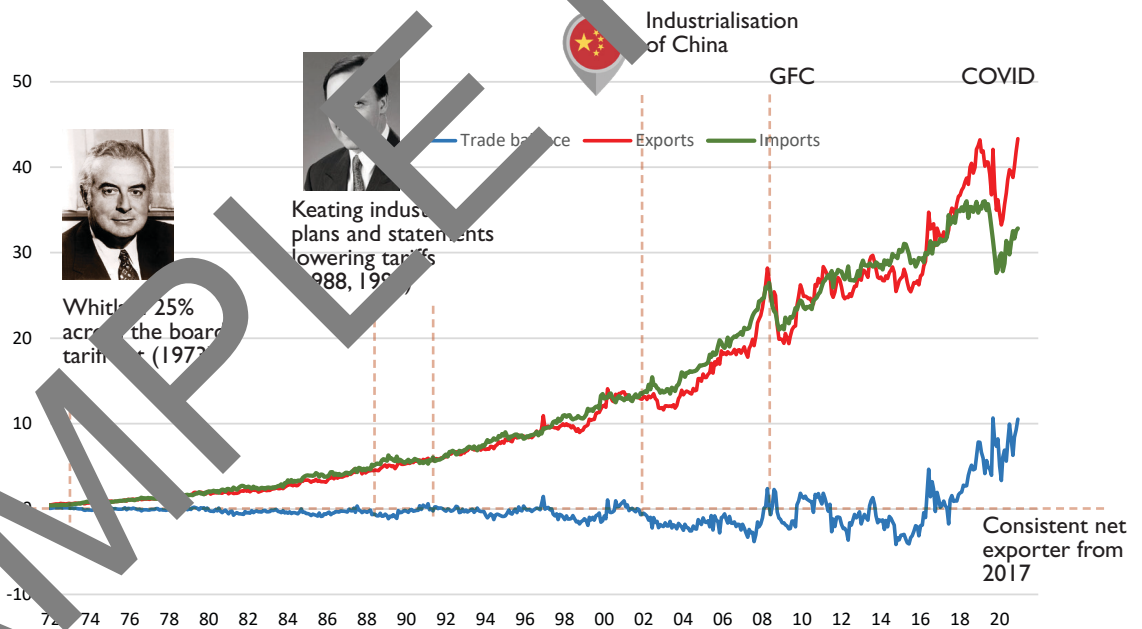
TRADE FLOWS - VCD XM

Trade flows refers to money paid for **exports** and **imports** of goods and services between Australia and other economies. Note that goods are tangible (can be touched, like iron ore) whereas services are intangible (cannot be touched, like tourism). Students often find conceptual difficulty referring to inbound tourism to Australia, or fees paid by foreign students to study in Australia, as exports. Both are important services exports for Australia - **a payment by foreigners** for the receipt by them of a service.

Value (the payment for the goods)

The first consideration is what has happened to the value of Australia's exports and imports. Remember, since the 1970s Australia has been impacted by two very significant factors in the trade arena. First, the reduction in Australia's previously significant level of protection of Australian manufacturers in the forms of tariffs and quotas (trade liberalisation). Second, the industrialisation of Asian economies, and China in particular since 2002, has significantly impacted demand for our commodities (iron ore, coal, LNG) which has impacted the value of exports.

FIGURE 5.1: Export & Imports (monthly / \$b)



Source: ABS 5368 Table 1.

As indicated in Figure 5.1, the value of both exports and imports has significantly increased since the 1970s (monthly exports \$43b and monthly imports \$33b (June 2021) up from \$0.5b and \$0.5b in 1971) both in response to the reduction in tariffs (increasing imports), and the impacts of globalisation and the industrialisation of Asian economies impacting our commodity exports. Note that on a net basis (that is exports minus imports), for most of this period Australia has had a **trade deficit**, that is, imports have been greater than exports (the grey line). However, recent trends as a result of both increased resource exports and services exports with the depreciation of the Australian dollar has seen both **record monthly exports**, and **record trade balance** (exports - imports). Also notice that the line of net exports is not straight - it is cyclical in nature reflecting the cyclical demand for our exports (and climate factors), and our cyclical demand for imports.

Terms of trade

The quantity of Australian dollars (AUD) that we receive for our exports, and the quantity of AUD that we pay for our imports depends upon both the **volume** of the goods and services (the quantity) and also the **prices** received and paid for those goods and services. In this way, the value of exports and imports can change depending upon both the demand for imports and exports, and also depending upon the **prices** received and paid for those goods and services.

In the same way as a price index is used to track changes in consumer prices (the Consumer Price Index (CPI) used to calculate inflation), price indexes are maintained for the prices of goods and services that we export, and the prices of goods and services that we import. Those two price indexes are called the **Export Price Index**, and the **Import Price Index** respectively. This provides two indexes - one for exports and one for imports. To be able to take an overall view of what is happening to trade prices, a further index, called the **Terms of Trade**, is created by dividing the Export Price Index by the Import Price Index and multiplying by 100.

The Terms of Trade is therefore a measure of the relative **prices** received for exports compared to the **prices** paid for imports. You can think of the terms of trade as a **trade prices index** (it would actually be less confusing for students if it was called the trade prices index, but all economies call it the terms of trade, thanks to American economist Frank Taussig who defined it that way in his 1927 book, *International Trade*. Blame him.).

If the index (the Terms of Trade) is going up it is called an **improvement** in the terms of trade, and could result from EITHER an increase in export prices (the Export Price Index) or a decrease in import prices (the Import Price Index). On the other hand, if the Terms of Trade is going down it is called a **deterioration** in the terms of trade, and could result from EITHER a decrease in export prices (the Export Price Index) or an increase in import prices (the Import Price Index).

Generally speaking, because Australia's exports are dominated by commodity exports in relation to which Australia is a price taker (i.e. the market, not Australia, sets the price), if the terms of trade improves this will result in an increase in export revenue (reflecting increased demand), and a deterioration in the terms of trade will result in a decrease in export revenue. The terms of trade is a key indicator for Australia's export earnings, and generally the value of the Australian dollar (the exchange rate) will track movements in the terms of trade (an improvement in the TOT results in an appreciation of the AUD, a deterioration in the TOT results in a depreciation of the AUD).

There have been very substantial changes in Australia's terms of trade since 2002, especially since the industrialisation of the Chinese economy. As that occurred, China needed to produce steel, which in turn needs iron ore to be smelted into steel during the production process. China does not have sufficient high quality iron ore, and therefore the increased demand for iron ore by China in global markets significantly increased the prices of commodities (iron ore, coking coal) resulting in a very significant improvement in Australia's terms of trade to 140 year record highs.

This improvement in the terms of trade then resulted in the mining investment booms (mining companies in Australia investing in increased infrastructure and capital equipment), influenced Australian monetary policy, appreciated the AUD, and resulted in increased exports - specifically larger and larger quantities of commodities being shipped at higher prices.



Simulator
TOT

Terms of Trade

A measure of the relative prices of exports and imports.

It is calculated as the export price index divided by the import price index times 100.

If the terms of trade improves we can purchase more imports in exchange for the same volume of exports as a result of the changes in relative prices.

Commodity

A raw material or primary agricultural product that can be bought and sold, such as iron ore, coal or LNG (liquefied natural gas).



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Terms of trade bounce

According to Treasury (Budget Paper No.1 2018/19 Budget) Australia's high grade iron ore became increasingly attractive to China's steel mills resulting in both higher quality production, and importantly less energy and pollution emissions required to convert to steel. Australia remains the world's largest exporter of iron ore - with a large share of the high grade ore market, the increase in price of which resulted in the terms of trade bounce as the Chinese government introduced measures to reduce industrial pollution.

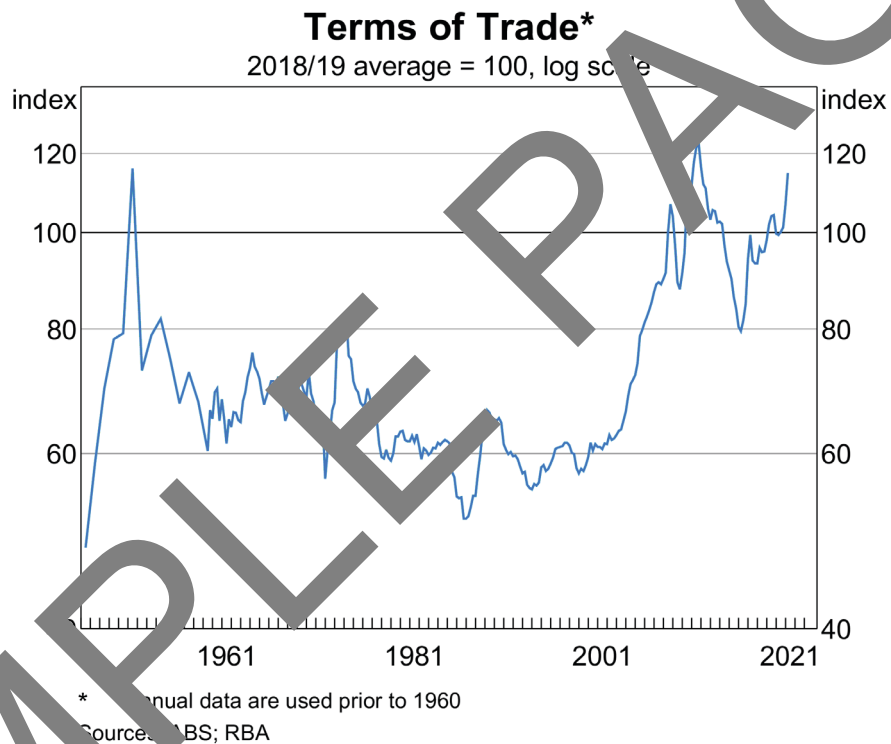
Later, as a result of two major dam failures associated with large iron ore mines in Brasil (including Vale's Brucutu mine), a reduction in global supply of iron ore saw the iron ore price rise significantly since November 2018.

Added to that, higher oil prices feed in to a higher LNG price as long term supply contracts are price linked to price of oil, following vast expansion of LNG production capacity, Australia in the medium term is becoming the world's largest exporter of LNG, and any increase in the oil price feeds improvement in the terms of trade. Of course, oil prices have been extremely volatile in the COVID period, with consequent impacts on LNG prices and volumes.

Recent history of the Terms of Trade

As indicated in the RBA chart below, following the industrialisation of China from around 2002 there was a very significant increase in Australia's terms of trade following a long, slow period of decline from the 1950s (the peak being the Korean war wool boom). This type of decline, persisting over a very long period, is referred to in economics as a **secular decline**. This secular decline in the terms of trade then changed, interrupted by the GFC in 2008/9, rising to 140 year record highs in 2012 before a deterioration in the terms of trade principally as a result of increased supply coming on line (more volumes were sold, but at lower prices). More recently there has been a marked bounce in the terms of trade (see sidebar).

FIGURE 5.2: History of the Terms of Trade



These changes in the terms of trade had significant implications for the VCD of Australia's exports and imports. The reason that the TOT improved was the significant increase in demand for commodities - so Australia was therefore shipping increased quantities of commodity exports (iron ore, coal) at higher prices, resulting in a **significant** increase in the **value** of mineral exports. Additionally, as those mineral exports were predominantly to China and other south east Asian nations, this movement in the TOT also resulted in a change in the **direction** of Australia's exports - which is measured by the percentage share of the value of Australia's exports that go to particular countries.

Additionally, the TOT improvement led to the mining investment boom (to expand mining and gas capacity and infrastructure) and half of all of the mining investment was spent in imported goods and services (i.e. imported engineering and construction services) so the mining investment boom also had an impact on the VCD of imports. As we will see later, when we consider financial flows, significant funds were sourced from overseas and borrowed to fund the construction of the mining and gas projects, resulting in significant inbound financial flows, especially debt (loan) financial flows.

Snapshot of VC of Australia's Trade

Below is a snapshot of the value and composition of Australia's Trade, sourced from the ABS publication 5302, tables 6-9 for the **year ended 30 June 2021**. Note that:

- mining exports dominate goods exports (\$299.6b of \$395.9b), with services exports \$61.3b of total exports of \$457.2b (13% down from 20% in 2019/20)
- non rural commodities and rural commodities dominate goods exports \$309.8b of \$395.9b (78%)
- total exports are larger than total imports (\$89.1b), with goods exports greater than imports, and services exports greater than imports
- the largest services exports are tourism (\$27.3b) and education related travel (\$2.6.7b) - that is foreign tourists visiting Australia, and foreign students attending Australian universities and educational institutions. Inbound and outbound tourism were dramatically impacted by COVID related border closures.

ABS 5302

Released quarterly.

Students should google ABS 5302 and download updated statistics throughout the year.



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EXPORTS		IMPORTS		
Non rural goods		Intermediate goods		
Mining (incl non monetary gold)	299.6	Inputs to production	118.0	
Machinery/transport		Non monetary gold	8.5	
Other non rural	14.5	Consumption goods		
Non rural + non mon gold	34.9	Electrical/transport	32.8	
	349.0	Textiles/clothing, footwear	21.0	
Rural goods		Food & beverages	16.9	
Meat	13.4	Toys/books, leisure goods	7.6	
Cereal & grains	10.2	Other	35.8	
Wool/sheepskins	7.7	Total	114.1	
Other	20.0	Capital goods		
Total	46.3	Machinery	26.9	
Other		Data processing equipment	11.5	
Not incl non monetary gold	0.62	Telecommunications	13.5	
		Transport	13.4	
		Other	14.0	
		Total	79.3	
Total goods	395.9	Total goods	319.9	76.0
Services exports		Services imports		13.1
Transport	3.8	Tourism	1.9	
Travel	0.6	Business services	14.3	
Education related travel	26.7	Telecommunications	5.6	
Other	30.2	Other	26.4	
Total	61.3	Total	48.2	
Total goods and services	457.2	Total goods and services	368.1	89.1

COVID

Whilst commodity exports have not been significantly impacted by COVID, with the Chinese economy restarting before the rest of the world, services imports and exports (especially tourism and education) were significantly impacted. Related to the pandemic, China's concerns at Australia's early call for an inquiry into the Wuhan origins of the virus angered China who have opened a number of trade related disputes including in relation to international students, barley, wine and beef - essentially all imports other than iron ore. See the Four Corners report Poking the Dragon



Four Corners
V40



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Exports Composition

As indicated below, the composition of Australia's exports (what is on the boats) has significantly changed over the last two decades. Most notable is the significant increase in minerals and metals (iron ore, coal, LNG and non monetary gold) as a percentage of exports, reduction in share of rural exports, and then following the depreciation of the dollar after 2012 a recovery and growth in services (education and tourism) and rural exports as a percentage of the total. Of course, COVID has impaired services exports since March 2020.

FIGURE 5.3: Composition of Australia's Exports (\$Ab)

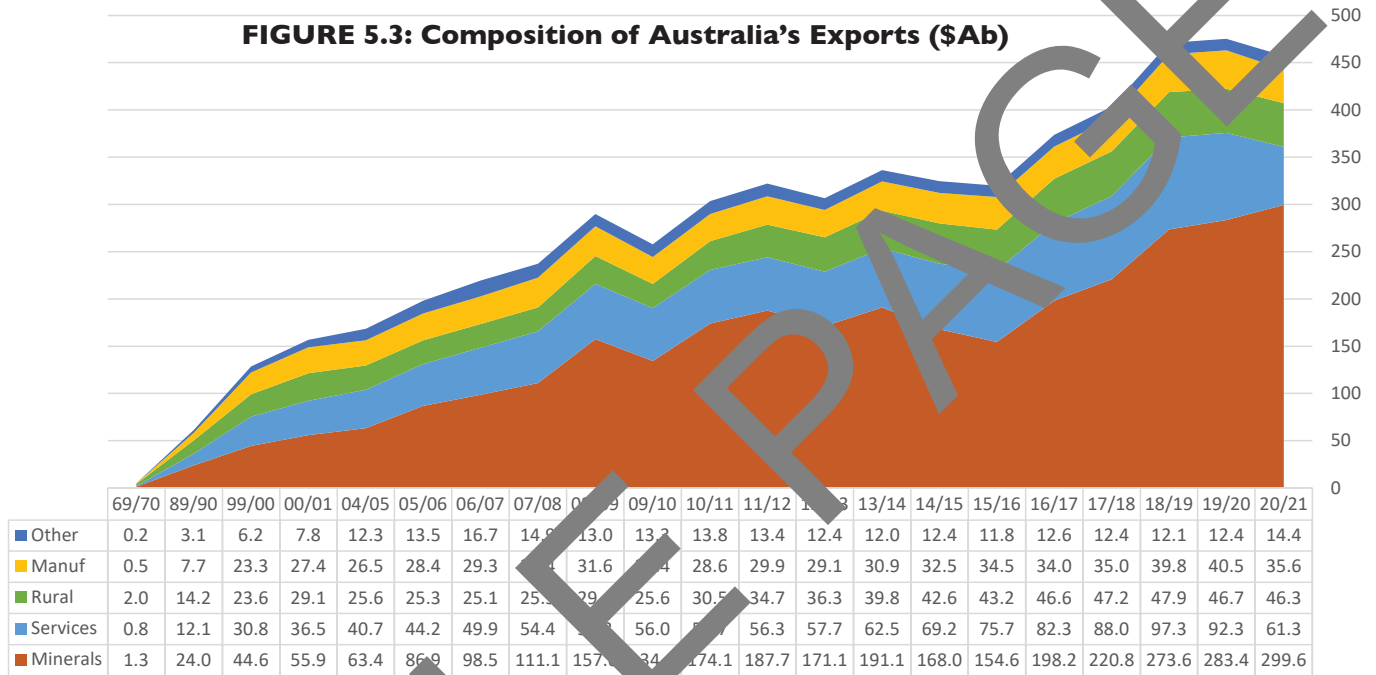
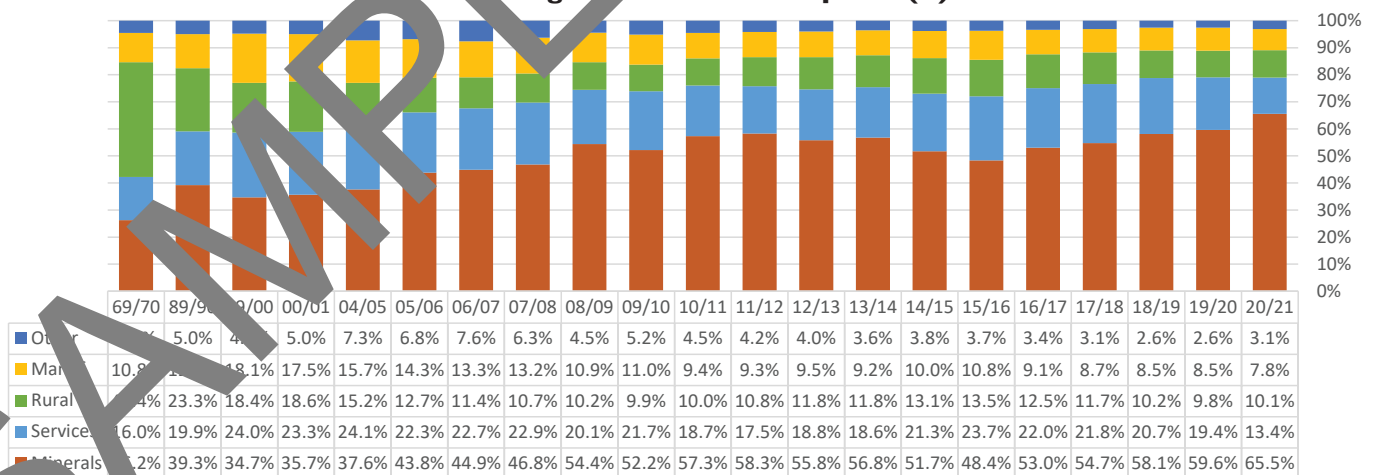


FIGURE 5.4: Percentage share of total exports (%)



Source: ABS 5302 Tables 6 and 8. Note that non monetary gold is included in minerals, not other

Note that minerals and metals rose to 66% of exports in 2020/21 as a result of declining services exports, and increasing mining exports. Whilst the relative share of mineral exports decreased several years ago, at all times the volume (not value) of mineral exports increased each year. As a share of the whole, rural has also declined over the period, and was significantly impacted following the 1960s and the EU's implementation of significant agricultural subsidies as part of the Common Agricultural Policy. Services exports have suffered a severe COVID contraction, most notably in relation to the exports of education and tourism with services declining to 13% of total exports in 2021.

Exports Direction

As the composition of Australia's exports have changed, so too has the direction of those exports. In the chart below, New Zealand is the black segment. Above the NZ segment is the non Asian advanced economies - the EU, USA and the rest of the world. Below the NZ segment are the Asian economies, China, Japan, ASEAN (Association of South East Asian Nations) and South Korea. As can be seen, there has been a significant shift of direction of exports towards China and Asian economies, and away from the EU (in particular) and the USA. The movement away from the EU relates to the EU Common Agricultural Policy (EU agricultural subsidies), and the significant shift to Asia is as a result in particular of minerals and energy exports to the region.



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FIGURE 5.5: Direction of Australia's Exports (A\$b)

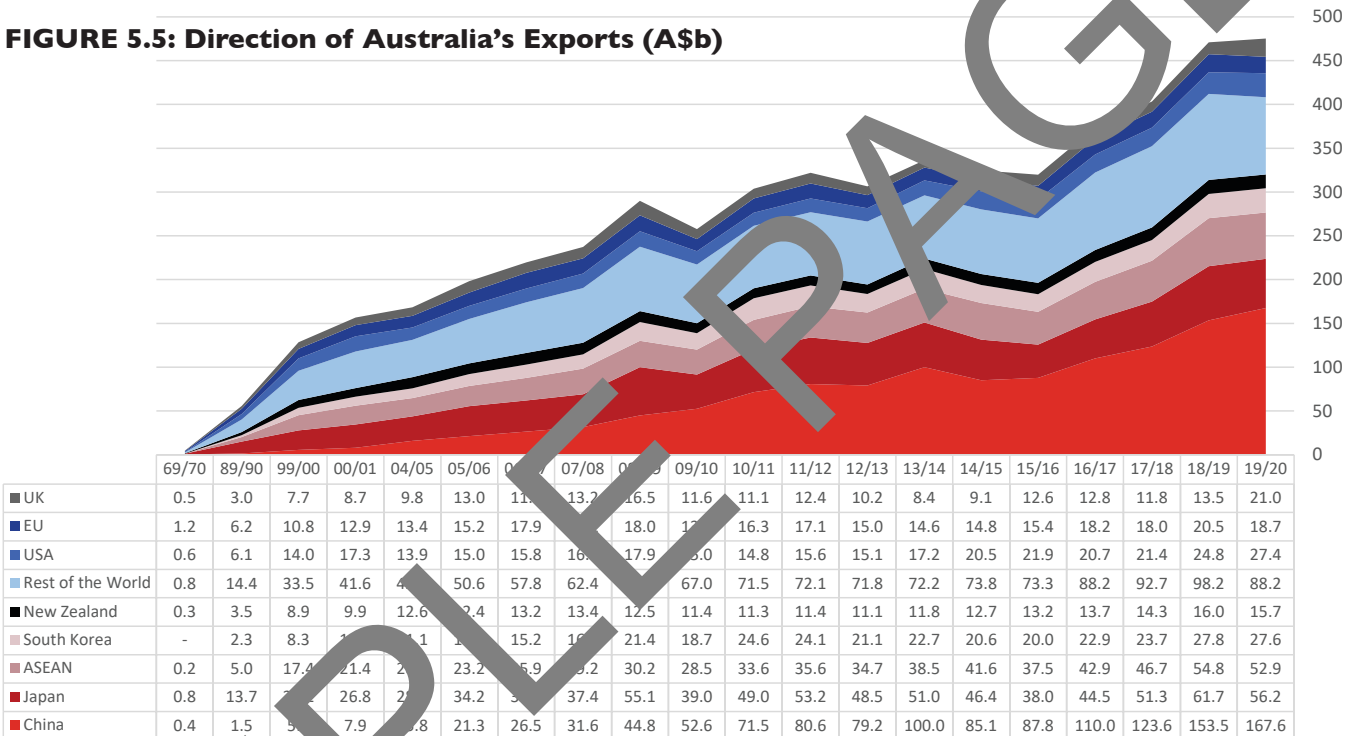
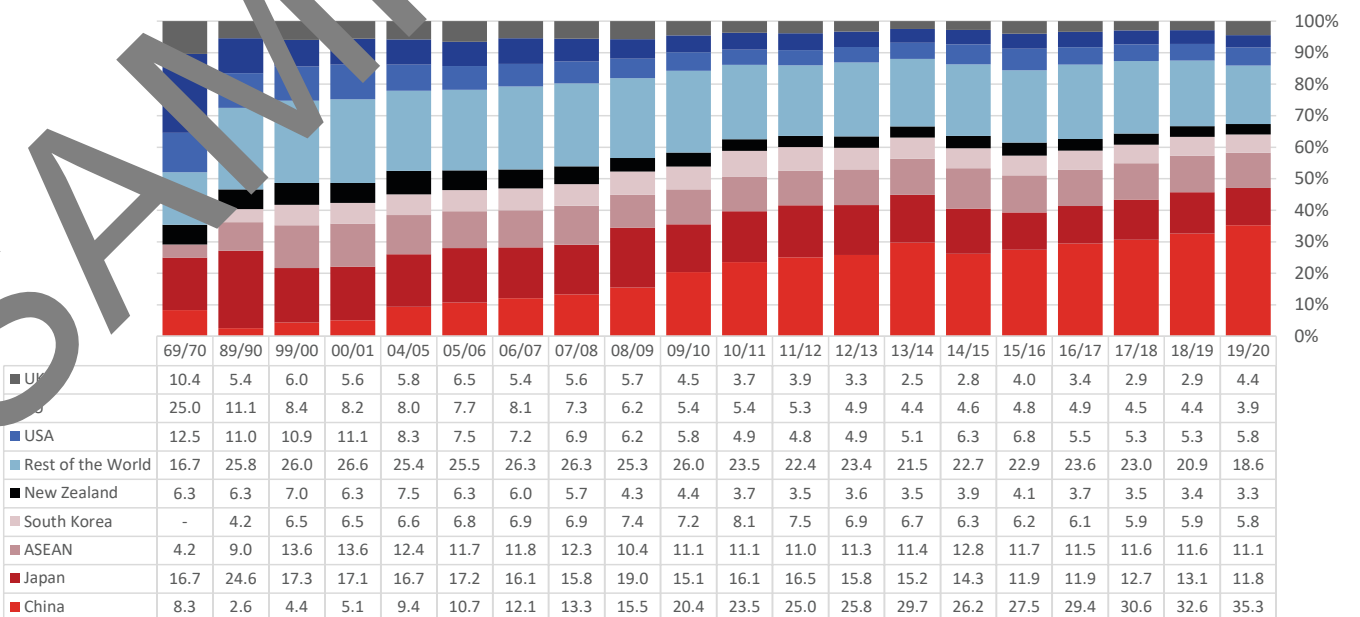


FIGURE 5.6: Direction shares of Australia's Exports (%)



Source: DFAT <https://www.dfat.gov.au/trade/resources/trade-statistics/trade-time-series-data>

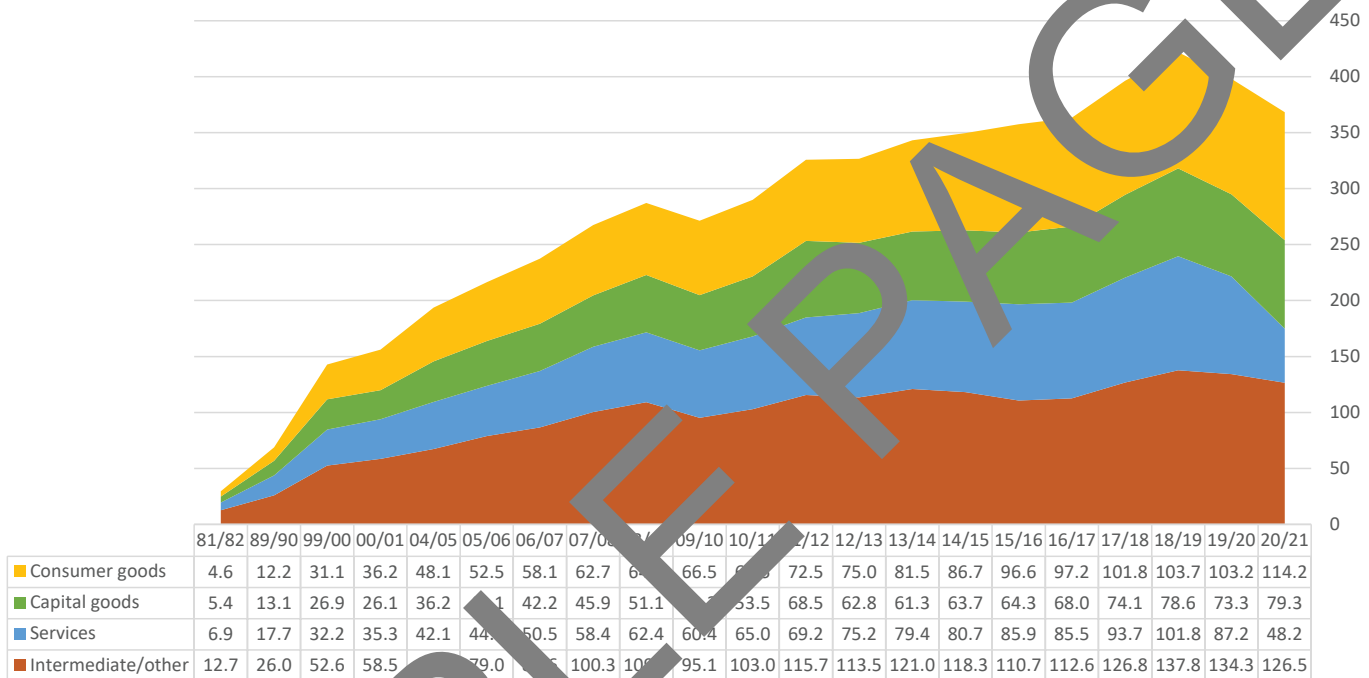


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Imports Composition

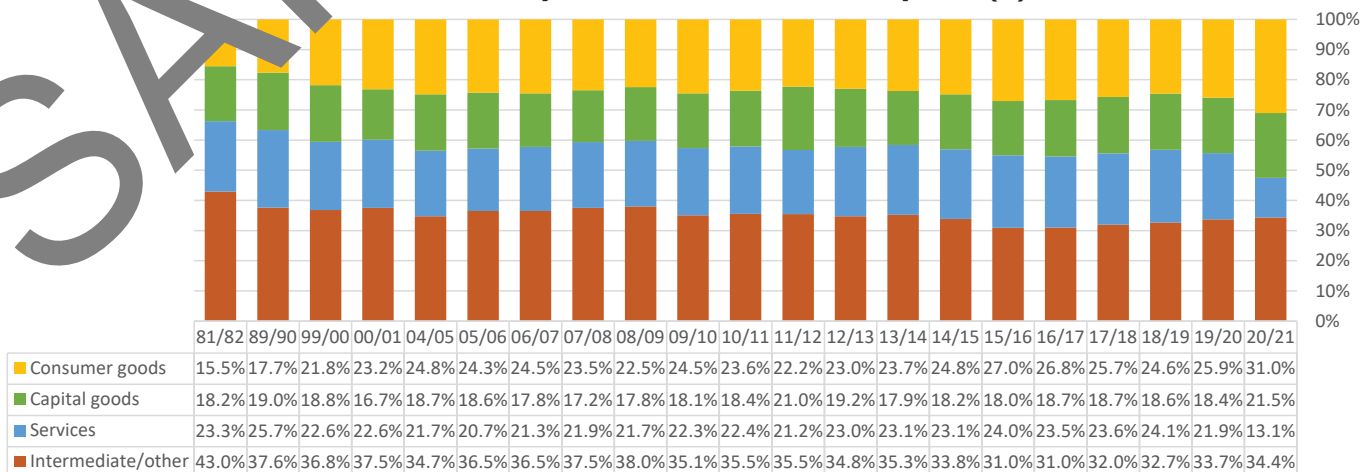
As indicated below, the composition of Australia's imports (what is on the boats) has also significantly changed over the last two decades, however not as much change has occurred in imports as a result of globalisation influences as has occurred with exports. The major change has been in relation to **intermediate goods**, which are inputs into the production of other goods, which has reduced as a share of the total, and total services imports declined as a result of COVID border closures, especially reducing tourism imports.

FIGURE 5.7: Composition of Australia's Imports (A\$b)



Originally there was a high percentage of intermediate goods, as firms would import partly completed goods (and finish the balance of production in Australia) in order to satisfy local content requirements and avoid the payment of tariffs. However, with the removal of these local content rules, businesses switched to importing fully assembled, completed consumer goods rather than partly completed goods, and the proportion of intermediate goods decreased in the composition of Australia's imports. Services imports declined to 13% in 2021 as a result of border closures.

FIGURE 5.8: Composition of Australia's Imports (%)



Source: ABS 5302

Imports Direction

Whilst the composition of Australia's imports has not very significantly changed, the direction of those imports (i.e. the countries that we are importing goods from) has very significantly changed. In the chart below, New Zealand is the black segment. Above the NZ segment is the non Asian advanced economies - the EU, USA and the rest of the world. Below the NZ segment are the Asian economies, China, Japan, ASEAN (Association of South East Asian Nations) and South Korea. As can be seen, there has been a significant shift of direction of imports towards China and Asian economies, away from the EU, and increase in the share of China and ASEAN at the expense of Japan.



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FIGURE 5.9: Direction of Australia's Imports (A\$b)

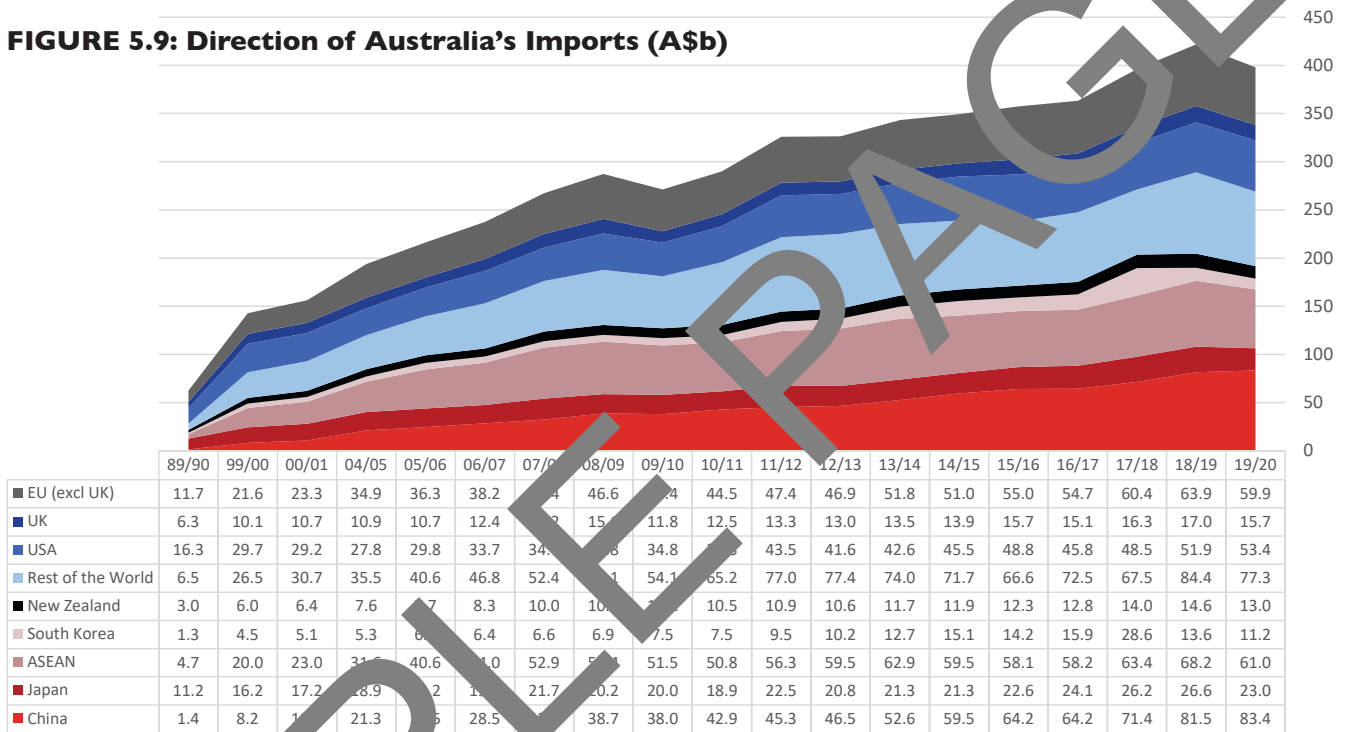
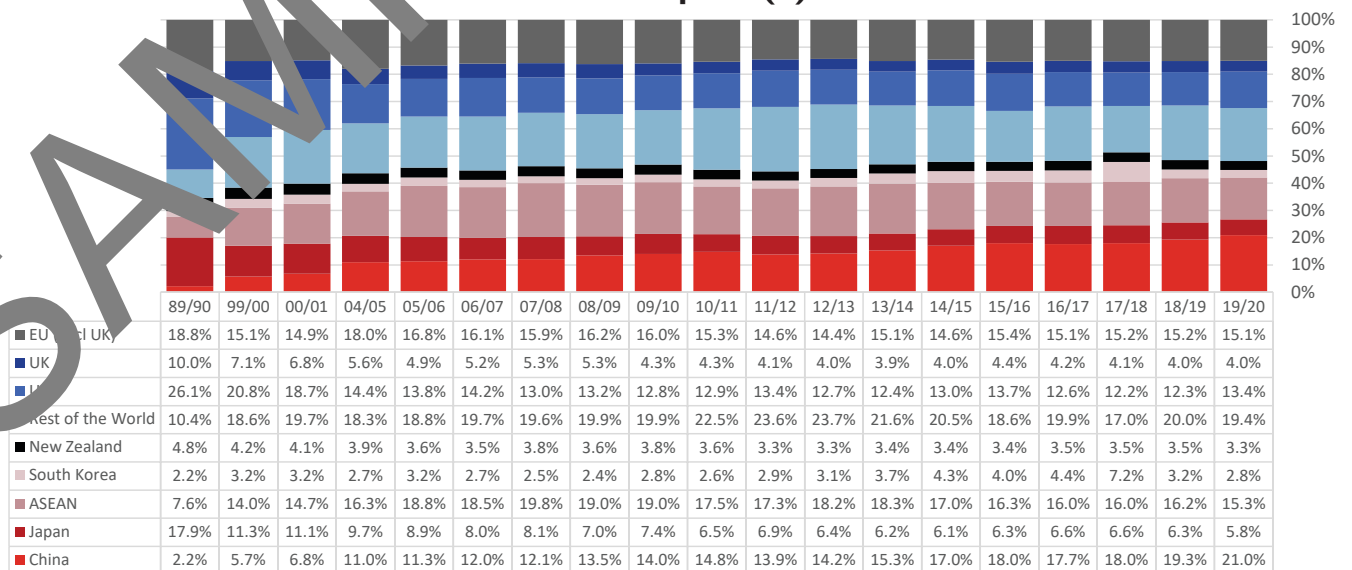


FIGURE 5.10: Direction shares of Australia's Imports (%)



Source: DFAT <https://www.dfat.gov.au/trade/resources/trade-statistics/trade-time-series-data>

Financial Flows

Whereas trade flows are the movements of money associated with an export or import of goods and services, financial flows are a set of different types of movement of money which are associated with **loans** and **investment** between countries. In the broadest terms, financial flows are any movements of money that are not associated with trade flows. With this broad definition of financial flows, that would include:

- financial flows associated with loans (called **debt**)
- financial flows associated with ownership investment in assets or companies between countries (called **equity**)
- **other** financial flows (a broad catch all category which includes non trade debt, equity movements of money between countries including insurance proceeds, purchases of intellectual property rights, (i.e. copyright) foreign aid and foreign workers sending money home called workers' remittances).

Debt

The lending of money (loan) between people in different countries.

Equity

The purchase by a person of an ownership interest in an asset in another country - for example the purchase of shares, or real estate by a foreigner.

When a loan is made, this gives rise to a number of financial flows associated with the loan, including the making of the loan, the paying of interest, and then the repayment of the loan at the end of the loan period. When an equity investment is made (for example the purchase of shares in JB HiFi by a foreigner) there are several financial flows that can arise. These include the funds for the purchase of the shares, funds when JB HiFi pays a dividend to the foreign shareholder, and then sale proceeds of the share if the foreign shareholder sells the shares to an Australian investor.

These different types of financial flows are separated in the table below to show the **inbound flows** (financial flows into Australia) and **outbound flows** (financial flows leaving Australia) in each of the categories of **debt** financial flows, **equity** financial flows and **other** financial flows.

FIGURE 5.11 Types of financial flows



Video F511

Money flowing into Australia

Inbound flows

Money flowing out of Australia

Outbound flows

Financial Flows			
	Debt	Equity	Other
Inbound flows	<ul style="list-style-type: none"> Receive loan money in Receive interest on loans to foreigners Receive loan repayment from foreigners. 	<ul style="list-style-type: none"> Money invested in Australia Receive dividends on equity investments overseas Receive sale proceeds selling foreign investments 	<ul style="list-style-type: none"> Receiving foreign aid Receive payment for IP rights Receive insurance claim payments from overseas RBA sells foreign currencies or gold Australians sell derivatives
Outbound flows	<ul style="list-style-type: none"> Loan money out Pay interest to foreigners on loans Repay loan to foreigners 	<ul style="list-style-type: none"> Invest money out Pay dividends to foreigners on investments in Australia Send proceeds of sale by foreigners of Australian investments 	<ul style="list-style-type: none"> Paying Foreign aid Workers remittances (send \$ home) Pay for IP rights Pay insurance claims to overseas RBA buys foreign currency or gold Australians buy derivatives

Key flows and stocks to count

Whilst all of the financial flows are counted by the ABS every year, in addition to counting the flow in a particular year (i.e. how much interest and dividends were paid, or how much outbound investment or foreign aid was paid) the ABS also keep track of the **current level** (called stock) of debt and equity between Australia and overseas.

This reflects the difference between what are called **flow variables** (i.e. the increase or decrease in a year) and a **stock variable** (which is the level of the variable at the end of a year). A flow variable is measured **over a period of time**, whereas a stock variable is measured **as at a certain date** (i.e. what is the level of the variable at the given date).

Element	Flow	Stock
Inbound debt	How much did the rest of the world lend to Australia in new debt during the period?	Adding this year's new borrowing, and allowing for any repayments, how much does Australia now owe to the rest of the world that it has borrowed? This is called foreign debt .
Inbound equity	How much did the rest of the world invest into Australia by buying shares and real estate during the period?	Adding this year's new investment, and allowing for any sales of previous investments, how much does the rest of the world now own of Australia's shares and assets? This is called foreign equity .
Outbound payments of interest and dividends	How much did Australia pay to foreigners as interest on foreign debt and dividends paid in relation to foreign equity during the period? This is called primary income .	

As indicated in the table above whilst there are flow variables for all of the financial flows, there are two key stock variables which measure the level of **foreign debt**, and the level of **foreign equity** as at a certain date.

For each of foreign debt, and foreign equity we count two variables.

For **foreign debt** we first count the amount which we have borrowed from overseas, and then count the amount we have lent to foreigners. Generally Australia has borrowed a significantly larger amount from overseas than we have lent overseas. **Net foreign debt** is calculated as the foreign debt we owe overseas less the debt that overseas owes to Australia.

For **foreign equity** we first count the amount that foreigners have invested in Australia and then count the investment that Australians have made overseas. **Net foreign equity** is calculated as foreign equity in Australia less Australia's investment overseas.

Once we have calculated net foreign debt (borrowings) and net foreign equity (ownership) for the economy we can then add them together to arrive at what is called **Net Foreign Liabilities**, another stock variable (created by adding together two stock variables).

$$\begin{aligned}\text{Net Foreign Liabilities} &= \text{Net Foreign Debt} + \text{Net Foreign Equity} \\ \text{NFL} &= \text{NFD} + \text{NFE}\end{aligned}$$

Following financial deregulation in the 1980s (floating of the dollar, removal of capital controls, licensing of foreign banks in Australia) there was a significant increase in lending (debt) by foreigners to Australians and Australian businesses. As indicated in Figure 5.12, the major component of Net Foreign Liabilities is Net Foreign Debt which has increased to around \$1.2 trillion in 2021 from around \$100 billion in 1988.

NFD

Net debt owed to the rest of the world by Australians.

NFE

Net ownership by foreigners of Australian assets.

NFL

The total of NFD and NFE.



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SNFL

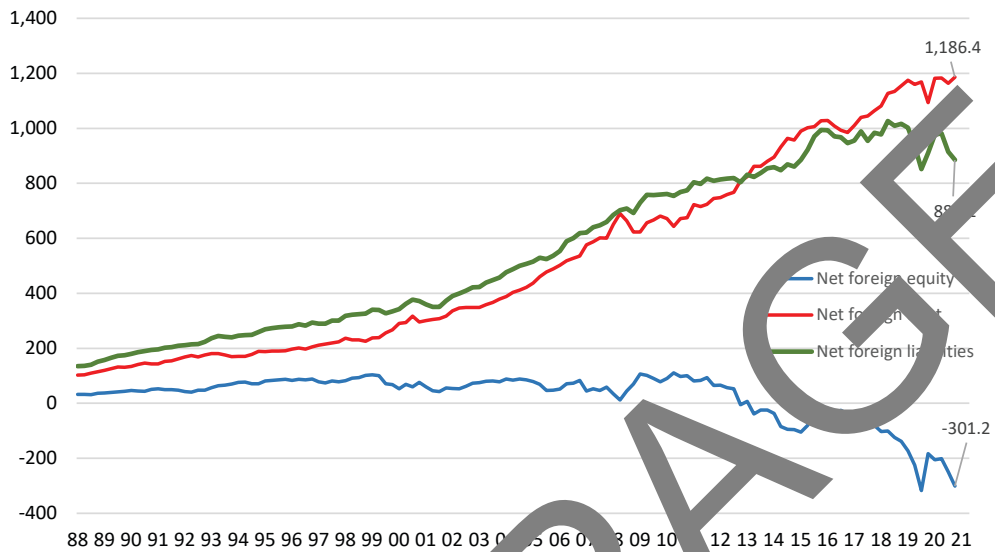
%GDP

Note that NFL, NFD and NFE are generally expressed as a percentage of GDP. This does not mean that they are a component of GDP - it is just a way of comparing the size of these stock variables to the size of GDP to enable comparisons between time periods and between economies. These are not elements of AD - they are not components of GDP.



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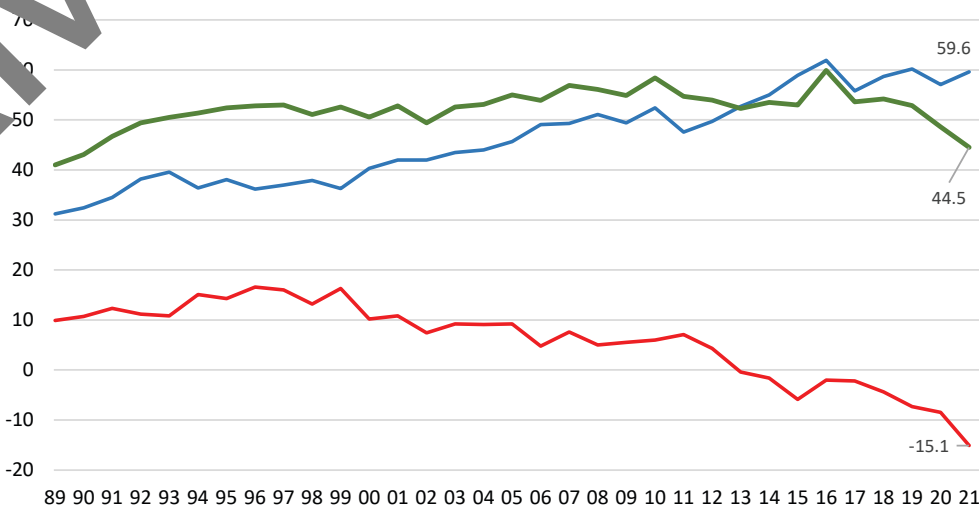
FIGURE 5.12: Australia's Net Foreign Liabilities (A\$b)



In June 2021 NFD was \$1,186b and NFE was -\$301b (i.e. Australians owned more assets overseas than foreigners owned Australian assets). This compares to NFD of \$102b in 1988, and NFE of \$32b.

These stock variables of Net Foreign Liabilities, Net Foreign Debt and Net Foreign Equity are typically expressed as a percentage of GDP to enable better assessment of whether the level of Net Foreign Liabilities may be too high and not sustainable. In June 2021 NFD as %GDP (current prices) was 59.6%, with NFE -15.1% of GDP and NFL 44.5% of GDP. There has been a very substantial increase in nominal NFD and NFL and NFD and NFL as a percentage of GDP has also increased since the 1980. However NFL as a %GDP has remained between 50%-60% of GDP despite the large investment flows as loans to fund the investment in the mining investment boom. Since 2016, however, NFL as a percentage of GDP has been decreasing mainly as a result of Australian purchase of foreign assets (NFE).

FIGURE 5.13: Australia's Net Foreign Liabilities (%GDP)



Source: ABS 5302, elements of Net International Investment Position divided by GDP - June Quarter data for each year

Trends in the key financial debt and equity flows

During each period the stock of Net Foreign Debt and Net Foreign Equity is impacted by the following flows.

Stock variable	Worsen (increase)	Improve (decrease)
Net Foreign Debt	New inbound loans	Repay foreign loans
	Foreigners repay loans received from Australia	New outbound loans
Net Foreign Equity	New inbound investment	New outbound investment
	Foreigners purchase foreign investments from Australians	Australians purchase Australian asset investments from foreigners

The financial flows of debt and equity during the year (shown above) can be classified in two different ways. The first way of classifying these flows is whether they are debt or equity flows.

If the total of these flows was \$100b, there may be \$80b of debt flows and \$20b of equity flows.

The second way of classifying (i.e. dividing) the \$100b of financial flows relates to the degree of control that the foreign person is obtaining, and the language we use is **direct investment**, and **portfolio investment**. The same \$100b of financial flows may therefore be classified into, or divided into, \$90b of portfolio investment and \$10b of direct investment.

Direct investment: the purchase of more than 10% of the shares in an existing company, or 100% of the shares in a new company, by a foreigner. The intention is to control the affairs of the company in making a long-term investment.

Portfolio investment: the purchase of less than 10% of the shares in an existing foreign company or loans by a foreigner. The intention is not to control the affairs of the company, but to be a non-controlling investor, and the investment is more volatile than direct investment and may be readily sold by the foreign investor.

In considering the value and composition of financial flows between Australia and the rest of the world we will use both methods of classifying the financial flows (i.e. both the classification of debt/equity investment and the classification of portfolio/direct investment).

Firstly we will consider the **portfolio and direct investment into Australia** from the rest of the world, and then we will consider the **portfolio and direct investment that Australians make to the rest of the world**.



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Direct investment

Remember this as the foreigner wants to direct the affairs of the business - hence purchasing more than 10% of the shares in the domestic business.

Portfolio investment

Remember this as the foreign investor building a share portfolio as a passive investor/trader - the intention is not to direct the affairs of the company. As a part of the share portfolio, the portfolio investment is more likely to be sold sooner than the larger stake acquired by direct investment which is more of a long time hold.

Portfolio and Direct Investment INTO Australia



Link
F514

Following financial deregulation in Australia, and as a result of the impact of globalisation of capital markets and the growth of trans national corporations, significant increases occurred in both portfolio and direct investment into Australia by foreigners, increasing to \$3.2 trillion in 2021. There has also been a change in the composition of that investment, with an increase in the percentage share of portfolio investment (more short term, volatile, not increasing technology flows or employment) compared to direct investment, with direct investment now comprising 34% down from 76% in 1981.

FIGURE 5.14: Inbound Portfolio & Direct Investment (A\$b)

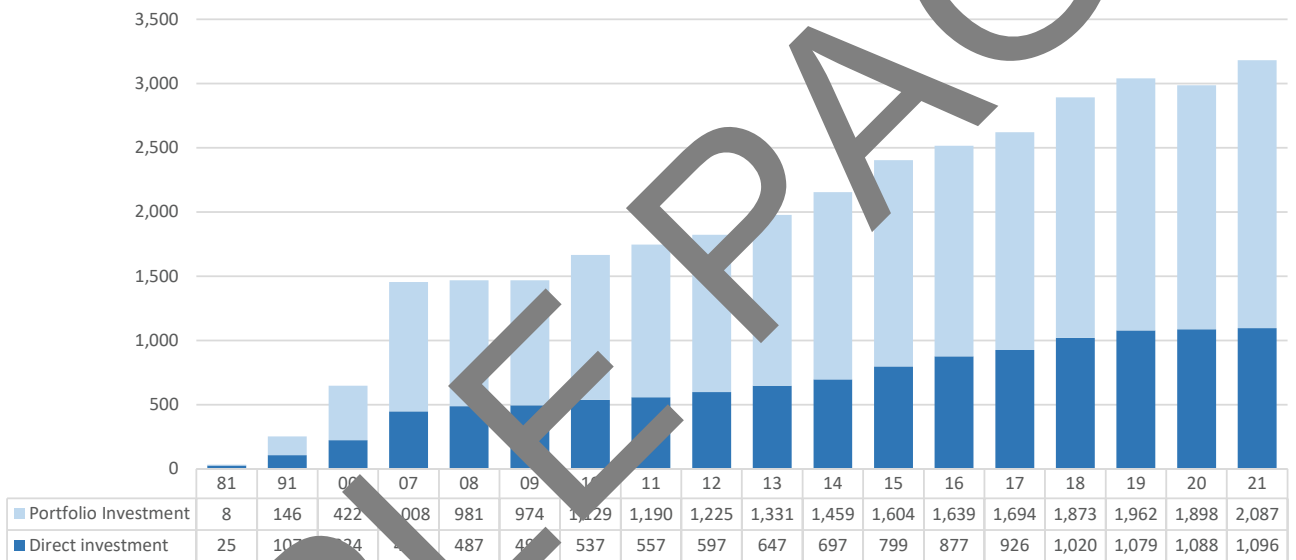
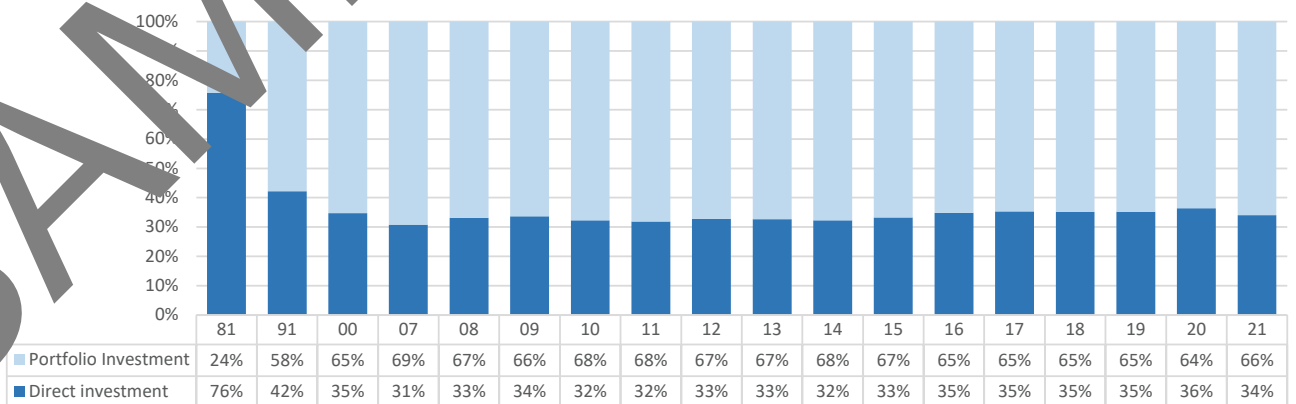


FIGURE 5.15: Inbound Portfolio & Direct Investment (%)



Source: ABS 5302, June stock variables. Does not include derivatives or other investment.

Portfolio and Direct Investment FROM Australia

There has also been a significant increase in outbound portfolio and direct investment, that is, Australian individuals and businesses purchasing overseas assets and shares, and making loans to foreigners. The level of this outbound investment is 74% of the level of inbound foreign and direct investment, however, is an increasing share. As superannuation balances increase and are partly reflected in overseas equities, the share of portfolio investment has increased.



FIGURE 5.16: Outbound Portfolio & Direct Investment (A\$b)

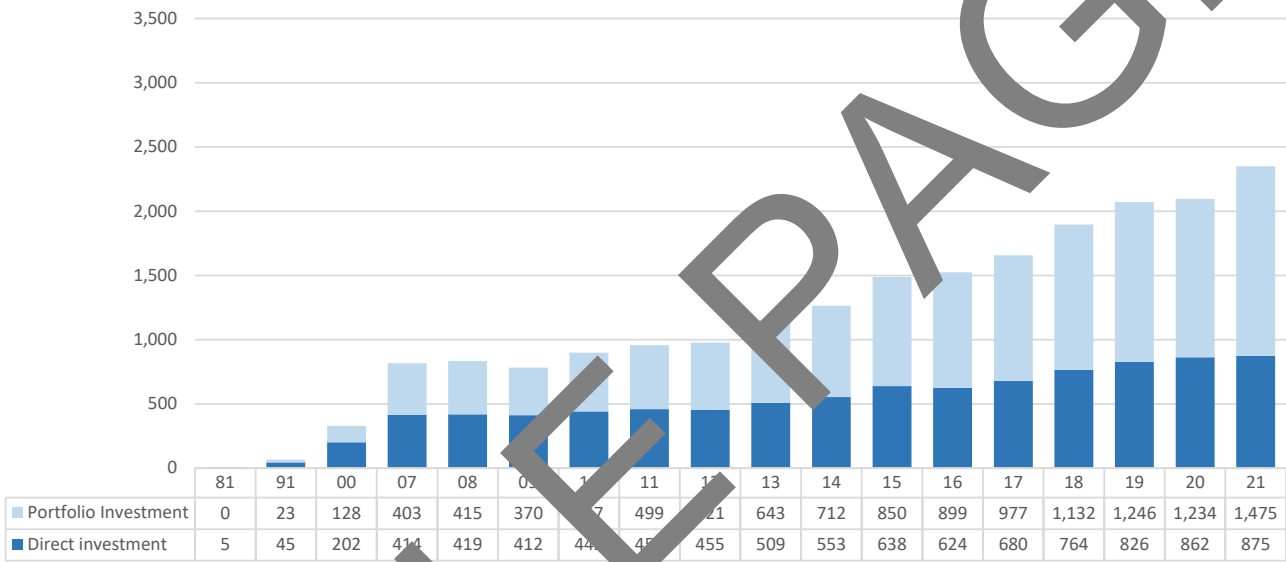
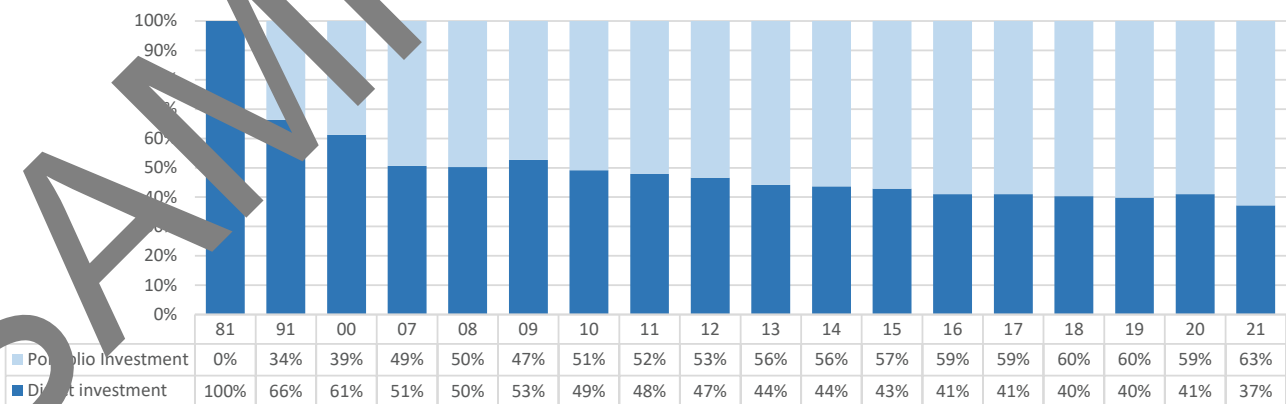


FIGURE 5.17: Outbound Portfolio & Direct Investment (%)



Source: ABS 5302, June stock variables. Does not include derivatives or other investment.



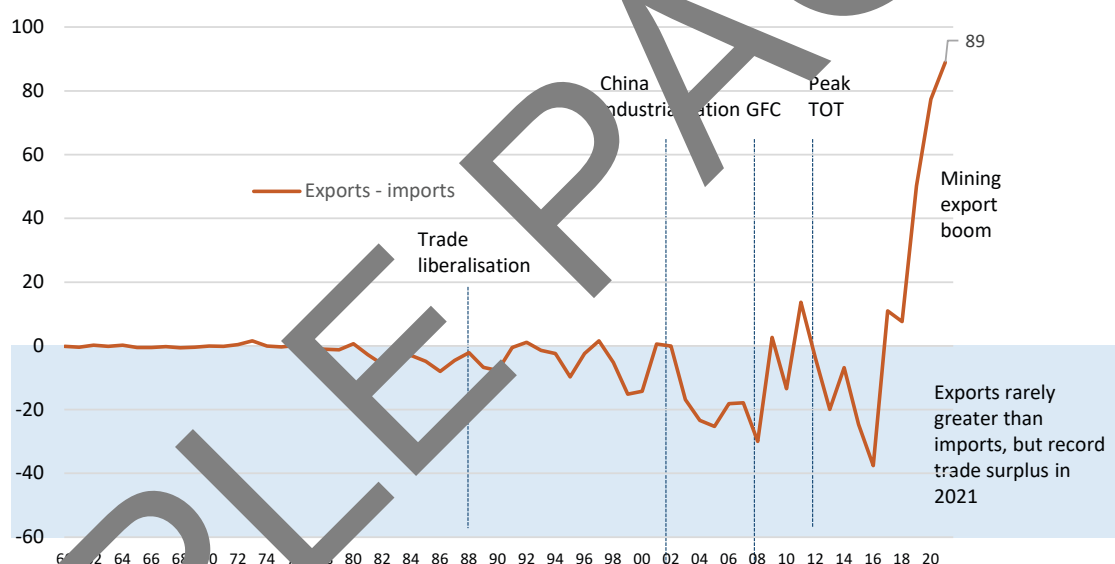
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TRENDS IN TRADE, INTEREST AND DIVIDENDS

Historically Australia generally imports more than it exports (graph below), and net imports became larger as a result of the reduction in tariff protection from trade liberalisation. Similarly, the level of interest and dividends paid overseas has significantly increased following financial deregulation, as Australia's net foreign liabilities (net foreign debt + net foreign equity) have increased.

Note that the net dividends and interest (collectively called primary income) is generally larger than net imports, and even if exports are greater than imports, the primary income leaving Australia is such that cash is always leaving Australia when we add imports, exports, interest and dividend flows. However, note the record trade balance in 2019-2021 as a result of increased commodity export volumes at strong prices, and a decrease in imports which have made a structural change to Australia's net exports, shifting to a net export.

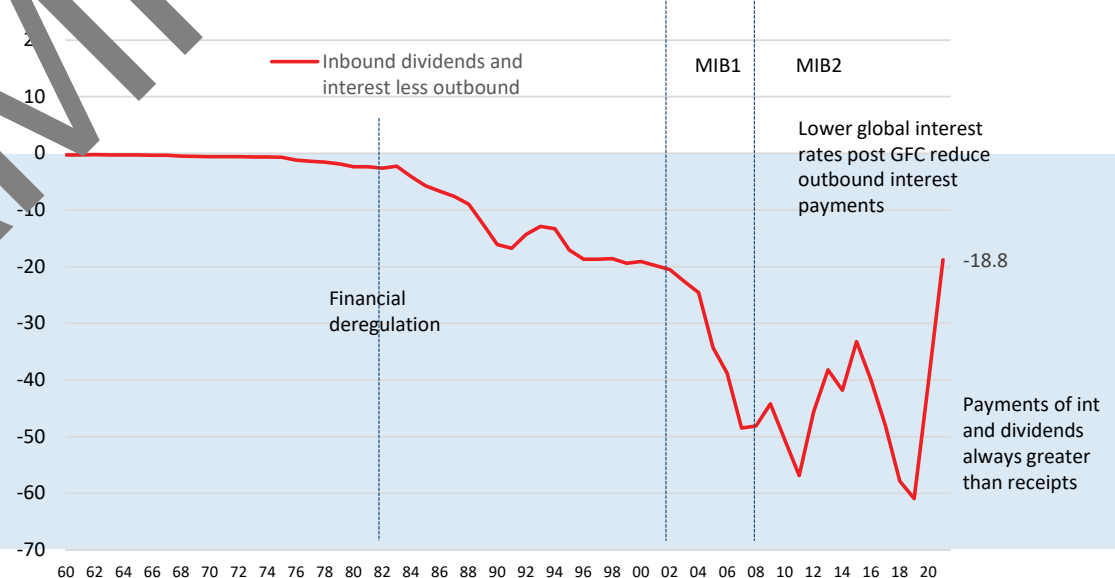
FIGURE 5.18: Australia: Annual exports less imports (A\$b)



The 2017 change

Note that as Australia entered the mining export boom from 2017, the trade balance turned very significantly positive, and the level of NPI decreased, resulting in a current account surplus for the first time in decades.

FIGURE 5.19: Australia: Annual net dividends and interest (primary income) received from/paid to overseas (A\$b)



Source: ABS 5302



Link F519

FACTORS IMPACTING VCD XM AND FINANCIAL FLOWS

It is customary in economics to separate factors impacting an economy into two different types, called **structural factors**, and **cyclical factors** as follows:

	Definition	Examples	
Structural factor	Persistent feature of the economy that does not change during the phases of the business cycle.	<ul style="list-style-type: none"> Labour market regulation and quality Resource endowments (minerals, agriculture) Comparative labour rates Population demographics Competition regulation 	Impacts the potential of aggregate supply in the economy
Cyclical factor	A feature of the economy that changes during the phases of the business cycle	<ul style="list-style-type: none"> Level of spending and saving Domestic and global interest rates Unemployment rates Exchange rates Domestic and global economic growth rate Inflation rate Commodity prices 	Impacts the level of aggregate demand in an economy

The reasons for the changes in value, composition and direction of Australia's trade and financial flows can therefore be analysed and understood through considering structural and cyclical factors that impact trade and financial flows.

	Trade flows (X, M)	Financial flows (Debt, Equity)
Structural factor	<ul style="list-style-type: none"> High labour rates in Australia make manufacturing less internationally competitive - increasing imports Abundant natural resources of high quality, combined with high labour rates result in narrow export base (few types of goods - increases volatility) Quality labour force, tourism locations and educational institutions attract visitors and students 	<ul style="list-style-type: none"> Australia's savings investment gap means we have been a net capital importer, leading to high inbound capital flows and high outbound interest and dividend flows Quality agriculture and mining assets and educated labour force are attractive to foreign investment
Cyclical factor	<ul style="list-style-type: none"> China growth rate has very significant impact on commodity prices and export values Global growth rate impacts export markets (pandemic slows trade growth) Exchange rate impacts non mining exports and imports (tourism, education, agriculture, manufacturing) Domestic and global weather events (and medical events) impact agriculture and other exports and imports Domestic growth, wage growth and unemployment rates impact imports 	<ul style="list-style-type: none"> Domestic and global interest rates Exchange rates, appreciation reduces attractiveness for foreigners purchasing Australian assets Domestic and global growth rates increase investment opportunities and need for loan funds Domestic and global inflation rates

reImagined Syllabus

VCD Trade and Financial Flows

The transition of the Australian economy

- From defence settlement (high tariffs, fixed exchange rate/capital controls, centralised wage fixing) to low tariffs, floating dollar and decentralised wage fixing
- Prices received for our exports (commodities, iron ore, coal, LNG, agriculture) are cyclical, and changes are overall measured by the
 - Terms of Trade** (Trade Price Index) which is the Export Price Index / Import Price Index x 100.
- China's industrialisation led to record high TOT reached in 2012, with the TOT softening as a result of increased supply, however is still significantly above long term averages.
- Australia was historically a **net capital importer** (net borrower from the rest of the world) because of the **savings investment gap**. With
 - a small population and
 - low household savings rates
 - our domestic saving pool is insufficient for large investment needs (mining, resources, infrastructure)
 - resulting in a savings investment gap which is filled by borrowing from overseas sources (i.e. increase NFD and NFL, therefore high NPI)

Trade flows (X, M)	Financial flows (Debt, Equity)
<p>V</p> <ul style="list-style-type: none"> Value of exports significantly increased as a result of industrialisation of China (and other south east Asian economies) and record increase in the terms of trade Value of imports significantly increased as a result of globalisation and trade liberalisation Both impacted by COVID reducing services trade 	<ul style="list-style-type: none"> Value of foreign debt (loans) significantly increased as a result of financial deregulation, and increased capital demands to support the mining investment booms and to part fund fiscal deficits. Value of equity (ownership) significantly inbound increased as a result of globalisation, and outbound increased as a result of increased superannuation investment pool
<p>C</p> <ul style="list-style-type: none"> Exports shifted towards minerals and energy now rebalancing somewhat to agriculture, education and tourism following AUD depreciation of the AUD but entering mining export boom and COVID impact. At risk with fossil fuel dependence and China trade war. Imports small shift away from intermediate goods although remains the largest category. 	<ul style="list-style-type: none"> Largest proportion of inbound foreign investment is portfolio investment (less than 10% of the shares in a company). Share of outbound foreign investment as direct investment is higher proportion than for inbound foreign investment
<p>D</p> <ul style="list-style-type: none"> Exports shifted very significantly towards China and south east Asian and away from EU/USA. Imports shifted towards China away from Japan, towards south east Asia away from USA but significant component from EU remains. 	

VCD TRADE & FINANCIAL FLOWS

1. Outline why Australia is described as a small, open economy.
2. Describe trends in the value of Australia's exports, imports, and trade balance since the 1970s.
3. Define the terms of trade and explain how the terms of trade could deteriorate.
4. Explain the impact of the industrialisation of China on Australia's terms of trade and net foreign debt.
5. Compare Australia's terms of trade to its long term average.
6. Explain the changes in the composition and direction of Australia's exports.
7. Outline trends in the composition and direction of Australia's imports.
8. Distinguish between equity and debt financial flows.
9. Explain how a single inbound loan from a foreigner to an Australian business results in multiple financial flows over time.
10. Identify financial flows between Australia and overseas which are not equity or debt financial flows.
11. Distinguish between a stock economic variable and a flow economic variable.
12. Explain the trends in the components of Australia's net foreign liabilities.
13. Distinguish between portfolio and direct investment.
14. Describe advantages of direct investment for the host economy compared with portfolio investment.
15. Describe trends in Australia's net exports and net dividends and interest financial flows.
16. Explain why Australia was said to be a net capital importer.
17. Explain how two structural factors impact Australia's trade and financial flows.
18. How would a global slowdown as a result of US protection policy impact Australia's trade and financial flows?
19. Explain how trends in trade and financial flows impact Australia's economic objectives.
20. Explain how the COVID pandemic has impacted Australia's trade and financial flows.



Chapter
C5

Answers
Videos
Revision
HSC Analysis



SAMPLE PAGES

Australia's Balance of Payments

- structure
 - Current Account, debits and credits
 - Capital and Financial Account
- links between key Balance of Payments categories
- trends in the size and composition of Australia's Balance of Payments
 - international competitiveness, terms of trade, international borrowing, foreign investment
 - effects of these trends on Australia's Balance of Payments

Chapter 6

BALANCE OF PAYMENTS



Overview
6

In order to assess the ability of countries to meet their financial obligations to foreigners in the future (called external stability) records are kept of each country's trade and financial flows. That is, records are kept of the various movements of money between economies.

Remember, there are movements of money associated with **trade** - the money paid for imports and received for exports. There are movements of money associated with debt and equity **financial flows** (the making of the loan, the paying of interest, and the repayment of the loan). Finally there are a range of other **financial flows**, including foreign aid, workers' remittances (sending money home), insurance payments and the purchase and sale of intellectual property assets (trademarks/copyright).

The International Monetary Fund is charged with, among other things, monitoring the ability of countries to meet their financial obligations to other countries in order to promote international financial stability. In order to do that, the IMF created a standardised way to record and report the trade and financial flows which occur between economies. That standardised report, which is prepared for all countries in the same way, is called the **Balance of Payments**. Because of the language is quite confusing - you can consider it a **Record of International Payments**.

The international framework for this recording of payments between countries is contained in two key documents - one from the OECD (Organisation for Economic Cooperation and Development) and one from the IMF. They are called the *System of National Accounts (2008, 2008SNA)* and the sixth edition of the *Balance of Payments Manual (BPM6)* respectively.

The **Balance of Payments** is a record of every transaction between Australia and the rest of the world for a period. Nothing is left out - every payment for an import or interest on a loan, recorded every receipt of money for an export is recorded; and every insurance claim on a foreign insurance company is recorded. Every single one of the trade and financial flows that occur between Australia and the rest of the world that occur during a period are recorded and presented in a prescribed format, called the **Balance of Payments**. The ABS does this for Australia, and prepares and publishes the Balance of Payments each quarter in series 5302.0 - *Balance of Payments and International Investment Position* which is readily found by googling ABS balance of payments.

This means that the Balance of Payments records **every movement of money** associated with **trade** (imports and exports) and **financial flows**. Remember from Chapter 5 that there are the major categories of debt and equity financial flows within financial flows, and also a range of other financial flows that occur between countries. All of these financial flows (shown again below) must be recorded and presented in the Balance of Payments.

External stability

The ability of a country to meet its financial obligations to the rest of the world in the future.



Balance of Payments

A record of all of the transactions between Australia and the rest of the world for a period.

Students can consider the Balance of Payments as a **Record of international payments**, which as we will see later is constructed so that it has two lists using **double entry accounting** that by definition ensures that it balances (totals to zero) - hence it is called the Balance of Payments.

FIGURE 6.1: Types of financial flows

		Financial Flows		
		Debt	Equity	Other
Money flowing into Australia	Inbound flows	Receive Loan money in	Money invested in Australia	Receiving foreign aid
		Receive interest on loans to foreigners	Receive dividends in equity investments overseas	Receive payment for IP rights
Money flowing out of Australia	Outbound flows	Receive loan repayment from foreigners.	Receive sale proceeds selling foreign investments	Receive insurance claim payments from overseas
		Loan money out	Invest money out	RBA sells foreign currency or gold
		Pay interest to foreigners on loans	Pay dividends to foreigners on investments in Australia	Australians sell derivatives
		Repay loan to foreigners	Send proceeds of sale to foreigners of Australian investments	Foreign aid
				Workers remittances (send \$ home)
				Pay for IP rights
				Pay insurance claims to overseas
				RBA buys foreign currency or gold
				Australians buy derivatives

Debt

The lending of money (loan) between people in different countries.

Equity

The purchase by a person of an ownership interest in an asset in another country - for example the purchase of shares, or real estate in another country.

Credit

Transactions which are recorded as positives in the Balance of Payments. This is used for transactions where money is coming into the economy from overseas.

Debit

Transactions which are recorded as negatives in the Balance of Payments. This is used for transactions where money is going to another economy, that is, leaving the economy and going to another economy.

First we are going to learn about a convention about the naming and how to account for transactions resulting in money flows into Australia as against money flows out of Australia, and then we will learn about the structure (layout) of the Balance of Payments document itself.

Language and counting conventions

Since the Balance of Payments is a record of all of the transactions between Australia and the rest of the world for a period, it will include many transactions and payments where money comes into Australia (for example as payment for an export), and many payments where money leaves Australia (for example to pay for an import of goods). For financial flows the graph above separates those transactions where money flows into Australia from those transactions where money flows out of Australia. The IMF Balance of Payments manual sets out the different language and counting arrangements that apply to transactions with **money into a country** as against **money out of a country**.

The conventions are as follows:

	Called	Counting treatment
Transaction resulting in money coming in to Australia	A credit	Record transaction as a positive number
Transaction resulting in money leaving Australia	A debit	Record transaction as a negative number

These formulations must be known by students as they are critical for an understanding of, and application of, the analysis which is the Balance of Payments. An easy way to remember this is:

Money coming into Australia is a credit and is positive.

Once you know that one, it follows that:

Money leaving Australia is a debit and is negative.

What this means is that all of the transactions in the previous figure shown as transactions where **money comes in to Australia** (including loans in, investment in, dividends received as a result of ownership of foreign shares) will be treated as credits, and will be counted as positives. On the other hand, all of the financial flows in the previous figure shown as transactions where **money leaves Australia** (including loans out, investment out, interest paid or foreign aid) will be treated as debits, and will be counted as negatives.

One matter sometimes confuses students with trade flows (that is imports and exports). The formulation above, transactions where money comes into Australia is a credit and is positive, refers to the **money flow**, not the physical good. Some students have considered the **physical good** - i.e. the imported good comes into Australia and therefore, **in error**, they wanted to record the import as a credit. Again, what we are interested in to classify the transaction in the Balance of Payments is the **flow of the money that results from the transaction**. The money flow in relation to an import transaction is money leaving Australia, and therefore the correct treatment for the import transaction is that it is a debit and counted as a negative because the flow of money from the transaction leaves Australia.

Warning
Avoid the common error in counting exports and imports. What matters is classifying the transaction as the movement of the money to pay for these, not the movement of the actual good which is the import or export.

Balance of Payments accounting (recording the transactions) is specified in the *Balance of Payments Manual* from the IMF, some 371 pages of specific detail. Students do not need to read all of the detail, but there are some key concepts which are critical to master as an outline of how the Balance of Payments is prepared. We will deal with these now.

CONCEPT 1 - THE DEFINITION

The Balance of Payments is a record of all the transactions between Australia and the rest of the world for a period. Every import, export, loan, investment, payment of interest, dividends, aid - everything. All trade and financial flows. Note that it does not record transactions between Australian residents - only where there is an international (cross border) transaction is it recorded in the balance of payments.

CONCEPT 2 - DOUBLE ENTRY RECORDING

Every transaction is recorded in **two places** in the balance of payments (per the Manual).

One is recorded with a positive sign (i.e. \$30) referred to as a **credit**, and one is recorded with a negative sign and is for the same value (i.e. -\$30) referred to as a **debit**.

Every single economic transaction is ever recorded as one number - **always a pair of numbers** that are equal and opposite (hence the language of double entry accounting - two equal and opposite entries (recordings) for the one transaction).

CONCEPT 3 - THE TWO ENTRIES TO DOUBLE ENTRY

The two elements (entries) being recorded for each transaction recorded in the balance of payments are:

1. The **economic transaction** involved (i.e. the import, export, loan, investment, aid etc); and
2. The **movement of cash to make payment** for the economic transaction (the actual payment for the import, the actual receipt of payment for the export, or the inbound loan)

Two things - two entries, for every transaction are recorded.

CONCEPT 4 - RECORDING THE ECONOMIC TRANSACTION

If the economic transaction will result in **cash coming in** to the economy:

1. the **economic transaction** (i.e. the export, the inbound loan, the inbound interest) will be recorded as a credit, and positive (i.e. \$50); and
2. the **movement of cash associated with the transaction** will be recorded as a debit, and negative (i.e. -\$50)

If the economic transaction will result in **cash leaving** the economy:

1. the **economic transaction** (i.e. the import, the outbound loan, the outbound aid, the outbound interest) will be recorded as a debit and negative (i.e. -\$50); and
2. the **movement of cash associated with the transaction** will be recorded as a credit, and positive (i.e. \$50).

These are the two entries (the double entry) for the economic transaction. There is **one entry** for the economic transaction (an import - goods moving) and **one entry** for the movement of cash associated with the transaction (the payment for the import). Both entries are for the same number - except one is positive, and one is negative.

CONCEPT 5 - THE BALANCE OF PAYMENTS BALANCES

Because the IMF's rules for preparing the Balance of Payments requires that every transaction is recorded with **two entries** - one positive, and one negative, for the same number - one debit, one credit) this means that the balance of payments (the records of all of the transactions between Australia and the rest of the world) **must balance**.

That means that the total of all of the positive entries (the credits) must, by definition, if the IMF rules are followed, be equal to the total of all of the negative entries (the debits). It is said to balance because the total of the credits (positive numbers) plus the total of the debits (the negative numbers) equals zero.

With those five concepts we now explore what the balance of payments looks like and how transactions are recorded with examples.

Double entry

Note that the actual movement of cash (the payment or receipt) is the second leg of the recording, and will be for the same amount as the economic transaction, but recorded with an opposite sign

Further information

For an RBA overview of the structure of the balance of payments and the double entry accounting requirements, see the RBA balance of payments explainer.

The ABS also publish a helpful explanatory note as part of ABS 5302.



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EVERY TRANSACTION BETWEEN AUSTRALIA AND THE REST OF THE WORLD REQUIRES FOREIGN EXCHANGE

The Balance of Payments records every transaction between Australia and the rest of the world for a period, and each of these transactions will either require Australians to **sell the Australian dollar** (in order to buy the right foreign currency for the transaction) or for foreigners to **buy Australian dollars** in exchange for their foreign currency (in order to buy Australian dollars to pay for the Australian good or service).

This is very important.

Every Balance of Payments transaction where money leaves Australia, that is all of those transactions where the economic transaction is recorded as negatives and called **debts**, involve a sale of the AUD (supply) in the foreign exchange market. That is every economic transaction that results in money leaving Australia is recorded as a debit and involves a **supply** of the AUD in the market for the AUD.

Every Balance of Payments transaction where the economic transaction results in money coming into Australia, that is all of those transactions where the economic transaction is recorded as positives and called **credits**, involve a purchase (demand) of the AUD in the foreign exchange market. That is every economic transaction recorded as a credit involves a **demand** for the AUD in the market for the AUD.

The market for the AUD (the foreign exchange market) is like any other market - supply curve, demand curve, price mechanism determining equilibrium price and quantity.

For **trade flows**, this means that exports, where money comes into Australia, are recorded as a **positive**, are called **credits**, and involve a **demand for the AUD** by the foreign person seeking to buy products from Australia. For imports, where money goes out of Australia, these are recorded as **negatives**, are called **debts**, and involve a **supply of the AUD** in the foreign exchange market (in order to purchase foreign currency).

Financial flows are treated similarly - an economic transaction which results in an inbound financial flow are positives, called credits, and involve demand for the AUD. All economic transactions which are outbound financial flows are negatives, called debts, and involve supply of the AUD in the foreign exchange market.

The graphic below shows all of the financial flow economic transactions which are demands for the AUD in the foreign exchange market, and all of the financial flow economic transactions which are supplies of the AUD in the foreign exchange market.

Remember that the market for the AUD is a market like any other. There is supply of the AUD by people wanting to sell the AUD in exchange for foreign currency. There is demand for the AUD, which is people wanting to sell foreign currency in exchange for the Australian dollar. Where the supply and demand curves cross, the price mechanism will determine the equilibrium price and quantity for the AUD (the exchange rate). The price axis in this market for the AUD is the exchange rate - the value of the AUD expressed in a foreign currency, and the quantity axis in this market for the AUD is the quantity of AUD that will be demanded and supplied at equilibrium.



Important link

Every transaction which is recorded in the balance of payments requires the foreign exchange market to convert the AUD to other currencies, or other currencies to AUD, in order to complete the transaction.

Transaction results in money in

Credit, positive, demand for the AUD.

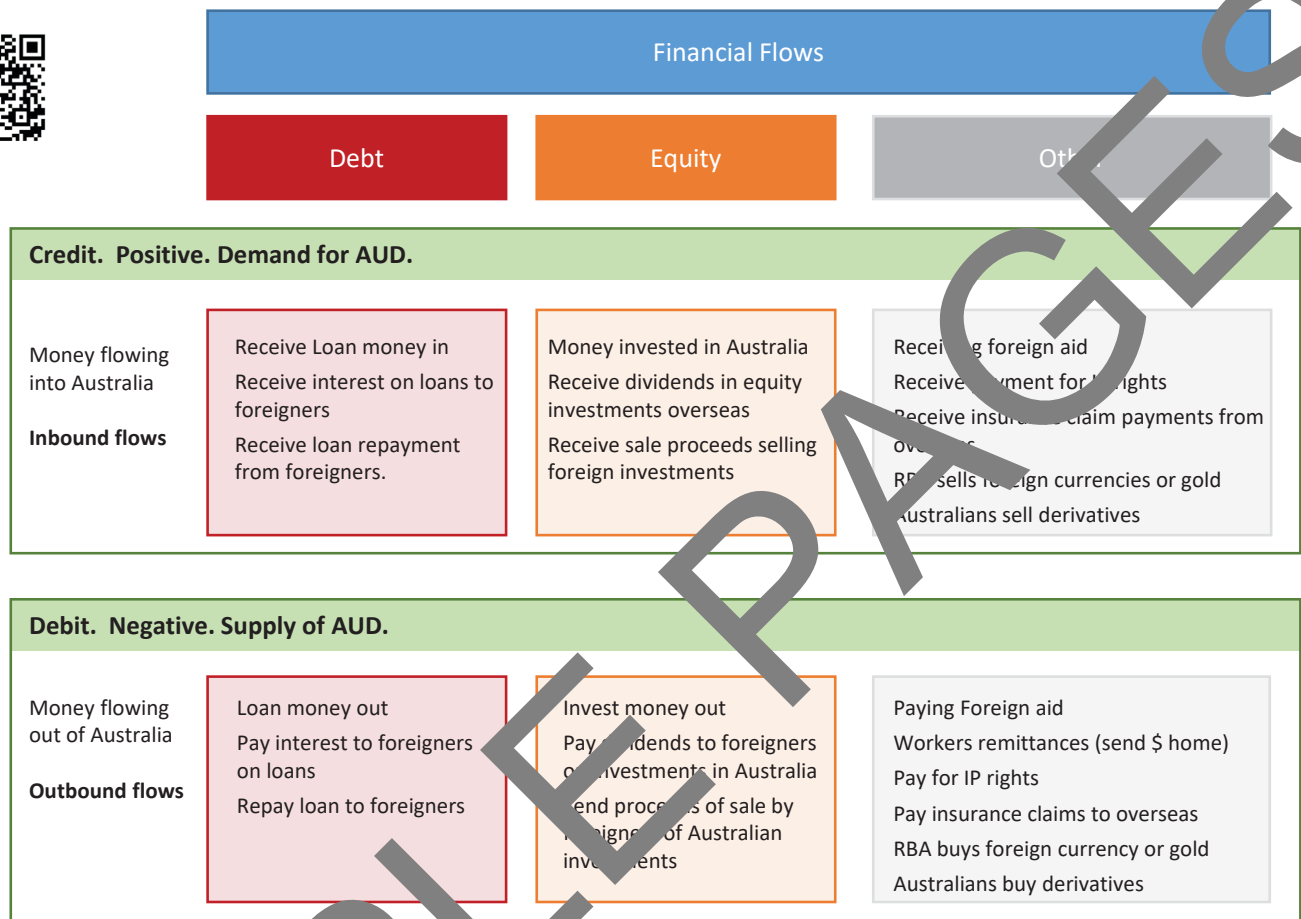
Transaction results in money out

Debit, negative, supply of the AUD.

FIGURE 6.2: Types of financial flow economic transactions indicating BOP treatment



Video F62



Australia has a **floating exchange rate**, which means the government does not intervene in the market to set the value of the Australian dollar (which is called a **fixed** exchange rate regime). Having a floating exchange rate, this means that the market forces of supply and demand interact in the market, and the price mechanism determines the equilibrium price and quantity. At the equilibrium price, the quantity demanded is the same as the quantity supplied.

Now, the fact that Australia has a floating exchange rate means that the **market balance of payments** balances, in addition to the **accounting balance of payments** balancing. The difference between those two concepts is outlined in the table below:

Accounting balance of payments

The record of all transactions between Australia and the rest of the world for a period using the double entry recording process outlined in the IMF Balance of Payments Manual. The balance is the Current Account + the Capital and Financial Account = 0. The accounting balance is zero as a result of the double entry recording required.

Market balance of payments

The balance of supply and demand for a country's currency in the foreign exchange market. The balance is supply less demand. In a floating exchange rate regime supply equals demand, and therefore the market balance is zero.

See *Balance-of-Payments Accounting and the Foreign-Exchange Market*, Thirlwall and Gibson (1992) Palgrave Macmillan, London

The balance of payments, recording every transaction between Australia and the rest of the world for a period, therefore records every supply and demand of the Australian dollar. In the **market balance of payments** (supply and demand for the dollar), since:

- economic transactions resulting in cash coming into Australia (demand for the dollar) are recorded as positive and credits, and
- economic transactions resulting in cash leaving Australia (supply of the dollar) are recorded as negative and debits

this means that the total of demand for the dollar equals the total of all supply of the dollar. In a floating exchange rate supply equals demand, and therefore the **market balance of payments also balances**.

Let's assume that there are only imports and exports occurring in a hypothetical economy. The Balance of Payments would record all of the imports as debits, as negatives, and total them. It would also record all of the exports, as credits, as positives, and total them. It would also record the payments as offsetting entries (per the double entry approach).

FIGURE 6.3: Balance of Payments for hypothetical economy (trade only)

	\$billion	
Imports		
Economic transactions (imports) recorded as debits, negative	-32	Debit
Payment for imports recorded as credit, positive	32	Credit
Exports		
Economic transactions (exports) recorded as credits, positive	30	Credit
Receipt of payment from overseas for the export	-30	Debit
Total balance of payments	0	

Credit

Transactions which are recorded as positives in the Balance of Payments and represent demand for the Australian dollar in the foreign exchange market.

Debit

Transactions which are recorded as negatives in the Balance of Payments, and which represent supply of the Australian dollar in the foreign exchange market.

Because of the rules of two entries per transaction (double entry), one for the economic transaction and one for the payment, the balance of payments must balance to zero. Let's add some financial flows to the trade flows for this hypothetical economy. Again, all of the debits (negatives) will have to equal all of the credits (positives) because of the IMF rules for the preparation of the balance of payments. Two columns have been used to clearly show the two entries per transaction, however the total balance of payments is **both** columns combined.

FIGURE 6.4: Balance of Payments for hypothetical economy (trade and financial flows)

Economic transaction entry	\$b		Payment entry	\$b	
Imports	-32	Debit	Pay cash for imports	32	Credit
Exports	30	Credit	Receive cash for imports	-30	Debit
Meet interest obligation	-5	Debit	Pay cash as interest	5	Credit
Foreign aid	-3	Debit	Pay cash for foreign aid	3	Credit
Borrow money from overseas	10	Credit	Receive cash as a result of loan	-10	Debit
Foreigner buys Australian shares	15	Credit	Receive cash on sale of asset	-15	Debit
Australian purchases foreign land	-19	Debit	Pay cash to purchase foreign land	19	Credit
Total balance of payments	0	(for all entries recorded - i.e. balance = 0)			

Current Account

That part of the Balance of Payments which records economic transactions which are irreversible.

Capital and Financial Account

That part of the Balance of Payments which records economic transactions which are reversible in the future.

What we notice here is that a record of all of the transactions between an economy and the rest of the world for a period, using the double entry approach of the IMF (recording the economic transaction, and the payment separately), will add to zero. It must do so given the double entry nature of the rules for recording the balance of payments.

However, analytically, the zero total for the Balance of Payments does not assist very much in determining whether the economy will be able to meet its financial obligations to the rest of the world in the future. So far the presentation is accurate, but not analytically helpful.

In order to analyse the ability of an economy to meet its financial obligations to the rest of the world, this listing adding to zero is **broken apart into two lists**, separating those transactions which are **irreversible** (i.e. the money is never coming back) and those transactions which are **reversible** (i.e. where the money may be returned to the economy from overseas in the future). By considering the irreversible transactions one can see how the economy is performing in its transactions with the rest of the world. Special language is used for these two lists, as indicated in the table below.

	Current Account	Capital & Financial Account
Type of economic transactions recorded in list (account)	Irreversible transactions	Reversible transactions
Contents recorded	Debits and credits of irreversible economic transactions	Debits and credits of reversible economic transactions

Irreversible economic transactions include flows like imports and exports, or the payment of interest or dividends. When interest is paid to the lender the lender is not going to reverse the transaction and pay the interest back to the borrower.

On the other hand, **reversible economic transactions** include flows like loans or investments. At some point in the future the loan will be repaid, and the flow of money reversed when the money returning to the country that made the loan, or when foreign investments are sold, the money returns to the investor in the different country - it is reversible.

Using the convention of having two accounts in the Balance of Payments:

- the **Current Account** for irreversible transactions and
- the **Capital and Financial Account** for reversible transactions,

the Balance of Payments for our hypothetical economy on the previous page would be constructed as below:

Current Account	\$b	Capital & Financial Account	\$b
Balance on goods and services		Capital Account	
Imports	-32	Purchase of IP rights	0
Exports	30		0
	-2		
Primary income		Financial Account	
Interest paid overseas	-5	Portfolio investment inbound loan	10
		Portfolio investment inbound	0
		Portfolio investment outbound	-19
Secondary income		Other investment	
Foreign aid	-3	Payment made for imports	32
		Payment received for exports	-30
		Payment for interest	5
		Payment of aid	3
		Receive cash as a result of loan	-10
		Receive cash on sale of asset	-15
		Pay cash to purchase foreign land	19
		Total other investment	4
		Total Financial Account	10
Total Current Account	-10	Total Capital & Financial Acc	10

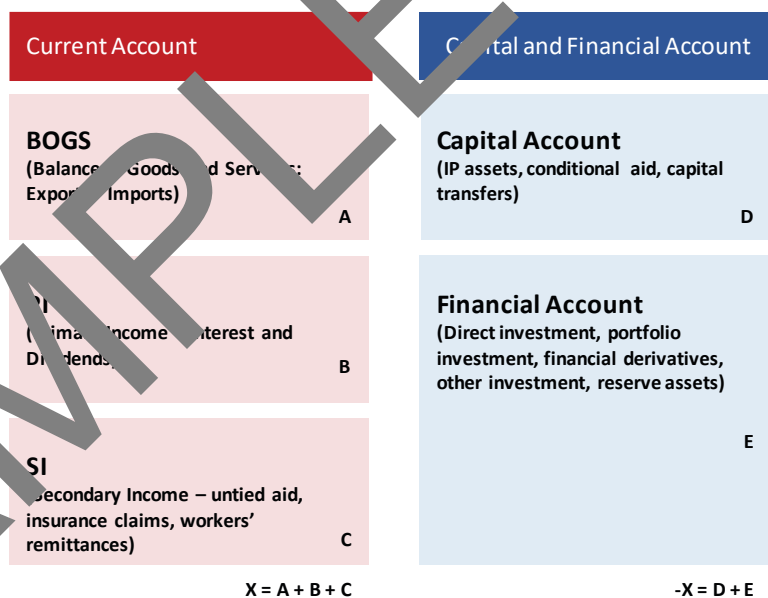
This next page collates down the detail of the **Other Investment category** in the financial account (which records all of the payment entries for all of the various transactions) to show a more typical layout for the balance of payments constructed in accordance with the IMF rules.

Other investment

Since the second of the double entries for most of the economic transactions (i.e. the second entry for imports, exports, loans, interest etc) is recorded in other investment there are many, many entries in other investment. Typically only a total is shown for other investment, like the other categories, however the detail is shown here to make clear the role of the other investment category in the double entry accounting approach required by the IMF Balance of Payments Manual.

Current Account		\$b	Capital & Financial Account		\$b
Balance on goods and services			Capital Account		
Imports		-32	Purchase of IP rights		0
Exports		30			
		-2			
Primary income			Financial Account		
Interest paid overseas		-5	Portfolio investment inbound loans		10
			Portfolio investment inbound		15
			Portfolio investment outbound		-19
			Other investment		4
					10
Secondary income					
Foreign aid		-3			
Total		-10	Total		10

FIGURE 6.5: Structure of the Balance of Payments



Set out in this way (which is what the IMF requires), we can see that in this economy:

- the economy imports more than it exports, resulting in a negative balance (-\$2b) on the Balance on Goods and Services (also called the trade balance)
- because of significant interest paid on previous borrowings (-\$5b), the economy has a small negative Primary Income balance of -\$5b (also referred to as negative Net Primary Income)
- the economy provides foreign aid overseas of \$3b
- the Current Account (the total of the irreversible transactions) is -\$10b, which is referred to as a Current Account Deficit of \$10b
- the -\$10b result in the Current Account (the Current Account Deficit) is financed by significant inbound loans (\$10b) and inbound direct investment (\$15b) offset somewhat by investment in other countries of \$19b and the other investment transactions. This surplus in the Financial Account means this economy has **increased its net foreign liabilities** by \$10b (the amount of the CAD) as a result of more borrowing and inbound investment than outbound investment in this period.

Structurally then, the Balance of Payments, as prescribed by the IMF in the *Balance of Payments Manual*, has two accounts, with distinct subsets in these accounts. Those elements are indicated in Figure 6.5. It is very important for students to be robust on the following in relation to the Balance of Payments:

- the Balance of Payments is a record of all of the transactions between Australia and the rest of the world for a period.
- in the Balance of Payments:
 - transactions where money flows into Australia are called credits, recorded as a positive, and are demands for the AUD
 - transactions where money flows out of Australia are called debits, recorded as a negative, and are supplies of the AUD
- as a result of the double entry rules in the IMF's Balance of Payments Manual, the accounting balance of payments balances (i.e. $CA + KFA = 0$). If a country has a floating exchange rate, the market balance of payments will also balance (i.e. supply of the currency + demand of the currency = 0).
- the Balance of Payments is divided into two list (accounts) called the **Current Account** for irreversible transactions, and the **Capital and Financial Account** for reversible transactions.
- Within the **Current Account** there is a three element structure (three boxes) being:
 - **Balance on Goods and Services** (BOGS) which is $X - M$
 - **Primary Income** (PI or Net Primary Income NPI) which records interest paid and received, and dividends paid and received, during the period. It also includes payments to Australian workers from overseas persons, and payments to the rest of the world as wages to foreign workers.
 - **Secondary Income** (irreversible flows of money which are not exports or imports, and are not payments or receipts of interest or dividends). In other words, this is a residual category that records any irreversible transaction which does not qualify as being within BOGS or NPI.

- Within the **Capital and Financial Account** there is a two element structure:
 - **Capital Account** which is reversible money flows which are not defined as financial flows (debt, equity, derivatives, reserve assets etc). These include the purchase and sale of intellectual property assets (i.e. trademarks) and the payment of aid on specific conditions such that if the conditions are not met the funding is reversed (called conditional aid, or tied aid).
 - **Financial Account** which is the making of, and repayment of, loans (debt) and equity flows - the making of international loans, the repayment of international loans and the cross border purchase of assets (shares and bonds). This account also includes categories for other investment (which contain the second of the double entries for most of the transactions), the purchase and sale of derivatives and the buying and selling of gold and foreign exchange by the central bank (the RBA) - referred to as reserve assets.

Students **must** be able to draw a representation of the two accounts of the Balance of Payments, and the names of the categories within both of the accounts.

As indicated in Figure 6.5, the **Current Account** is BOA, PI and SI. The current account balance is then simply adding up the numbers for BOA, PI and SI. If the total of the current account is a negative number, we say that the economy has a Current Account Deficit (CAD). If the total of the current account is a positive number we say that the economy has a current account surplus.

The **Capital and Financial Account** has only two elements, the Capital Account, and the Financial Account. The balance of the Capital and Financial Account is then simply adding up the numbers for the Capital Account and the Financial Account. If the total of the Capital and Financial account is a negative number, we say that the economy has a Capital and Financial Account deficit. If the total of the Capital and Financial Account is a positive number, we say that the economy has a Capital and Financial Account surplus.

Importantly, because of the double entry process required by the IMF Balance of Payments Manual the balance of payments balances - that is the totals for each account are equal and opposite (CA + KFA = 0).

This is indicated in the graphic by the total of the Current Account being X, and the total of the Capital and Financial Account being -X. Equal and opposite.

Debit	Credit
+	-
-	+
+	-
+	-
-	+
-	+

Double - entry accounting

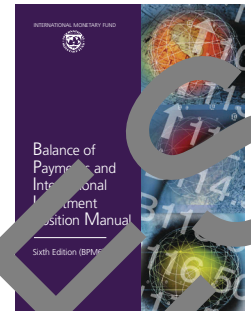
Requires that every transaction in the balance of payments is recorded in at least two accounts
(IMF Balance of Payments Manual)



Figure 6.5 is in line with the structure in the *Balance of Payments Manual* of the IMF, and is the methodology used by the ABS in preparing ABS 5302.0 - *Balance of Payments and International Investment Position* which is published quarterly. You can google ABS balance of payments and very easily locate this ABS series.

Australia's most recent Balance of Payments is below:

**FIGURE 6.6: Australia's detailed Balance of Payments (\$b)
Year ended 30 June 2021**



CURRENT ACCOUNT

	2019/20	2020/21
Goods and services		
Goods		
Exports (credits)	383.1	396.0
Imports (debits)	-310.8	-320.0
	72.3	76.0
Services		
Exports (credits)	92.3	61.3
Imports (debits)	-87.2	-48.2
	5.1	13.1
BOGS	77.4	89.1

Primary income		
Inbound interest and dividends (credits)	68.5	65.0
Outbound interest & dividends (debits)	-109.2	-77.3
	-40.7	-12.3

Secondary income		
Inbound (credits)	10.1	9.7
Outbound (debits)	-11.5	-12.0
	-1.4	-2.3

Current Account **35.3 68.0**

Source: ABS 5302

CAPITAL & FINANCIAL ACCOUNT

	2019/20	2020/21
Capital Account		
Acquisitions/disposals of IP assets		
Sales of IP assets (credits)	0.0	0.0
Purchases of IP assets (debits)	-0.3	0.0
	-0.3	0.0
Capital transfers		
Capital transfers in (credits)	0.0	0.0
Capital transfers out (debits)	-0.8	-0.7
	-0.8	-0.7
Capital Account	-1.1	-0.7

Financial Account		
Direct investment		
Net new investment overseas	-11.3	-4.5
Net new investment in Australia	41.0	14.6
	29.7	10.1

Portfolio investment		
Net new investment overseas	-13.0	-173.8
Net new investment in Australia	0.3	116.7
	-12.7	-57.1

Financial derivatives **-8.2 -19.1**

Other investment **-63.5 13.2**

Reserve assets **18.5 -4.2**

Total Financial Account **-36.2 -57.1**

Capital & Financial account **-37.3 -57.8**

Net errors and omissions **2.0 -10.2**

Capital & Financial Account **-35.3 -68.0**



Link
F66



Simulator
SBOP

The **detailed** Balance of Payments above provides details in relation to the debits and credits of each category in BOGS and the Financial Account rather than the net aggregates which are shown in the **summary** Balance of Payments on the next page (for the same years).

**FIGURE 6.7: Australia's summary Balance of Payments (\$b)
Year ended 30 June 2021**

CURRENT ACCOUNT		2019/20	2020/21	CAPITAL AND FINANCIAL ACCOUNT		2019/20	2020/21
Goods and services				Capital account			
Goods		72.3	76.0	Acquisitions/disposals of IP assets		-0.3	0.0
Services		5.1	13.1	Capital transfers		0.3	0.0
BOGS		<u>77.4</u>	<u>89.1</u>				
Primary income				Financial account			
Inbound interest and dividends (credits)		68.5	65.5	Direct investment		29.1	10.1
Outbound interest & dividends (debits)		<u>-109.2</u>	<u>-84.3</u>	Portfolio investment		10.7	-57.1
		-40.7	-18.8	Financial derivatives		-8.2	-19.1
Secondary income				Other investment		-63.5	13.2
Inbound (credits)		10.1	9.7	Reserve assets		<u>18.5</u>	<u>-4.2</u>
Outbound (debits)		<u>-11.5</u>	<u>-12.0</u>			-36.2	-57.1
		-1.4	-2.3	Capital and Financial Account		-37.3	-57.8
Current Account		35.3	68.0	Net errors and omissions		2.0	-10.2
				Capital and Financial Account		-35.3	-68.0

Source: ABS 5302

Some things to notice:

- the IMF Balance of Payments Manual notes that although the balance of payments account, should, by definition, be in balance (i.e. equal and opposite as a result of the double entry system of recording), imbalances result in practice from imperfections in source data and compilation. The IMF therefore suggest, where necessary, a balancing item titled net errors and omissions be added to the capital and financial account to ensure that the balance of payments balances. The ABS refers to this item as a balancing item (ABS 5301) to reflect the underlying double entry accounting system used in the balance of payments, where the two accounts must balance.

The syllabus requires students to know not only the structure of the Balance of Payments but also "links between key Balance of Payments categories". Those links are indicated below.

Links between key Balance of Payments categories

There are three key links for students to recognise and be able to articulate:

- as a result of the double entry accounting system required by the IMF's Balance of Payments Manual, the Current Account is **equal and opposite** to the Capital and Financial Account.
- if a country borrows from overseas (i.e. inbound loans to finance a CAD) this results in future NPI debits and a worsened CAD, which all other things being equal will require further foreign funding to pay. An increase in foreign loans (NFD) will worsen the CAD in the future.
- a country's Net Foreign Liabilities (also known as the Net International Investment Position) at the end of the period is equal to NIIP at the beginning of the period, plus the CAD plus net changes in the financial account other than other investment, and adjustments for movements in asset values, exchange rates, and volumes during the period.

RBA resources

As part of its commitment to, and investment in, education, the RBA has produced some excellent explanatory resources in relation to a range of economic concepts.

These can easily be located by googling RBA education.

Students should read the Explainer on:

- The Balance of Payments
- Australia and the Global Economy - the Terms of Trade boom



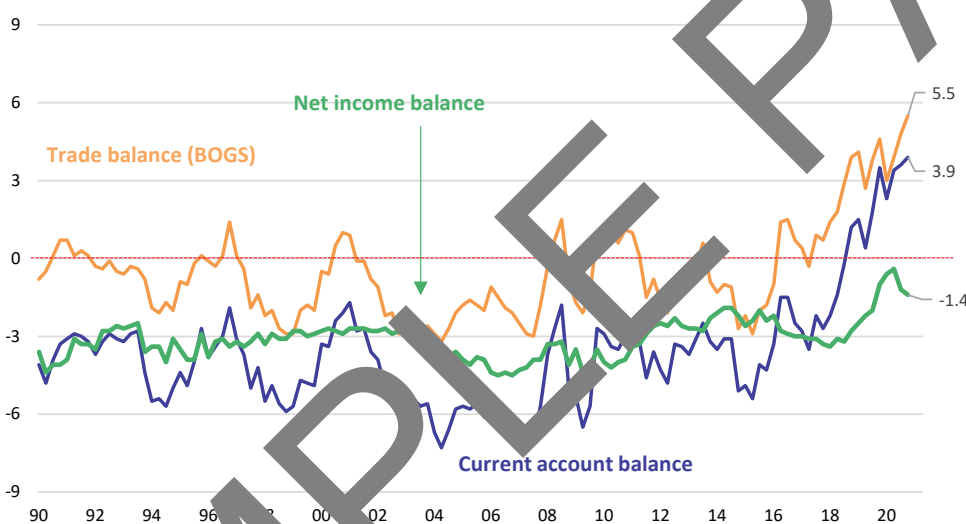
Link
L69

CAD TRENDS

Whilst the previous two pages indicated the current state of Australia's Balance of Payments in the last two years, the syllabus requires students to have an understanding of the trends in the Current Account over the last several decades. Since the CAD is merely the addition of the sections within the account (BOGS, NI, SI) this means that students need to have an understanding of trends in each of those components of the Current Account.

This brings us to one of the most important charts which the RBA publishes in their excellent, continuously updated chart pack on their website. On the tab titled "Balance of Payments and External Position" the fifth graph in the section is titled "Current Account Balance" and is a graph ALL HSC economics students must both be familiar with, and be able to explain. We will first introduce and orient to the graph, then in the next page we will use a larger version annotated to show the major periods and impacts.

FIGURE 6.8: Australia's Current Account - Quarterly (%GDP)



So, this looks like a rather complicated graph.

Ignore everything else and just look at the yellow line, marked **Trade balance**. This is BOGS. Note that it is generally below 0% GDP, which means that exports are typically less than imports, at a maximum of approximately 3% of GDP. Note that BOGS is quite cyclical (up and down) but exports were rarely greater than imports (although they are currently). Compare the post 2017 level to the previous readings - the trade balance is at a record high.

Secondly, ignore everything else and just look at the green line, marked **Net income balance**. This is NPI. Note that it is not really cyclical, and was steady at around -3% GDP, then got worse, then got better - but much less volatile than BOGS, and a bigger percentage of GDP than BOGS.

Finally, ignore everything other than the blue line marked **Current account balance**. This just adds BOGS and NPI lines and secondary income (SI) (SI is not here because it is so small). So the blue line is the CAD, and is mostly negative in this period because of the level of NPI, and the cyclical nature of the CAD comes from the cyclical nature and shape of BOGS. Compare the CAD in 2019 - 2021 to the previous readings - what do you notice?



Link
to
RBA
Chart
Pack

RBA Chart Pack

An outstanding free resource published by the RBA which should be on every economics students' bookmarks bar in their browser. It can easily be found by googling rba chart pack.

The graph here uses the same data and colours as the RBA chart, however at time of press the RBA chart was not yet updated to reflect Australia's current account result for the June 2021 quarter which was Australia's highest current account surplus since 1959.

Students should also review the excellent RBA explainer, Trends in Australia's Balance of Payments

%GDP

Note that BOGS, NPI and the CAD are generally expressed as a percentage of GDP. This does not mean that they are a component of GDP - it is just a way of comparing the size of these flow variables to the size of GDP to enable comparisons between time periods and between economies. These are not elements of AD - they are not components of GDP.

FIGURE 6.9: The phased trends in the CAD (quarterly)
MIB Mark I > GFC > MIB Mark II > Rebalancing and MEB > COVID



Video F69



CAD simply adds BOGS, NPI and SI. Other than the June Qtr 2019 onwards, always a CAD in this period.

2002-2008 Mining Investment Boom Mark 1
China industrialises
Demand for iron ore, coal increases
Terms of Trade improves
AUD appreciates
Mining exports increase
Non mining exports decrease
Large imports as part of mining construction projects
Net exports a drag on growth
BOGS worsens during mining
Investment boom Mark 1
Increase borrowing to fund mining construction projects
Increased NFD, increased NPI debits
CAD worsens to 7.2% GDP (Qtrly)

2008/9 GFC
Demand for iron ore, coal softens
Terms of Trade deteriorates
AUD depreciates
Large imports as part of mining construction projects
Non mining imports reduce
BOGS improves as imports reduce

2009-2012 Mining Investment Boom Mark 2
Same influences as MIB1
TOT continues to rise to 140 year record highs
AUD continues to appreciate
Except that lower global interest rates mean that even though larger NFD, lower NPI debits therefore NPI improves.
Net exports again a drag on growth and trade balance worsens.

2012- Post commodity peak rebalancing
More supply softens commodity prices
Shipping higher volumes at lower prices
AUD depreciates, increasing non mining exports, increase import costs for cars, electronics etc no longer produced in Australia
Mining export boom commences – LNG exports and commodity price bounce leading to BOGS surplus
Global interest rates stay low keeping NPI moderated

COVID reduces imports more than exports, increase trade balance.

CAD best in 30 years.

To get a deeper understanding of the trends in Australia's Current Account we will now engage with a high quality paper by Treasury.



Shared Learnings: Indonesia's and Australia's Current Account Balances

Ford, Alfirman, Irawan

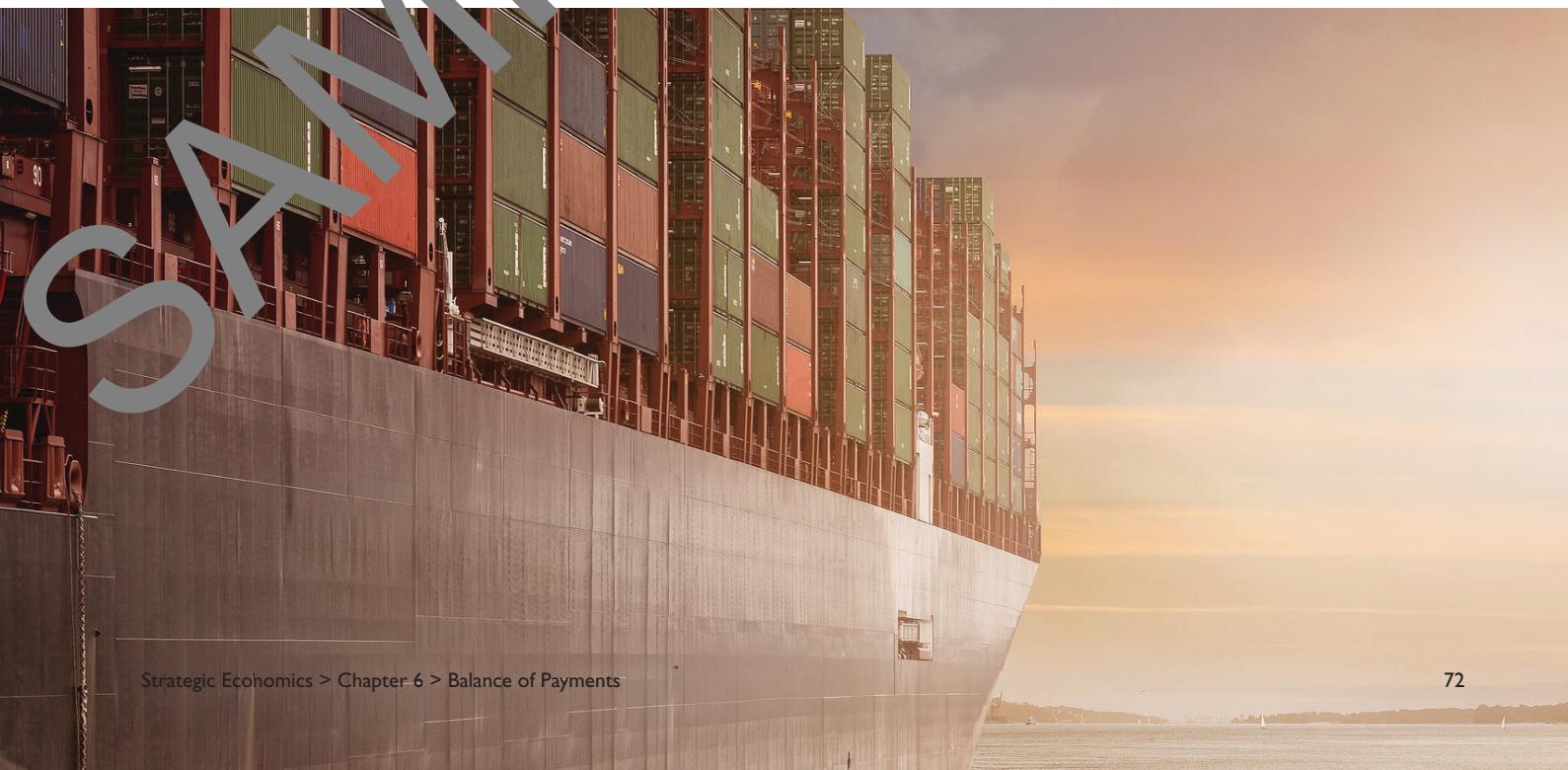
Economic Roundup Issue 1, 2015

https://static.treasury.gov.au/uploads/sites/1/2017/06/Roundup_01-2015_article2_Indonesia.pdf

Australia ... has run a CAD for the majority of the statistical record, weathering both the Asian and Global Financial Crises without significant capital flight or serious impediments to real economic performance. The perception of Australia's CAD has changed over this time. Australia's current account position in recent decades was not a significant concern, due to the move away from a fixed exchange rate and a trade deficit that was unmet by capital inflows. Empirical experience suggested that under a fixed exchange rate regime with limited capital mobility, large and persistent CADs were unsustainable, and left the economy vulnerable to changes in market perceptions of risk.

During the 1980s, various arms of macroeconomic policy in Australia were partly targeted toward managing the CAD, under the assumption that foreign borrowings were unsustainable. These policies ultimately proved to be an inefficient means of managing the economy. After the floating of the dollar, academics such as Makin (1988), Pitchford (1989) and Corden (1991) challenged the view that Australia's persistent CAD was 'unsustainable'. Instead, they argued that the CAD was a result of optimal consumption and investment decisions made by 'consenting adults'.

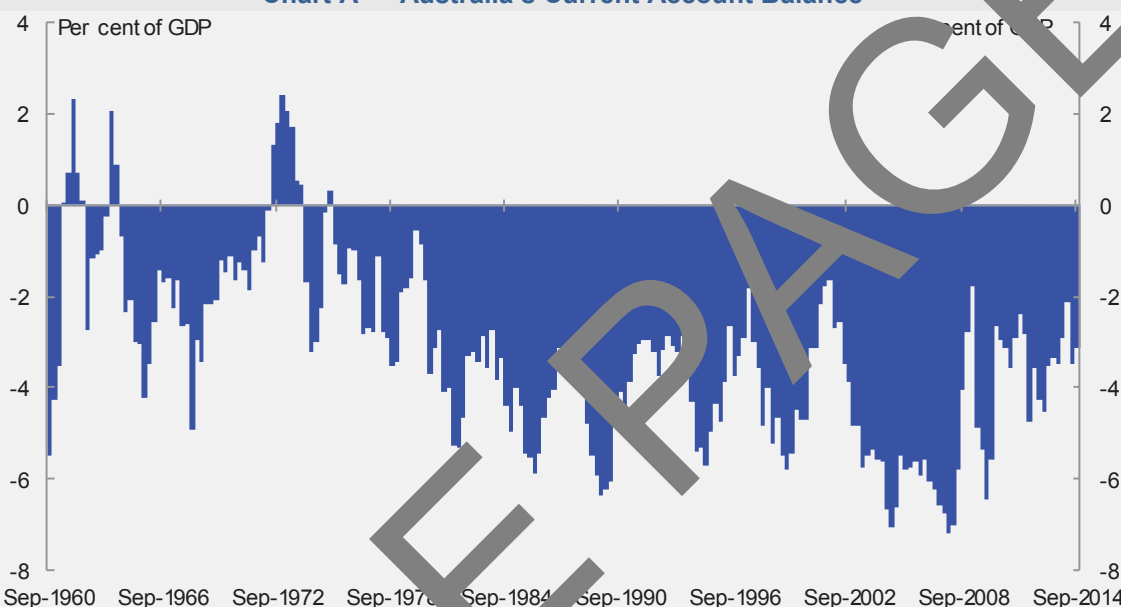
This paper, posits that a CAD itself is not necessarily 'bad'; rather it is the fundamental factors that drive a CAD that determine whether or not it is a 'sustainable' position for a country.



Box 1: Australia's experience with CADs

Australia's current account has been in deficit almost continually since official statistics began in the late-1950s (Chart A), though research by the Reserve Bank of Australia points to the current account being more often in deficit as far back as the mid-1850s (Belkar, Cockereil and Kent, 2007).

Chart A — Australia's Current Account Balance



Source: ABS cat. no. 5302.0 and 5206.0.

Despite Australia's prolonged CADs, periods of capital flight have been limited. The most notable occurred during the 1890s depression after significant inflows had contributed to a property bubble. When it burst, foreign capital retreated for much of the decade – except for inflows related to the West Australian gold rush – which contributed to a banking crisis that resulted in the closure of roughly half the nation's banks (Belkar et al. 2007). Capital inflows also slowed during the 1930s depression but less dramatically than in the previous episode. Fears that Australia would be unable to meet repayments on Treasury bills issued in London and due in mid-1931 dissipated following a raft of measures, many of which entailed greater austerity, culminating in a conference of federal and state ministers that became known as the Premiers' Plan (Gibson 1951, Gruen and Clark, 2009).

There was less concern with the current account during the period of capital controls enacted during the Second World War, which lasted into the 1970s. As the controls were progressively removed, the CAD increasingly became problematic due to the fixed and subsequent crawling peg exchange rate regimes, given the finite level of foreign exchange reserves and periods of intense speculation that the currency would have to be devalued. After the floating of the Australian dollar in December 1983, the CAD increased, with the government focusing on fiscal consolidation and microeconomic reform to improve Australia's international competitiveness, though only in part because of their concerns about the balance of payments. Meanwhile, for a brief period in the 1980s, the balance of payments became one of several explicit targets of monetary policy.

Box 1: Australia's experience with CADs continued

As the economic reforms of the 1980s began to reduce rigidities within the economy, concerns about the CAD gradually diminished. The steady reduction in tariffs and other trade barriers exposed domestic industries to greater international competition, labour market reforms and subsequent policies enhanced labour market flexibility, and financial deregulation (including by allowing foreign-owned banks to compete for corporate and (eventually) deposit taking business) along with reforms to the financial regulatory framework provided an environment for the private sector to manage its own financing risks.

Monetary policy eventually moved to an inflation targeting regime and the benefits of a freely floating exchange rate in absorbing some of the impact of international shocks became apparent. Through time, fewer official foreign exchange reserves were required, though there were still episodes of heavy intervention in 2001 and 2008. In recent years, Australia has had relatively high levels of saving in comparison to other developed economies, with household savings increasing since from the mid-2000s. In addition, Australia's CAD has been one of the drivers for running conservative fiscal policy – ensuring the public sector does not exacerbate the private sector position. As such, rather than being the product of insufficient domestic savings, Australia's CAD is better characterised as being the result of ample investment opportunities attracting foreign capital (Gruen and Sayegh, 2005 and Debelle, 2011), which became particularly apparent during the commodities boom.

Concerns about Australia's current account are still periodically raised by international organisations, such as the International Monetary Fund and the credit rating agencies, though these concerns mainly focus on how Australia's current account and the accumulated net foreign liabilities from past CADs are financed. The Australian banking system has traditionally intermediated a significant proportion of the CAD, though the recent mining investment boom saw an increase in direct investment by mining companies. While a significant proportion of Australian bank funding is sourced offshore, the foreign exchange risk is almost completely hedged (Charts B and C).

Chart B — Gross foreign currency exposure by sector (per cent of GDP)

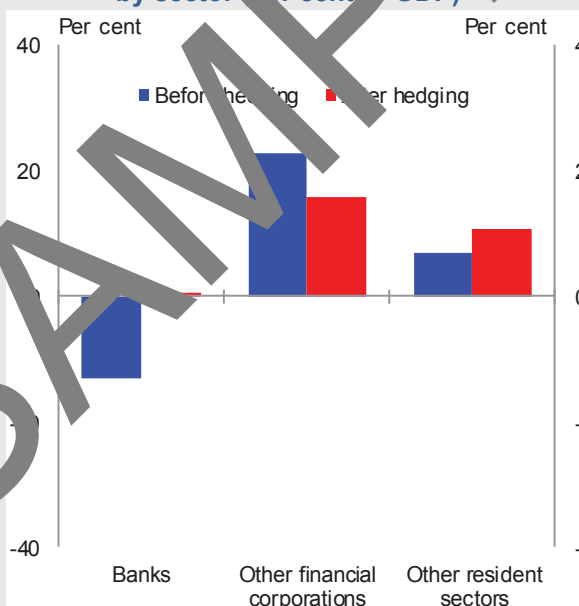
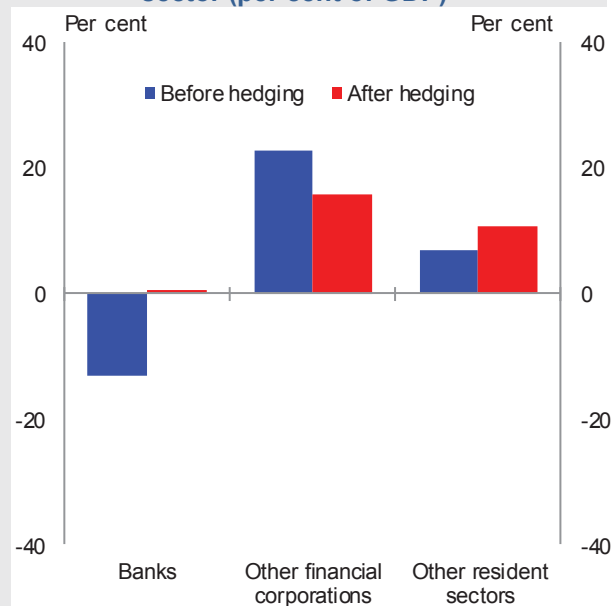


Chart C — Net foreign currency exposure by sector (per cent of GDP)



Source: Bank for International Settlements and ABS cat. No. 5206.0.

Box 1: Australia's experience with CADs continued

Moreover, net of hedging, Australia's foreign currency exposures are on the asset side of the balance sheet, in part reflecting the benefits of international diversification and Australia's expanding pool of superannuation assets. Accordingly, Australian dollar depreciation improves the net position. Since the global financial crisis, Australian banks have increased their sources of domestic funding, mainly in the form of deposits, and have retired some of their foreign debt.

This shift has taken place even though Australian banks have had little difficulty in accessing foreign funding – with the exception of the height of the GFC. Over this time, the term maturity of foreign debt has been lengthened, which has increased the stability of banks' foreign funding and reduced rollover risk. In addition, the share of foreign debt denominated in Australian dollars has been increasing, though diversity in funding sources by currency remains.

Historical performance of Australia's current account

Source: ABS 5206 Table 40, GDP at Current Prices Table 3. BOGS, NPI and CAD divided by GDP.

Year	BOGS \$b	NPI \$b	CAD \$b	BOGS %GDP	NPI %GDP	CAD %GDP	Year	BOGS \$b	NPI \$b	CAD \$b	BOGS %GDP	NPI %GDP	CAD %GDP
1960	-0.2	-0.3	-0.3	-1.1%	-1.6%	-1.9%	1991	-0.6	-16.8	-16.7	-0.1%	-4.0%	-4.0%
1961	-0.5	-0.3	-0.6	-2.6%	-1.5%	-3.3%	1992	1.2	-14.3	-12.9	0.3%	-3.4%	-3.1%
1962	0.2	-0.2	0.2	1.3%	-1.2%	0.5%	1993	-1.4	-12.9	-14.2	-0.3%	-2.9%	-3.2%
1963	-0.2	-0.3	-0.3	-0.8%	-1.5%	-1.6%	1994	-2.4	-13.3	-15.6	-0.5%	-2.9%	-3.4%
1964	0.2	-0.3	0.1	1.2%	-1.4%	0.4%	1995	-9.7	-17.1	-26.8	-2.0%	-3.5%	-5.4%
1965	-0.5	-0.3	-0.6	-2.0%	-2.0%	-2.7%	1996	-2.4	-18.7	-20.7	-0.5%	-3.5%	-3.9%
1966	-0.5	-0.3	-0.7	-2.2%	-1.5%	-3.1%	1997	1.5	-18.7	-16.8	0.3%	-3.4%	-3.0%
1967	-0.3	-0.3	-0.5	-1.0%	-1.2%	-2.0%	1998	-5.2	-18.6	-23.4	-0.9%	-3.2%	-4.0%
1968	-0.6	-0.5	-1.0	-2.1%	-1.6%	-3.5%	1999	-15.2	-19.4	-34.4	-2.4%	-3.1%	-5.5%
1969	-0.5	-0.5	-0.9	-1.4%	-1.6%	-2.6%	2000	-14.3	-19.1	-33.4	-2.2%	-2.9%	-5.1%
1970	-0.1	-0.6	-0.6	-0.2%	-1.6%	-1.5%	2001	0.6	-19.8	-19.6	0.1%	-2.8%	-2.8%
1971	-0.1	-0.6	-0.6	-0.2%	-1.5%	-1.5%	2002	-0.1	-20.5	-20.3	0.0%	-2.7%	-2.7%
1972	0.4	-0.6	-0.6	0.9%	-1.3%	-0.2%	2003	-16.9	-22.6	-39.3	-2.1%	-2.8%	-4.9%
1973	1.6	-0.7	1.0	3.1%	-1.3%	2.0%	2004	-23.4	-24.6	-47.4	-2.7%	-2.9%	-5.5%
1974	0.0	-0.7	-0.7	-0.1%	-1.1%	-1.1%	2005	-25.3	-34.3	-60.6	-2.7%	-3.7%	-6.6%
1975	-0.3	-0.7	-1.0	-0.5%	-1.0%	-1.3%	2006	-18.1	-38.8	-57.7	-1.8%	-3.9%	-5.8%
1976	0.1	-1.2	1.1	0.1%	-1.4%	-1.4%	2007	-17.9	-48.5	-66.6	-1.6%	-4.5%	-6.1%
1977	-0.6	-1.2	-2.1	-0.6%	-1.4%	-2.2%	2008	-30.0	-48.1	-78.0	-2.5%	-4.1%	-6.6%
1978	-1.0	-1.5	-2.7	-1.0%	-1.5%	-2.5%	2009	2.7	-44.2	-42.4	0.2%	-3.5%	-3.4%
1979	-1.2	-1.8	-3.3	-1.0%	-1.6%	-2.7%	2010	-13.4	-50.5	-65.2	-1.0%	-3.9%	-5.0%
1980	-1.7	-2.4	-1.7	0.5%	-1.8%	-1.3%	2011	13.7	-56.9	-45.3	1.0%	-4.0%	-3.2%
1981	-2.8	-2.3	-5.3	-1.8%	-1.5%	-3.5%	2012	-3.7	-45.6	-51.4	-0.2%	-3.0%	-3.4%
1982	-5.8	-2.6	-8.5	-3.3%	-1.5%	-4.8%	2013	-19.9	-38.2	-60.4	-1.3%	-2.5%	-3.9%
1983	-3.8	-2.3	-6.3	-2.0%	-1.2%	-3.3%	2014	-6.8	-41.8	-50.8	-0.4%	-2.6%	-3.2%
1984	-3.0	-4.1	-7.2	-1.4%	-1.9%	-3.4%	2015	-24.8	-33.2	-59.8	-1.5%	-2.0%	-3.7%
1985	-4.8	-5.7	-10.6	-2.0%	-2.4%	-4.5%	2016	-37.8	-39.3	-78.0	-2.3%	-2.4%	-4.7%
1986	-8.0	-6.7	-14.7	-3.1%	-2.6%	-5.6%	2017	10.4	-48.0	-39.2	0.6%	-2.7%	-2.2%
1987	-4.6	-7.6	-11.7	-1.6%	-2.7%	-4.1%	2018	7.0	-57.9	-51.7	0.4%	-3.1%	-2.8%
1988	-2.1	-8.9	-10.6	-0.7%	-2.8%	-3.3%	2019	49.0	-62.5	-14.4	2.5%	-3.2%	-0.7%
1989	-6.7	-12.4	-18.5	-1.8%	-3.4%	-5.0%	2020	77.4	-40.7	35.3	3.9%	-2.0%	1.8%
1990	-7.8	-16.1	-23.4	-1.9%	-4.0%	-5.8%	2021	89.0	-18.8	68.0	4.3%	-0.9%	3.3%