

RBNZ Quantitative Easing FAQ

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What is Quantitative Easing? (And what do all those acronyms mean?)

Summary

As the COVID-19 crisis has unfolded, the monetary policy landscape in New Zealand has changed. After lowering the Official Cash Rate (OCR) to 0.25%, the RBNZ has moved into “unconventional” territory, embarking on a quantitative easing (“QE”) programme in late March. The tools and mechanisms used to help stabilise the economy look a little different in this new world, but many of the principles remain the same. In this note we consider some of the questions that have been raised about the RBNZ’s recent move to begin QE, and explain some of the many acronyms we now find ourselves using on a regular basis!

This document contains clickable links so that it is easy to navigate between questions. Note that the response to each of the questions is written to be standalone, so please excuse repetition in places. A [glossary](#) can be found on the next page.

Frequently Asked Questions

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Glossary of Central Banking and Bond Market Acronyms/Terms

Bonds: Debt instruments issued by the borrower to the lender (who is the buyer). Bonds can and are regularly on-sold, like a share, because they are standardised and fully fungible. Most government bonds change hands many (hundreds or even thousands) of times in the secondary market before they mature.

CPI: Consumers Price Index, published quarterly by Statistics NZ. The most common and widely accepted measure of inflation.

Credit markets: A marketplace where bonds issued by non-government borrowers (typically large corporates) trade.

Fed: The Federal Reserve, the United States of America's central bank. Website: www.federalreserve.gov

LGFA: The Local Government Funding Agency, which funds the borrowing needs of many (but not all) local governments such as councils.

Linkers: Inflation-linked New Zealand Government Bonds. A complex type of bond whose coupon payments and final principal are linked to inflation.

LSAP: Large Scale Asset-purchase Programme, the name of the Reserve Bank of New Zealand's QE programme.

NZDM: New Zealand Debt Management, the branch of the Treasury tasked with advising on and overseeing the Government's borrowing requirements. Website: <https://debtmanagement.treasury.govt.nz>

NZGB: New Zealand Government Bonds, which are issued by New Zealand Debt Management on behalf of the Government. Sometimes also known as NZGS (NZ Government Stock) and unless otherwise stated, generally refers to nominal bonds (ie. bonds with fixed coupon payments on a fixed principal amount). See a basic explanation of how bonds work [here](#).

OCR: Official Cash Rate, which is the overnight cash rate set by the Reserve Bank. Sometimes known overseas as the repo rate or discount rate.

QE: Quantitative Easing, which this paper is all about. Refers to any policy where a central bank purchases bonds in the secondary market in an attempt to try to lower longer-term interest rates and flatten the yield curve.

RBA: The Reserve Bank of Australia, Australia's central bank. Website: www.rba.gov.au

RBNZ: The Reserve Bank of New Zealand, New Zealand's central bank. Website: www.rbnz.govt.nz

Risk-free rates: Generally refers to the term structure of the government bond yield curve. They are called risk-free (or "gilt-edged") because the government is considered to have no risk of ever defaulting on debt issued in its own currency (as it always has the option of printing money to meet its obligations if it comes to it).

Secondary market: A marketplace where any financial instrument is traded (be it a bond, a share or a commodity). These days these markets are generally electronic exchanges.

SOMA: The US Federal Reserve's System Open Market Account, the account they use to buy bonds for their QE programme.

The Treasury: The New Zealand Treasury manages the Government's financial affairs. Website: www.treasury.govt.nz

The yield curve: A plot of the different yields (or interest rates) against the term or 'tenor' of a bond, demonstrating the **term structure** of interest rates.

1. What is “Quantitative Easing”?

“Conventional” monetary policy is generally conducted by setting an overnight interest rate – in New Zealand, this is called the Official Cash Rate (OCR). The RBNZ carries out overnight transactions with trading banks (such as ANZ), to ensure inter-bank overnight interest rates trade near the OCR. This has flow-on effects to market interest rates more broadly. In practice, these transactions expand (or contract) the money supply to provide more (or less) stimulus to the economy, with the intention of seeing inflation near target and the labour market near full employment in the medium term.

Conventional monetary policy runs into its limits when policy interest rates reach levels close to zero. At this point “Quantitative easing” (QE) is an alternative way of easing monetary conditions. QE is when central banks purchase assets in order to expand the money supply and stimulate the economy. In New Zealand, the Reserve Bank’s (RBNZ) quantitative easing programme involves the purchase of bonds in the secondary market (ie from other bondholders, rather than straight from the organisation that issued the bond). Purchases so far have included government bonds (NZGBs) and those of the Local Government Funding Agency (LGFAs). (See [question 3](#) for how this works).

See [“How does QE work in practice?”](#) for a discussion of how this stimulates the economy.

The key distinctions between quantitative easing and “normal” monetary policy are: a) it involves the outright purchase of market instruments like government bonds, and b) it results in the expansion of central bank balance sheets (ie the central bank now owns a whole lot of assets).

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2. Are there other names for QE?

The RBNZ’s QE programme is officially called the “Large-Scale Asset Purchase Programme” (or “LSAP”). Although other central banks have different names for their QE programmes (and take slightly different approaches) they are all versions of the same thing (see [question 10](#)). For example, in Australia and Japan, it is called “Yield Curve Control”, in the UK it is called the “Asset Purchase Facility”, and in Europe it is called the “Securities Market Programme”. In the US, the Fed calls the bonds it buys “purchases” and does this through what it calls its “System Open Market Account” or SOMA for short. So there are a lot of acronyms.

QE also is often described as “unconventional monetary policy”, which is a general term used to describe policies employed to provide policy stimulus when policy interest rates (ie the OCR) reach levels close to zero – the lower bound of “conventional” policy. In a sense, the term “unconventional” monetary policy to describe asset purchases it is a bit of a misnomer, because asset purchases have been used as a means of implementing monetary policy over history. But in recent decades they have only been used in this way once central banks run out of conventional policy-rate ammunition or run the risk of coming up against the “effective lower bound”. Negative policy rates are another form of “unconventional” monetary policy. See [question 17](#) for more on the effective lower bound and negative interest rates.

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3. How does QE work in practice?

Different central banks conduct QE slightly differently, in terms of what assets they are purchasing and in what market. But broadly, the mechanisms for how the asset purchases stimulate the economy are the same. In New Zealand:

- The RBNZ purchases assets (primarily Government bonds at this stage) in significant quantities from holders in the secondary market (not directly from the Government).
- This makes these bonds easier to sell, suppressing borrowing costs for those (like the Government) who are issuing these bonds. In mathematical terms, the resulting higher prices for bonds equate to lower yields (see a bond explainer [here](#)).
- Reduced yields encourage existing holders of these bonds to buy other, higher-yielding ones. This creates beneficial spill-overs, suppressing other yields too (eg on corporate debt).
- This lowers interest rates in financial markets more broadly, easing costs for a wide range of borrowers. It also tends to lower the exchange rate.
- This encourages economic activity by bolstering domestic demand and encouraging net exports. It also leads to higher inflation, and supports inflation expectations.

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4. Is QE the same as printing money?

Yes, it is, to the extent that most “money” these days is electronic and the Reserve Bank buys the bonds with money that it has created via an electronic account entry. But if QE is unwound in future (by selling the bonds, or more realistically, by allowing the bonds that are purchased to roll off by not reinvesting the proceeds when they mature) then at that point in time it will be like “burning money”. So you could say that in the short term, it is akin to money printing. But whether there is a permanent increase in the money supply depends on future actions.

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5. Why is QE necessary?

Once policy rates reach super-low levels, they cannot be lowered any further without venturing into territory that may come up against the “effective lower bound”. The effective lower bound is the point at which the net impact of a still-lower policy rate would no longer be stimulatory and may even become contractionary. Problem is, central banks can’t know for sure where the effective lower bound is. If it is well below zero, then negative policy rates are another possible policy option, as have been seen in Europe and Japan. But if not, then the costs of taking the OCR negative could outweigh the benefits quite quickly.

New Zealand went into the COVID-19 crisis with the OCR at just 1%, which gave it little room to ease monetary policy in the traditional sense. By contrast, the RBNZ eased the OCR 5.75%pts (from 8.75% to 2.50%) in the space of less than 12 months after the Global Financial Crisis (GFC), and many other countries cut by a similar amount. This time that scale of easing simply wasn’t possible, given the starting point.

But the COVID-19 crisis is leading to an economic shock that most consider to be considerably larger than the GFC, and the economy needs a large boost to limit the consequent rise in unemployment and the drop in inflation. Unfortunately, monetary policy won’t be able to undo the damage. It is a blunt tool that can’t fix everything. But it can help cushion the blow.

The RBNZ first dropped the OCR 75bps to 0.25% and then turned to QE in a bid to drive longer-term interest rates for Government bonds down, with flow-on effects to other market interest rates.

Even if the overnight interest rate is stuck at the lower bound (which due to technical reasons is currently +0.25%), it's longer-term interest rates that matter for things like fixed mortgage rates. Getting longer rates down helps to ease debt-servicing costs, impact behaviour, shape broader expectations and give the economy a boost.

The RBNZ's QE programme has helped to achieve this by driving the term structure of the Government bond curve lower and flatter (ie reducing yields over the whole range of shorter and longer terms). As owners of Government bonds have been selling them to the RBNZ, they have been looking for other assets to buy, which has made other products (like corporate bonds) more attractive, reducing yields and hence corporate borrowing costs too. In this way, the programme has helped drive down interest rates for other borrowers (or at least helped stop them rising). And QE has helped fiscal policy directly too. By buying government bonds, the RBNZ has made it easier for the Government to increase its borrowing, ie issuing lots of new bonds, without having to worry quite so much about who's going to buy them all. That's keeping the interest rates on that new debt down too. See [question 8](#) for more on impacts.

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6. Why wasn't QE used before now?

Conducting QE has been necessary to help cushion the blow from the current economic shock, since conventional policy rates (in New Zealand, the Official Cash Rate, or OCR) are now close to zero and so can't be lowered much. For example, in New Zealand the OCR was lowered 5.75%pts during the GFC. But this time round, the starting point was just 1.0%. See [question 5](#) for more on why this was necessary. See [question 9](#) for why some other countries needed to use QE sooner.

Monetary policy works by guiding interest rates such that they stimulate or rein in economic activity, in order to stabilise the labour market and inflation. In order to do this, central banks vary their policy rates relative to an estimate of equilibrium. This equilibrium is often called the "neutral interest rate", and it is the level of the policy rate that would be consistent with neither contracting nor stimulating the economy, with the labour market and inflation stable at target in the long run. The RBNZ does not control the neutral interest rate, but rather has to treat it as given when setting the policy rate. See [question 19](#) for more on the limits of inflation targeting.

The neutral interest rate is determined by a range of structural factors but is broadly determined by the amount of saving (supply of funds) taking place relative to investment (demand for funds). The balance between these two forces determines the equilibrium amount of borrowing in the economy and its price (the interest rate) in real terms. Other factors like inflation and credit spreads then affect how this notion translates into interest rates seen in financial markets.

Over the past few decades, the neutral interest rate in New Zealand has trended down due to a range of factors: current and required saving in the future has increased; growth in output per person has been low due to weak productivity and investment; the population is ageing, meaning less investment is required in future; inflation and inflation expectations have fallen; and funding spreads have widened.

As the neutral interest rate has fallen, the OCR has had to trend down too, and over time, scope to lower the OCR significantly has been eroded because of the lower bound (the most gung ho estimates of the lower bound are -0.75%, as beyond that, people would just hoard cash). Given the deflationary nature of the current shock it's hard to see some of these trends abating any time soon. Policy stimulus will be needed through the recovery and beyond, meaning that policy rates are likely to remain low for some time – and unconventional monetary policy and QE will be part of the landscape for a while. See [question 7](#) for the outlook.

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7. What's the outlook from here?

We expect the RBNZ to expand the size of its QE programme in May, roughly doubling it from \$33bn to \$60bn, with risks skewed towards them doing more than that. This would take the size of the QE programme to around 20% of GDP, which was about the same size as the Fed's QE programme after the Global Financial Crisis (GFC). The economic outlook is bleak and the RBNZ will need to do more to support the economy. They will also need to continue to provide stimulus well into the economic recovery, since the scars of this crisis will take a long time to heal.

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8. Has QE had an impact?

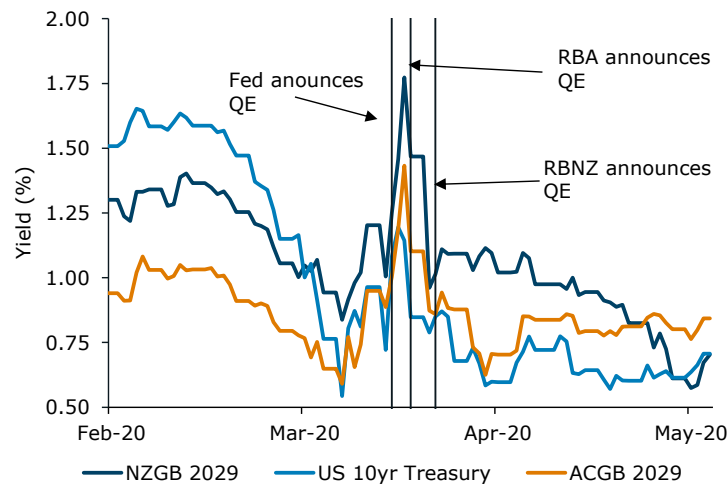
Yes, it has, although it will take a while to flow through to the economy fully, and of course, we will never know what might have happened without it.

Most notable has been the impact on long-term interest rates, which are more important for corporate borrowers and homeowners with a preference for fixed rate mortgages, and for people planning for the future. Very few people or businesses borrow heavily overnight at the OCR or cash rate. However, the cash rate (sometimes known overseas as the repo or discount rate) has nonetheless historically been the policy lever of choice, because central banks could easily control it by injecting or withdrawing liquidity from the cash market. As the cash rate moved, long-term interest rates moved with the forward guidance central banks gave (along with economists' forecasts and market expectations) and that was the transmission mechanism. But when the OCR got near zero, forward guidance couldn't do any more, so the RBNZ turned to QE.

Figure 1 shows how long-term interest rates have responded. As the chart indicates, the path of interest rates since the crisis emerged has been convoluted and volatile. Interest rates on government bonds (also known as bond yields) fell after the US Fed cut (with markets expecting other central banks to follow – which they duly did). However, in the days after the RBNZ and the Fed cut their respective rates to 0.25%, markets started to become concerned about whether bond markets could digest the looming massive ramp-up in government bond issuance associated with much greater fiscal spending.

As yields started spiralling higher it became clear that it was not just fears of the likely scale of government bond issuance but also an issue of a lack of liquidity, with the yield on the NZGB 2037 bond moving above 2.6% at one point – more than ten times the new 0.25% OCR. At that point (Thursday 19th March), the RBNZ confirmed that it was in the secondary market buying bonds in small volume to support market functioning as part of its market functioning and stability mandate (known as the Bond Market Liquidity Support programme). Yields started falling gradually from that point, and dropped dramatically when the RBNZ announced QE on Monday 23rd March.

Figure 1: 10 year Government bond yields in New Zealand, Australia and the US

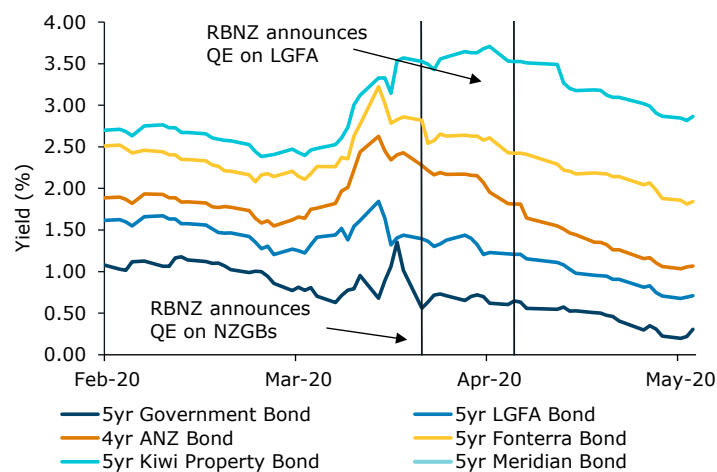


Source: Bloomberg, RBNZ, Federal Reserve, RBA

In other countries, central banks are buying large volumes of non-government bonds (especially in the US; see [question 10](#)). However, here the focus is on government bonds and Local Government Funding Agency (LGFA) bonds (split \$30bn and \$3bn respectively at the moment). But that doesn't mean QE only "helps" central and local government. Lowering the yields and hence returns available on government and LGFA bonds encourages holders of those bonds to sell them and purchase bonds issued by other borrowers instead, which has a knock-on impact.

Accordingly, the fall in Government bond yields has also helped lower the yields on bonds for other issuers (borrowers) in the market (figure 2), and that's certainly one of the desired outcomes. We can't say for certain because there we will never know the counterfactual, but it is likely that the NZD would also have strengthened had the RBNZ not engaged QE, given that most other central banks were doing so. After the 2008/09 global financial crisis (the GFC) the exchange rates of countries who engaged in more QE did tend to depreciate against those who did less (or didn't do it at all). See [question 3](#) for more on how QE works. See [question 12](#) for discussion of how stimulatory it is.

Figure 2: Yields on selected New Zealand 4-5 year wholesale bonds



Source: Bloomberg, RBNZ

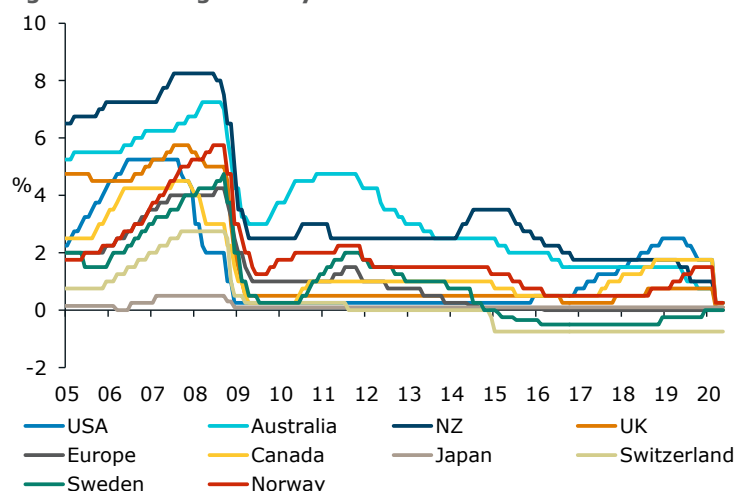
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9. Does every country engage in QE?

Many advanced economies do use QE and many did so before this year. QE became fairly commonplace after the Global Financial Crisis (GFC), but New Zealand and Australia both managed to avoid using it until now. This was largely because until now, Australia and New Zealand still had room to ease policy more conventionally – by cutting their official policy rates. As figure 3 shows, we went into the GFC with the OCR at 8.25%, affording plenty of scope for it to be cut. New Zealand's cash rate was the highest in the G10 (the 10 countries with the most actively traded exchange rates plus the US). But going into this crisis, the OCR was at just 1.00%, owing to persistently low inflation and slowing economic growth over the past 2-3 years.

The fact that New Zealand and Australia had policy room available up until now reflects that they generally tend to have higher interest rates than other advanced economies like the US, for a range of reasons. It also reflects the fact that New Zealand and Australian economies were not as badly impacted following the GFC. See [question 6](#) for more on why QE wasn't useful in New Zealand until now.

Figure 3: Overnight Policy Rates across the G10 countries



Source: Bloomberg

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10. Is QE done the same way in New Zealand as it is overseas?

In broad terms, yes, the basic principles across most countries are the same – the central bank buys bonds to lower interest rates and stimulate the economy. But how this is communicated and carried out differs from country to country. In New Zealand, the RBNZ has said that it will buy up to \$33bn of bonds over the next 12 months, made up of \$30bn of Government bonds (NZGBs) and \$3bn of Local Government Funding Agency (LGFA) bonds. That quantity of bonds can change at any time (and we think it will shortly), but it is capped. Every Friday, the RBNZ publishes a schedule of the volumes of each bond it intends to buy (there are only eight NZGBs on issue). Thus far they have tended to buy mostly longer bonds (7yrs+). The RBNZ does not buy inflation-linked bonds and the only non-government bonds it buys are LGFA bonds, to support the flow of credit to local authorities.

In the US, the Federal Reserve (the "Fed") has said that it is prepared to buy an "unlimited" amount of bonds. The unlimited nature of their QE programme is designed to promote confidence in it and to deter people from "taking them on". Each week it publishes a schedule of the volume and maturity ranges of

the bonds (there are hundreds of US Government bonds) it intends to buy the following week. At the moment, the Fed tends to weight its buying to the shorter end of the yield curve, with around two thirds of its buying in the 0-7yr part of the curve and one third in the 7yr+ part of the curve. The Fed also buys agency bonds and other corporate bonds, as well as inflation-linked bonds.

One reason why the US has purchased a large volume of non-government bonds is because its mortgage market is quite different from New Zealand's. In the US, the mortgage market is dominated by a handful of large government-sponsored entities like Fannie Mae and Freddie Mac, who originate mortgages and sell them down to investors. Supporting these issuers helps ensure that the flow of credit to households is not interrupted. In New Zealand the RBNZ does not buy bonds issued by banks to support mortgage borrowing here. However, it has made liquidity facilities available to banks, which have the same intended effect. These include the RBNZ's Term Auction Facility and the Term Lending Facility, which give banks access to funding in return for pledging collateral to the Reserve Bank. It's more of a backstop than a mainstream facility, to ensure credit keeps flowing should global funding markets strike problems as they did in the GFC.

In Australia, things are different again, with the RBA committing to keep their 3-year Government bond yield at "around 0.25%". Instead of signalling how the quantity of bonds they will buy, they have instead effectively signalled the price they want that bond to be (with yields and prices of bonds inversely related). This is called yield curve control (or "YCC") and the Bank of Japan does it too (although Japan targets the 10-year bond). In order to do this, both central banks have committed to buying bonds in any amount in order to achieve their objectives. In Australia, the RBA has allowed the yield on longer bonds to drift up, as fears of increased government borrowing have weighed on the bond market. But the market knows the RBA won't let that go too far.

No matter how it is carried out, all forms of QE represent some type of yield curve control, with each central bank altering the volume, composition and frequency of purchases regularly to get their government bond curves to where they want them to be, even if those yield/price targets are not publicised.

In most countries, the bonds are bought on the secondary market, which helps fuel liquidity in the market. It also allows the Treasury (which, among other things, has a mandate to raise money at the lowest possible rate) and the Reserve Bank (which has a mandate to maintain full employment and to keep inflation around 2%) to act independently, even if what they are doing is complementary.

Some academics call QE indirect monetisation (see [question 16](#)), because it is one arm of the government (the RBNZ) financing the other (the Treasury). However, in theory, bonds bought by the RBNZ could be sold back into the open market or not rolled over (ie replaced) at maturity. And there is no direct link between the bonds the RBNZ buys and the ones the Treasury sells. In Australia, the RBA – who staunchly defend their independence – maintain that they are not monetising the deficit because the bonds they are buying (primarily bonds 3 years and shorter in duration) are not the same bonds that the Australian Treasury typically sells (5-25 year bonds).

There are exceptions though. In the UK the Bank of England buys some (but not all) bonds directly off HM Treasury. This is called direct monetisation of debt. The idea has been floated in New Zealand (see [question 17](#)), but it is not occurring at the moment (see [question 16](#)). In practical terms, the near-term implications for direct or indirect monetisation are the same – driving the term structure of interest rates lower and flatter. And it's cheaper. But it does potentially compromise the independence of the central bank.

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11. What are the risks of NZ doing more/less QE than other countries?

Appropriately sizing QE is important.

Generally speaking, doing too much could kill the free market, distorting bond market pricing by reducing the price signals that compensate for more/less risk, and undermining the exchange rate. This could lead to excessive risk taking and leverage, dangerously high asset prices, too much inflation and a dependence on central bank purchases.

But doing too little would risk not making enough of an impact on interest rates or the currency. If that happened, economic growth would be weaker than otherwise, unemployment higher, and inflation lower than target – and expectations of this weaker outlook could become entrenched and make it self-fulfilling and persistent. A move of inflation expectations well away from target (in either direction) makes it more difficult to get inflation back on track. In this case (analogous to easing the OCR too late), QE would need to do more down the track, with even more purchases required to shore up the outlook. Counterintuitively, central banks that do not do enough are more likely to end up with larger balance sheets and for longer (like the European Central Bank after the Global Financial Crisis).

The economic shock that we are currently facing is enormous, so the risk of doing too little far outweighs the risk of doing too much right now. GDP is slumping, unemployment is rising rapidly and inflation is set to move well below target. Indeed, there is a risk that inflation expectations fall persistently, which could lead to greater dependence on purchases later – a risk the RBNZ will be looking to mitigate.

We think the RBNZ's programme is about the right size for now, but it will adapt as the situation evolves and we expect more will be required. One key feature of New Zealand's QE programme is its small size, which stems in part from the fact that New Zealand's net government debt level was among the lowest in the developed world as a percentage of GDP before the crisis (around 20%). That means it has taken fewer purchases to have a significant impact on government bond yields. It is not the amount of purchases but their effects on financial markets that determines how effective a QE programme is.

At the end of March, the RBNZ's balance sheet sat at around 14% of GDP, and that included only some of the bonds purchased in the early days of its QE programme. By contrast, at the end of April, the US Federal Reserve's balance sheet sat at 31% of GDP, and in Japan, the Bank of Japan's balance sheet sat at around 109% of GDP. If the RBNZ purchased all of the \$33bn of bonds today that it said it would buy over 12 months when it launched QE, all else equal its balance sheet would only get to a little over 20% of GDP. So there is room to expand it, and we believe that will occur.

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12. Can we measure how stimulatory QE is?

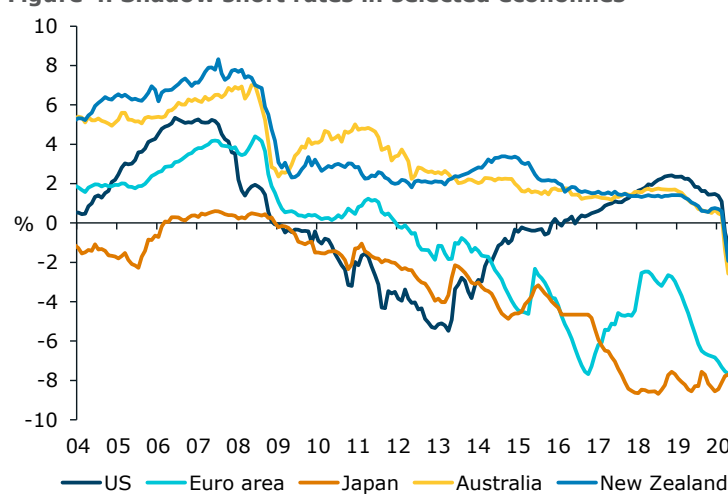
It is difficult to measure exactly how much the asset purchases associated with QE have eased financial conditions, but one way is to look at "shadow short rates" (or SSRs). These estimate the effective stance of monetary policy implied by yield curve data (ie prices for the whole range of short- and long-term interest rates).

These estimates suggest that at the end of April the stance of policy was equivalent to an OCR of around -2%, meaning a total drop from 1% pre-crisis of 3%pts. Since QE took effect, about 2%pts of extra stimulus has been added. Using a simple rule of thumb, this means each \$10bn of signalled purchases

has reduced the SSR by 50bps. However, other factors may also be at play that are also providing extra stimulus, such as markets pricing in the possibility of negative policy rates. In practice, the direct impact of QE itself might be less than this rule of thumb suggests. And the impact of QE would likely vary over time as conditions change in any case.

Although QE is providing significant stimulus, the fall in the SSR is not as large as the fall in the OCR seen during the GFC, and this shock is bigger. And also, one can't transact at the theoretical SSR, so reducing it it isn't equivalent to an OCR cut in that important sense. For that reason, we think that the RBNZ has more to do and that they will shortly roughly double their purchases, if not more. This will see the SSR fall even further, to potentially as low as a -4%, and still more may be required.

Figure 4. Shadow short rates in selected economies



Source: LJK Limited

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13. Won't it just lead to inflation?

Yes, and that's part of the plan, but it will also bolster economic activity and lead to more favourable conditions in the labour market along the way. Currently, inflation is too low. More specifically, the RBNZ is forward looking and the outlook is for inflation to soften considerably in coming years on the back of the current economic slump underway (as weaker demand sees less upward pressure on prices).

QE is aimed at shoring up the economy, in order to achieve an inflation rate something closer to (ideally within) the RBNZ's target range of 1-3%. To do this, QE will lower debt-servicing costs in financial markets and lower the exchange rate, with positive effects for both activity and inflation. Without it, inflation would be significantly weaker and the labour market would be in a worse shape than otherwise. In fact, there would be a heightened risk of deflation (falling prices), which can worsen an economic slump. People may delay spending because they expect prices will fall, and because no one likes a pay cut, real wages may ratchet upward despite weak labour markets, dampening both competitiveness and employment. See [question 3](#) for more on how QE works.

An overshoot in inflation is possible, but is not looking likely at the moment, since the downturn we are experiencing is expected to have long-lasting impacts that the RBNZ will need to offset. This means that QE will be needed long into the recovery, particularly since there is a risk that inflation expectations could fall, which can lead to a more persistent, self-reinforcing drop in inflation.

Eventually, it is possible that the economy has recovered such that it looks like inflation might overshoot the target. These risks would be heightened if the RBNZ resorted to less conventional measures (like simply handing out free money), or it looked like the RBNZ was losing its independence and the Government was using the central bank to finance unsustainable deficits. Such an outcome could see a high-inflation scenario emerge very quickly.

But that's not the world we are in at present, and the risk of an inflation overshoot is a long way off, given the outlook. Nonetheless, the RBNZ will look to bear that in mind when it is quantifying the volume of QE required. See [question 11](#) for more on the size of the QE programme and [question 7](#) for a discussion of the outlook.

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14. Isn't it risky for the Reserve Bank to own lots of bonds?

Strictly speaking, no, at least not in New Zealand, where the Reserve Bank is only buying Government bonds (which are default risk-free) and LGFA bonds (which have a very high credit risk rating). As the bonds are expected to be held to maturity, the RBNZ is able to look-through mark-to-market valuation changes, for which it has received a full [indemnity](#) from the Minister of Finance. So there is very little risk. In some other countries where central banks have started buying corporate bonds and even junk bonds and equities, the risks to the taxpayer are higher. But that's not happening here, and although it might in future, we think the hurdle to it is high.

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15. Can it be reversed?

Yes, it can, though it isn't always easy to wean markets off it. If the proceeds from the maturing bonds (and the coupons received along the way) that the RBNZ has purchased are not reinvested, then that would result in a withdrawal of money from the banking system, placing upward pressure on interest rates that can be quite abrupt. If it is considered too soon for such a tightening, central banks can reinvest any funds they receive from coupons and maturities. In practice, we've seen central banks tend to only very slowly pare back the pace of purchases. In 2013 the Fed said it was considering "tapering" the volume of bonds it bought each month. The resulting spike higher in yields and fall in equity price became known as the "taper tantrum". It eventually saw the Fed trim the volume of its purchase a lot more gradually – only to have to resume buying this year when another negative shock came along.

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16. Isn't this monetising the deficit?

Yes, it is in a sense, but it's complicated. Critics of QE call it "indirect" monetisation because it is one arm of the government financing the other. However, in theory, bonds bought by the RBNZ could be sold back into the open market (or not rolled over at maturity) if policy needed to be unwound. There is no mechanical linkage between the bonds the RBNZ buys and the ones the Treasury sells, nor is there any promise of debt forgiveness. This distinction is highly evident in Australia, where the RBA – who staunchly defend their independence – maintain that they are not monetising the deficit because the bonds they are buying (primarily bonds 3 years and shorter) are not the same bonds that the Australian Treasury sells (typically 5-25 year bonds). There is no legislation in New Zealand preventing the RBNZ from directly monetising the deficit but there are hurdles to it (see [question 17](#)).

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17. What other options are there? Why not negative rates?

Debate has recently expanded about the scope for the RBNZ to use more controversial measures to help battle the effects of the crisis. Some of these are more likely than others. For example, the RBNZ could easily provide further forward guidance on what it would like to see the yield curve do in response to QE, which would likely see markets gravitate there more easily.

There has been speculation that a negative OCR could be used, and it is indeed possible. But in our view, such a move would be a long way off, and the RBNZ would need to lay the ground work first by ensuring that the system could function smoothly – and also to ready the public, since negative interest rates are pretty mind-bending, although they have been used in Europe post-GFC.

A negative OCR would work in the same way as lowering the OCR to any other level, by lowering broader interest rates in financial markets and the exchange rate. However, at some point, the impact of lower interest rates on the economy starts to change, and could even be counter-productive – when the “effective lower bound” is reached.

The effective lower bound is the point at which the net impact of a still-lower policy rate would no longer be stimulatory and may even become contractionary. Once policy rates reach a certain level, deposit rates cannot go any lower, since regulatory constraints requires banks to source a certain portion of their funding through deposits. This floor on deposit rates squeezes bank margins and mutes the transmission of lower policy rates to mortgage rates. Squeezed margins may also reduce credit availability, which could have contractionary effects, offsetting any stimulatory impact via a lower exchange rate for example. The problem is, central banks can't know for sure where the effective lower bound is. If it is well below zero, then negative policy rates are another possible policy option, as seen in Europe and Japan.

But if there is any concern about market functioning, the health of the banking system, or the availability of credit, then the costs of taking the OCR negative could outweigh the benefits quite quickly, warranting increased caution.

So although we think it is possible in time, we don't think negative interest rates will be on the cards soon. If they are employed, they would be most effective when financial and credit supply risks have dissipated and the recovery is underway, with firms ready to borrow to expand.

In terms of other possibilities, the RBNZ could fund the Government directly by purchasing government bonds in the primary market. This has been suggested, by a number of people, including the RBNZ Governor himself, who has said he wants to keep an open mind at this time of stress. But there are significant hurdles to it. There's no legislation stopping it happening, but set up would be required for the RBNZ to [participate](#) in the tender process. But over and above that, direct monetisation of fiscal deficits ([question 16](#)) carries risks if central bank independence is seen as jeopardised or there is a perception in markets that the central bank is allowing Government to spend unsustainably. If confidence in the RBNZ's independence was lost, this could undermine the NZD and potentially lead to an outflow of funds (and we are a new debtor nation). An exit strategy and clear governance arrangements would be important, and those would take time to set up. In any case, the near-term impact on the economy would be the same whether or not the RBNZ directly or indirectly monetises the government deficit, especially if the RBNZ maintains committed to its dual mandate of full employment and 2% inflation.

At the more unlikely end of the spectrum is direct lending by the RBNZ to corporates, which we would see as risky and perverse for incentives, giving the RBNZ power to direct economic resources and potentially allowing businesses to operate beyond their creditworthiness. Although the Government is now

lending directly to SMEs, this is a stop-gap to get through the immediate revenue crisis. Stimulus is needed for a long time, but ongoing direct financing of corporates on a more permanent basis, by either the Government or RBNZ, would be undesirable and likely politically unpalatable in our view.

The Government handing out borrowed cash willy-nilly has also been suggested, but that's not well targeted fiscal policy, and other choices would get better bang for buck. Cash handouts fresh from the RBNZ's money printer would be a big step further into the twilight zone. The RBNZ handing out cash to the public is sometimes called "helicopter money", but most economists and the Government tend to prefer a more targeted approach to stimulus.

It is also worth noting that while it is called helicopter money (a phrase coined by Milton Friedman in 1969 and popularised by Fed Chair Ben Bernanke in 2002), the government would not actually drop banknotes from a helicopter. What normally happens is that the government would credit the bank account of each citizen. US President Trump did this recently, offering to pay every adult US\$1,200 and every child US\$500 (with less for those earning more than US\$75,000 per annum).

They would be effective at generating inflation, but might over-achieve, risking an eventual overshoot in the opposite direction. QE on the other hand can be reversed; see [question 15](#). The scars of 1970s high inflation have faded, but have not been forgotten completely. The key thing would be ensuring that the RBNZ clearly held the reins, not Government, or central bank independence would be at risk. With the RBNZ and Government working together to combat this crisis, those lines could blur rather quickly, eroding our institutional frameworks and credibility. So again, this is unlikely, but with conventional monetary policy firmly in the rear-view mirror globally, it's a case of "never say never".

The RBNZ has expressed that it has an open mind about possible policy options (inflation targeting needs to adapt; see [question 19](#)), and the current crisis has certainly spurred creative thinking globally – so we wouldn't rule anything out when it comes to the path ahead. For now, though, ramping up quantitative easing seems like the most logical next step. This could be augmented with guidance about the desired path of yields and a statement of willingness to do open-ended purchases, both of which could enhance effectiveness.

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18. Does all the government debt that the RBNZ is buying still have to be paid back?

Yes, but it's complicated. The RBNZ has the same rights as any other bond owner; they expect to (and will) receive full repayment from the government at maturity.

When the Treasury (which is one arm of the Government) repays the bonds to the RBNZ (which is another arm of the Government), these two payments effectively cancel each other out. However, if the Treasury doesn't replace this bond with other borrowing (from the Reserve Bank or elsewhere), then the Government's reliance on debt will need to reduce, or the shortfall will need to be funded from other government revenue, such as taxation or asset sales.

The RBNZ could, in theory, forgive the Treasury debt and we all move on. Some people are championing this idea but we think it's unlikely, at least in the near term. Such a course of action has implications for the money supply and also for the trust in the RBNZ and Treasury that has been hard won over the last three decades (see [question 19](#)).

For now, we are working on the assumption that the RBNZ won't forgive the Treasury its debt. Many people are also not thinking that far down the track (around two thirds of the bonds the RBNZ has bought mature after 2025). So it's a problem for another day. But that day will come, and at that point we assume the RBNZ will roll over all or most of these government bond holdings, and gradually (rather than abruptly) wind down the QE programme over a long period. This process (which has been dubbed "tapering" overseas) would start with the RBNZ slowing the pace of bond buying. Once the pace of buying slowed to zero, the QE programme would automatically unwind as the bonds matured. If necessary, the pace of this unwinding could of course be slowed by reinvesting some, but not all of the proceeds of maturing bonds. Presuming QE is fully unwound, then that borrowing will need to be funded (gradually) with more borrowing, taxation or asset sales.

It's important to note that for the time being, when the RBNZ buys government bonds it does so in the secondary market, rather than directly off the Treasury. That means that the Treasury has to sell bonds to other investors first, before the RBNZ can buy them. Technically, that means that the RBNZ is not financing the Treasury (see [question 17](#) for more on that possibility). But by buying bonds off other people in the market, it makes it less risky for those people to buy them off the Treasury in the first place. It sounds convoluted, and it is a bit, but one thing it does preserve is the RBNZ's independence.

This matters a lot. Consider a situation where, for example, the RBNZ thought the Treasury was borrowing too much and spending it in ways that threatened to drive inflation rapidly higher. As long as the RBNZ remains committed to low inflation and full employment (which remains its mandate), it is likely that the RBNZ would slow the pace of bond purchases or even sell its bonds to tighten monetary conditions. So even though it makes sense for the RBNZ and the Treasury to work hand in hand now, one can't take the other for granted and the two need to remain committed to their independent objectives.

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19. Has inflation targeting failed?

No, but it has its limits and needs to adapt.

The RBNZ is an inflation-targeting central bank – the first one in fact, although recently it has changed to having both an inflation and employment mandate. The broader goal of monetary policy, however, is to stabilise economic fluctuations and guide the economy towards full employment (with inflation at target). The RBNZ can "look through" shocks that are expected to be temporary, but is focused on working against more persistent deviations.

To achieve its goals, the RBNZ uses monetary policy – that is, adjusting the money supply – by adjusting the policy rate (OCR) and conducting QE. This impacts interest rates, the exchange rate, demand and expectations – helping to stabilise the economy. See [question 3](#) for how this works.

But as we have talked about in previous questions, the RBNZ cannot fix all economic problems. Monetary policy is a blunt tool used to stabilise the economy broadly; it cannot work against the specific business impacts of a health crisis. Government and monetary policy need to work in tandem. And even then, some economic impact and adjustment is inevitable.

Monetary policy also has to take into account structural factors, like the decline in the neutral interest rate seen over recent decades (see [question 6](#)). That means that scope to use the OCR to provide stimulus is limited, and other tools will be needed. But monetary policy is not limited to the OCR; it is more broadly about what can be done to expand the money supply, and the RBNZ does have options, including QE. The RBNZ has needed to adapt to that.

One of the foundational aspects of inflation targeting that make it work is central bank independence from Government. This ensures that governments do not have control over the money supply, since political incentives can lead governments to pursue policy that leads the economy to overheat and inflation to rise rapidly. One of the risks of the current crisis is that if monetary policy is perceived to be limited or to have “failed”, then central bank independence could be lost. This could happen if the Government were perceived to be pulling the strings, or if the RBNZ were to be perceived as enabling persistent fiscal deficits beyond prudent levels. This could have significant long-term consequences through the erosion of credibility in markets and eventually, high inflation.

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