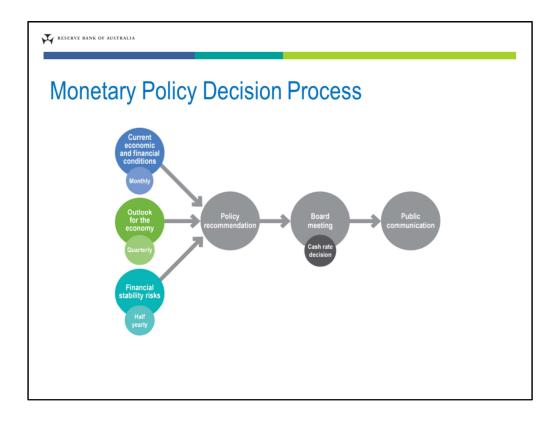


The Reserve Bank has been making concerted efforts in recent years to reach out to teachers and students with an interest in economics. This is not only to increase the understanding in the community about what the Reserve Bank does, but also more broadly in the interest of supporting the discipline of economics in Australia.

The operational aspects of monetary policy are sometimes not well understood by economists and even many central bankers only tend to have a cursory understanding of the topic if they are not directly involved in the implementation process.



The monetary policy decision process has a number of important inputs:

- staff at the Reserve Bank continuously monitor economic and financial conditions, formulate a view about the economic outlook, and make assessments about risks to financial stability.
- management help the Governor formulate a view on monetary policy.
- the Governor puts a policy recommendation on where the official cash rate should be to the Reserve Bank Board.
- a board meeting is held on the first Tuesday of each month (except January) to make a
  decision on monetary policy, taking into account the recommendation made by the
  Governor.
- after the meeting, the Reserve Bank announces the cash rate decision to the public with a short explanatory statement.
- two weeks after the meeting, the minutes are made available to the public.

RESERVE BANK OF AUSTRALIA

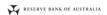
## Monetary Policy Implementation Example

What 'really' happened on a day that policy was changed?

... 3 August 2016

A good way to explain monetary policy implementation is to illustrate the process of what happened on a day when the Reserve Bank changed the cash rate.

On Tuesday 2 August 2016, the Reserve Bank announced that the cash rate target would be lowered by 0.25 percentage points from 1.75 per cent to 1.50 per cent (effective from the following day, Wednesday 3 August 2016).



## Statement by Glenn Stevens, Governor: Monetary Policy Decision, 2 August 2016 (14:30 AEST)

Abridaed

The Board decided to lower the cash rate by 25 basis points to 1.50 per cent, effective 3 August 2016.

The global economy is continuing to grow, at a lower than average pace.

Australia's terms of trade remain much lower ...

... globally, monetary policy remains remarkably accommodative.

In Australia, ... growth is continuing at a moderate pace ...

... inflation remains quite low.

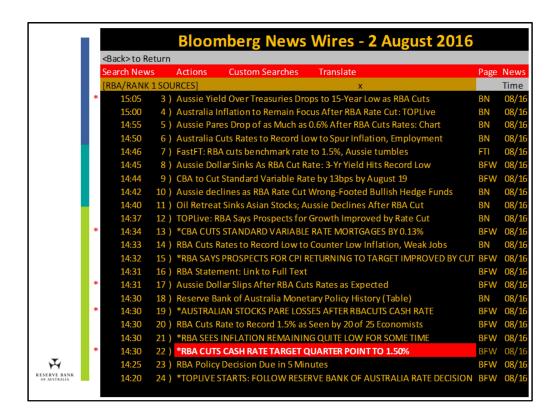
Supervisory measures have strengthened lending standards ... the likelihood of lower interest rates exacerbating risks in the housing market has diminished.

... prospects for sustainable growth in the economy, with inflation returning to target over time, would be improved by easing monetary policy at this meeting.

On Tuesday 2 August 2016 the Board met and deliberated on Monetary Policy. The members came to the conclusion that the policy cash rate target should be lowered. To communicate this decision the usual media release at 2:30pm Sydney time explained the decision.

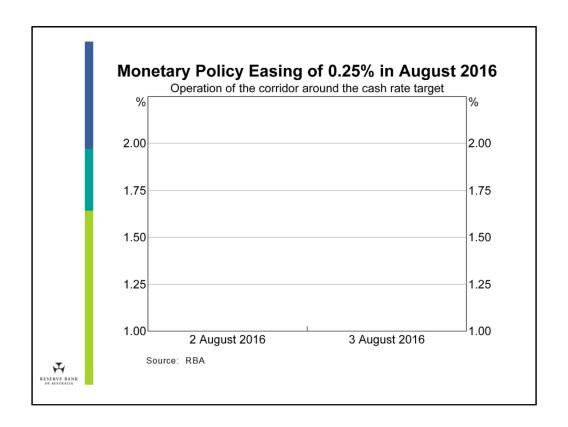
In this abridged version of the release, the key decision points made reference to:

- new rate will apply from the beginning of the following day (Wednesday)
- · global economy
- terms of trade
- · monetary policy has been accommodative
- · moderate economic growth
- low inflation
- prevailing risks in housing
- and a forward looking element, with respect to growth and inflation.



The decision of the Reserve Bank is closely watched by financial markets and journalists. There is an immediate reaction in the electronic media:

- the 2:30pm announcement is highlighted by Bloomberg in red.
- the stock market reacted and the Australian dollar fell.
- only 4 minutes after the announcement, banks started to change the rates at which they lend. These rates are arguably more directly relevant for households and businesses than the cash rate itself.
- other markets such as the bond market also reacted to the fall in the cash rate.

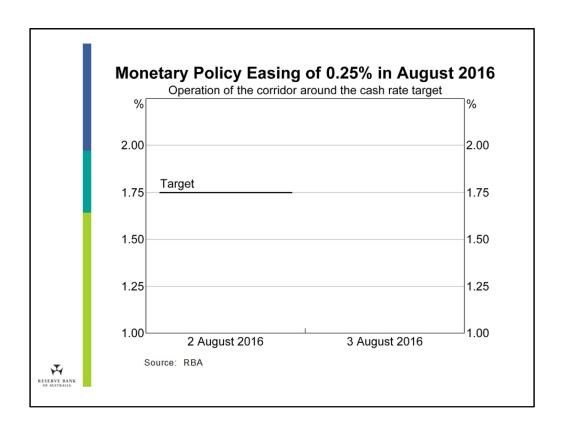


Following the press release on 2 August 2016 there is very little else that needed to be done to implement the new cash rate. There were no operations to lower the rate. It was not necessary to increase the supply of exchange settlement cash balances (as is often asserted in textbooks).

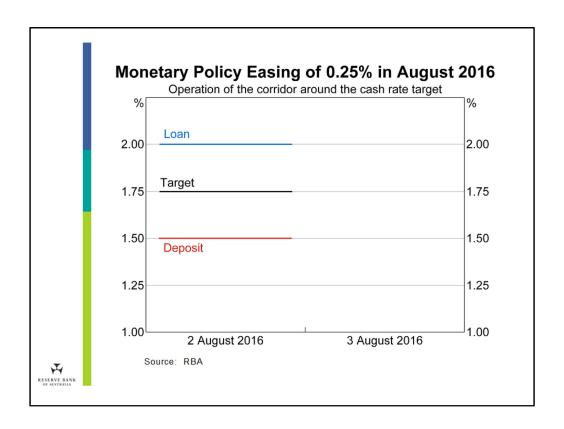
To illustrate this, take a simple characterisation of the corridor system that the RBA has operated around the cash rate target for around two decades.

We build up this framework step-by-step.

Interest rates are on the vertical axis and time (in days) along the horizontal.

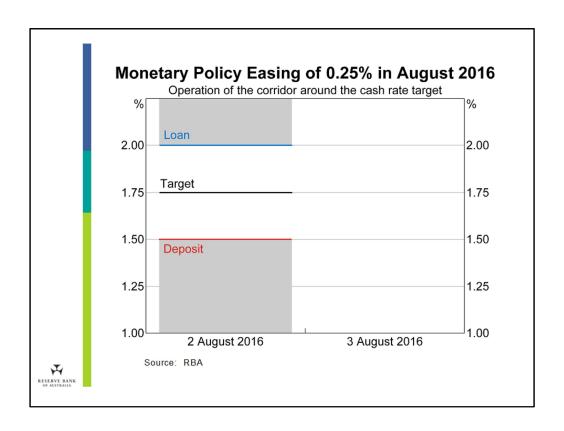


The cash rate target was 1.75 per cent at the time the RBA Board met on the first Tuesday in August 2016.



The interest rate corridor around the cash rate target is +/-0.25 percentage points and determines the rate at which the RBA accepts deposits (floor) and the rate at which it lends (ceiling).

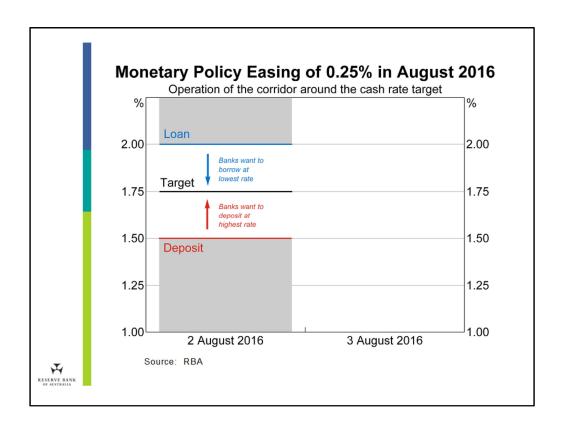
What does this mean? If a bank has excess cash balances that it does not lend out, those balances remain in its account at the RBA and are treated as "deposits" – those deposits were paid an interest rate of 1.50 per cent by the RBA at that time. If a bank did not have sufficient cash balances to meet its payment obligations it could have borrowed the shortfall from the RBA as a "loan" – these loans were charged at 2.00 per cent.



Since the low deposit rate is available to all eligible cash market participants, there is no reason for any institution with cash exchange settlement balances to lend at any rate that is lower. Why lend it in the market at a lower rate when the RBA will pay 1.50 per cent? As a result, there is unlikely to be a market rate lower than the floor of the corridor.

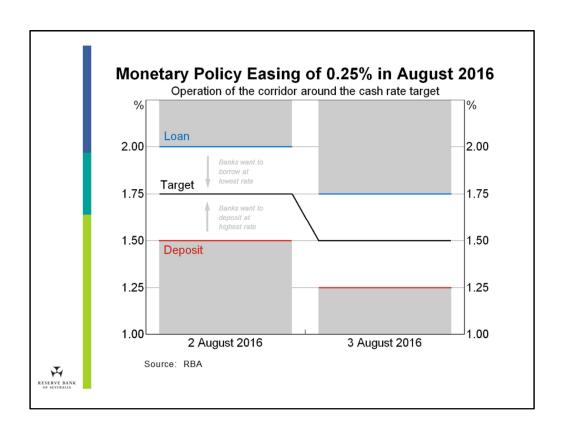
A similar set of incentives prevails at the top of the corridor. Institutions that need cash can borrow it from the RBA at this rate and have no incentive to pay more for such a loan. Why pay more than 2.00 per cent when the RBA will lend at the ceiling?

Consequently, there are no transactions outside the corridor set by the RBA. Interest rates in the overnight cash market are highly unlikely to ever stray outside the corridor into the grey shaded area.

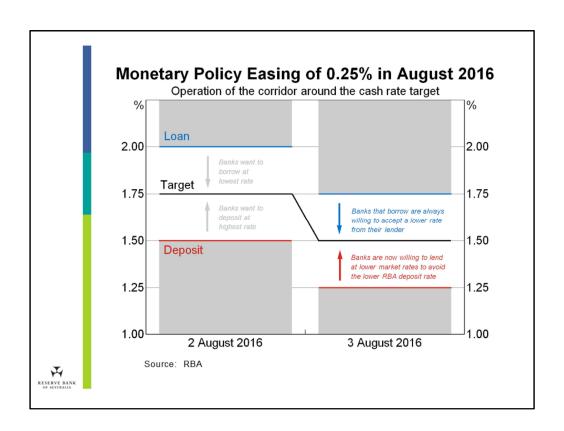


In fact, there are incentives that drive market cash rate transactions to the centre of the corridor (i.e. the target). Those institutions that have excess balances are always willing to lend for rates higher than the floor in order to make more profit from the transaction. At the same time, those who have a shortage and need to borrow are always shopping around for the lowest possible rate. Cash rate transactions therefore gravitate toward the cash rate target at the middle of the corridor.

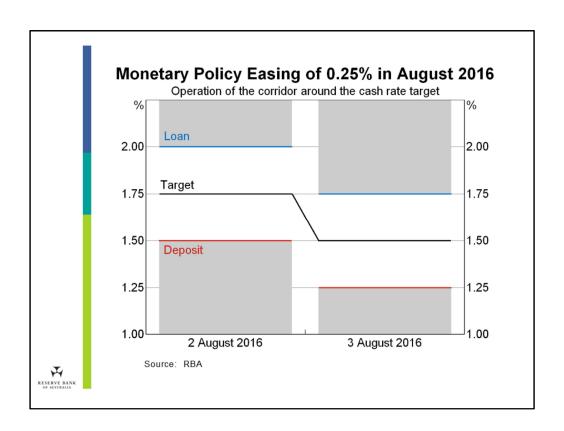
Over time, a reinforcing convention has emerged that almost all cash market transactions occur at the target. The last time this was not the case was briefly in 2010 and the deviation was only for 2 days and by just 0.01 percentage points.



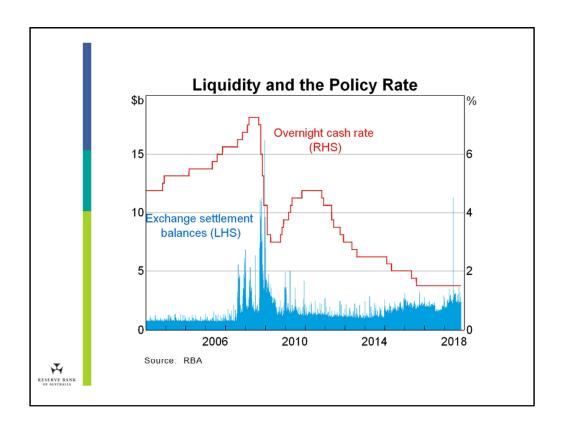
On 2 August, the press release had announced that the new cash rate target would be 1.50 per cent the following day. Because the corridor remains +/-0.25 percentage points, the deposit and lending rates move lower in line with target, and hence the entire cash rate corridor shifted lower on Wednesday 3 August 2016.



The same incentives not to borrow or lend outside the corridor (the grey area) prevail at the lower interest rates. And similarly, there is still gravitation to the centre of the band. The excess holders of exchange settlement cash balances now get paid only 1.25 per cent by the RBA (down from 1.50 per cent the day before). However, they still wish to lend those balances at the highest rate they can obtain in the market, effectively pushing the market rate up from the floor of 1.25 per cent. The borrowers of cash on the other hand can borrow more cheaply from the RBA if forced to at 1.75 per cent (down from 2.00 per cent the day before). Yet they would still like to get the cheapest rate possible for their loan and hence push the market down from the ceiling. The market borrowers and lenders tend to meet in the centre of the corridor at the newly established cash rate target announced the previous day.



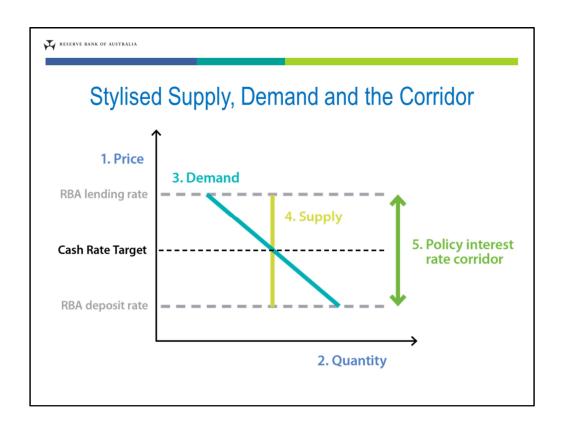
Cash rate transactions therefore automatically occur at the new lower cash rate target without the RBA conducting any transactions at all. There are no open market operations to increase the supply of exchange settlement cash balances. The existence of the interest rate corridor does all the work, and because it is a credible policy backed by the RBA, the markets are guided to it by the incentives described here.



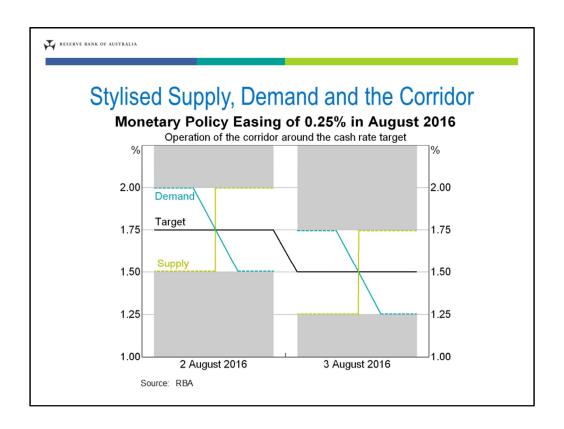
The supply of exchange settlement cash balances really does not change when the cash rate target is lowered (or raised).

As the cash rate steps up, cash exchange settlement balances do not decrease, and when it steps down, they do not increase. Before the financial crisis, cash balances were broadly steady for around a decade at \$0.8 billion per day; they were very variable during the financial crisis (for unrelated reasons), then they were steady at around \$1 billion, before increasing gradually to around \$2 billion.

The variation in those balances is mainly determined by the liquidity management of the Reserve Bank directed at the clearing needs of the payments system, not to implement changes in the cash rate target itself. However, maintaining the cash rate at its target and the management of system liquidity for payment system needs are complementary and have to be consistent with one another. We discuss liquidity management in more detail in a separate presentation.



The corridor can also be thought of in terms of a very stylised demand and supply characterisation. Note that the supply curve for cash is vertical. The Reserve Bank determines how much exchange settlement cash balances are and no one else in this country can (legally) create or destroy these balances.



We can super impose the stylised supply and demand curves that are consistent with the formation of the policy interest rate corridor onto the framework explained earlier. It has already been established that the supply of cash balances is not only vertical at the quantity supplied by the Reserve Bank but also does not change when the policy rate is altered. The description of incentives associated with the corridor are characterised by a demand curve that is defined by those incentives. In other words, the demand curve is defined 'within' the boundaries of the corridor and therefore shifts in line with where the Reserve Bank determines that corridor to be, as described above.

