



# Exchange Rates and their Measurement

An exchange rate is a relative price of one currency expressed in terms of another currency (or group of currencies). For economies like Australia that actively engage in international trade, the exchange rate is an important economic variable. Changes in it affect economic activity, inflation and the nation's balance of payments. (See [Explainer: Exchange Rates and the Australian Economy](#).) The Australian dollar is also the sixth most traded currency in foreign exchange markets. There are different ways in which exchange rates are measured and, over the years, there have been different operational arrangements for determining the value of Australia's exchange rate.

## Measuring Exchange Rates

### Bilateral exchange rate

There are many ways to measure an exchange rate. The most common way is to measure a bilateral exchange rate. A bilateral exchange rate refers to the value of one currency relative to another. Bilateral exchange rates are typically quoted against the US dollar (USD), as it is the most traded currency globally. Looking at the Australian dollar (AUD), the AUD/USD exchange rate gives you the amount of US dollars that you will receive for each Australian dollar that you convert. For example, an AUD/USD exchange rate of 0.75 means that you will get US75 cents for every AUD1 that is converted to US dollars.

Bilateral exchange rates are visible in our daily lives and widely reported in the media. Consumers are exposed to them when they travel overseas or when they order goods and services from other countries. Businesses are exposed to them when

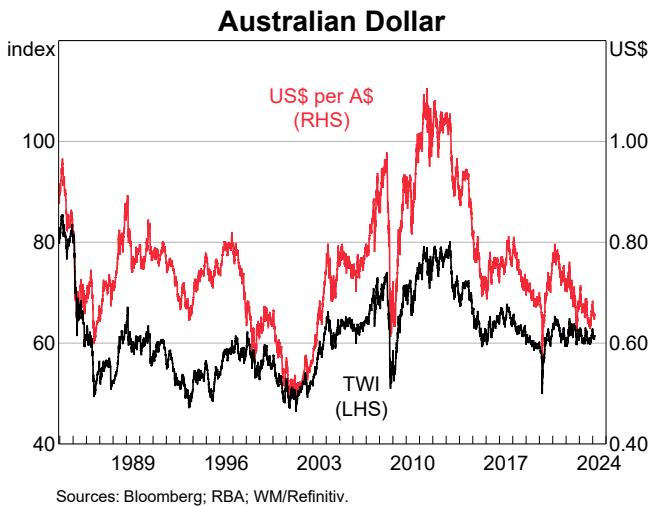
they purchase inputs to production from other countries and enter contracts to export their goods and services elsewhere.

### Cross rates

Bilateral exchange rates also provide a basis for calculating 'cross rates'. A cross rate is an exchange rate calculated by reference to a third currency. For instance, if the exchange rate for the euro (EUR) against the US dollar is known as well as for the Australian dollar against the US dollar, the exchange rate between the euro and the Australian dollar (EUR/AUD) can be calculated by using the AUD/USD and EUR/USD rates (that is,  $EUR/AUD = EUR/USD \times USD/AUD$ ).

### Trade-weighted index (TWI)

While bilateral exchange rates are the most frequently quoted exchange rates (and are most likely to be quoted in the press), a trade-weighted index (TWI) provides a broader measure of general trends in a currency. This is because a TWI captures the price of a domestic currency in terms of a weighted average of a group or 'basket' of currencies (rather than a single foreign currency). The weights of each currency in the basket are generally based on the share of trade conducted with each of a country's trading partners (usually total trade shares, but import or export shares can also be used). As a result, a TWI can measure whether a currency is appreciating or depreciating on average relative to its trading partners. A TWI generally fluctuates less than bilateral exchange rates because movements in the bilateral exchange rates used to construct a TWI will often partly offset each other.



## Exchange Rate Regimes

There are numerous exchange rate regimes a country may choose to operate under. At one end of the spectrum a currency is freely floating, and at the other end it is fixed to another currency using a hard peg. Below, we have divided this spectrum into two broad categories – floating and pegged – although finer distinctions can also be used within these categories.

### Floating

Australia has had a floating exchange rate regime since 1983. This is a common type of exchange rate regime as it contributes to macroeconomic stability by cushioning economies from shocks and allowing monetary policy to be focussed on targeting domestic economic conditions. In a floating regime, exchange rates are generally determined by the market forces of supply and demand for foreign exchange. For many years, floating exchange rates have been the regime used by the world's major currencies – that is, the US dollar, the euro area's euro, the Japanese yen and the UK pound sterling.

In the long term, the theory of purchasing power parity says that floating bilateral exchange rates should settle at a level that makes goods and services cost the same amount in both countries, although it is difficult to see this in the historical data. In the medium term, movements in an

exchange rate reflect things like changes in interest rate differentials, international competitiveness and the relative economic outlook in each economy. On a daily basis, exchange rate movements may reflect speculation or news and events that affect the respective economies.

A floating exchange rate can result in larger and more frequent fluctuations in the currency compared with pegged regimes. In a freely floating regime, the monetary authority intervenes to affect the level of the exchange rate only on rare occasions if market conditions are disorderly. In contrast, some floating regimes are more managed, and the monetary authority intervenes more frequently to limit exchange rate volatility.

### Pegged

Under a pegged regime (sometimes referred to as a fixed regime), the monetary authority ties its official exchange rate to another nation's currency. In most cases, this will be in the form of a currency target or target band at a rate against the US dollar, the euro or a basket of currencies. The target provides a visible anchor and stability in the currency, although the target may move over time.

The monetary authority manages its exchange rate by intervening (buying and selling currency) in the foreign exchange market to minimise fluctuations and keep the currency close to its target (or within its target band). A pegged exchange rate regime limits monetary policy independence since it restricts the use of interest rates as a policy tool and requires the monetary authority to hold substantial foreign currency reserves for intervention purposes. (For a discussion of monetary policy implementation, please see [Explainer: How the Reserve Bank Implements Monetary Policy](#)).

An example of a pegged exchange rate is the Danish krone, which is pegged to the euro so that 1 euro equals 7.46 kroner, but can fluctuate between 7.29 and 7.62 kroner per euro.