# Fiscal Policy for Full Employment: A Necessary Complement to Monetary Policy Focused on Price Stability

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**Working Paper 21/15**

**2021**

VICTORIA UNIVERSITY OF WELLINGTON
TE HERENGA WAKA

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INSTITUTE FOR GOVERNANCE
AND POLICY STUDIES
WORKING PAPER
21/15

MONTH/YEAR

November 2021

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## The argument

Robust official responses to Covid-19, as to the Global Financial Crisis a decade earlier, included substantial central bank credit creation in the public interest. This paper explores possible ways of managing similar recourse to central bank credit as an ongoing tool for employment promotion without prejudicing the possibly conflicting goal of price stability.

I argue that full employment should be a continuing macroeconomic policy objective, with equivalent status to price stability, and suggest delegation of responsibility for the maintenance of full employment to a nominated entity, possibly to the Secretary to the Treasury, under the terms of a policy agreement with the Minister of Finance. The agreement should specify the terms under which the responsible official could authorize access to Reserve Bank credit.

This paper has benefited from the writings of "modern money" theorists, and I note several points on which I find myself in some disagreement with them. The paper also explores central bank credit creation within the national income accounting framework and essays a separation of the Reserve Bank and Core Crown balance sheets for the June years 2019 to 2021. I am looking for advice on this dis-aggregation. A supporting Excel workbook and descriptive file are available from me.

The final chapter argues the case for full employment and then outlines a possible institutional arrangement directed to continuing achievement of this goal. It is brief, and I would welcome feedback, criticism and suggestions for development.

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12 November 2021

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**Acknowledgement**
My thanks to Geoff Bertram, Brian Easton, Jack Foster, Adam Richardson, Jeremy Rose and Bill Rosenberg for comments and feedback on earlier drafts. They have their own perspectives on these issues and are not responsible for my errors.

**Introduction**

Official responses to the 2008 Global Financial Crisis and to Covid-19 show that when it comes to the crunch, finance ministers, central bankers and Treasury officials are prepared, quite properly, to break the fetters imposed by their predecessors, and sometimes themselves, in the decades of austerity following the great inflation of the 1970s. When necessity strikes, officials are adept at finding new ways to stimulate spending within an economy in crisis.

But this was only half a break. The chosen format, quantitative easing, went part of the distance, creating extra liquidity in the hope that it would lower rates of return, lift asset prices, and stimulate investment, thus generating increases in private spending, output and employment. These things happened, but the stronger than expected economic performance is associated with sharp rises in asset values, particularly house prices, accentuating inequality and marking a bubble that will likely cause problems down the line.

The limitations of monetary tools in times of recession or depression are widely acknowledged. For several decades from the 1940s, policy-makers followed a Keynesian prescription, recognizing active fiscal and monetary policies as complementary, and stressing the importance of fitting the balance between them to the prevailing circumstances. This was never easy and over time, developing inflation broke the Keynesian consensus.

Today's challenge is to design a policy framework that enables more active fiscal policy, aimed at promoting sustainable levels of output, employment and incomes, without unacceptable inflation or external indebtedness. It needs to achieve this whilst enabling the central bank to exercise its statutory roles, particularly the control of inflation and promotion of financial stability.

This paper discusses two main topics: the use of fiscal policy to promote growth in output, employment and incomes (Section 1); and the architecture of a control framework ensuring a continuing focus on the simultaneous attainment of full employment and price stability, without prejudicing other important national objectives (Section 4). Two more technical sections discuss money creation in a national accounting framework (Section 2) and summarize the government's response to the Covid-19 pandemic (Section 3).

## 1. Promoting growth in output, employment and incomes

The Keynesian policy framework developed in the middle of the twentieth century was always contentious. The national economy is complex and operates within the wider world. Most economic activity occurs within private enterprises (corporate or individually owned) earning their way within a competitive marketplace. The state and local authorities also provide economic services, some for sale but most as collectively provided goods and services. The economy's performance depends on the operation and activity of all these parts and no single policy-maker has the power to steer it into some ideal position.

That said, decisions by the core fiscal and monetary agents, the Minister of Finance, the Treasury, and the Reserve Bank, powerfully influence the course of events. They help

determine the aggregate level of economic activity as measured by GDP. Collectively, we benefit from things they get right and pick up the costs for things they get wrong.

Their decisions reflect their understanding of the determinants of the total level of economic activity and of the boundary to be drawn between activities best left to the market and the community at large and those best performed by state and public institutions.

Those understandings relate to the wider issue of the ultimate purpose of economic activity. Work sustains us and shapes our being, but policy-makers, perforce, need some indicator of overall success in economic management, such as wellbeing, GDP, GDP per head, or leaving the world no worse off than when we entered it. GDP, despite its limitations, has the advantage of fitting within an accounting framework that articulates the linkages within a functioning market economy.

I assume that whatever our wider vision, the pursuit of full employment – in the sense that the economy should offer sufficient opportunities to ensure that any person willing and able to work can find a useful role within society – is an accepted goal.

Successful economies function with some element of frictional unemployment as jobs become redundant, as firms fail, and as those who lose their jobs or are seeking to move into employment take time to find suitable positions. To put a number on such frictional unemployment is difficult but necessary if we aim for a quantitative "full employment" target. William Beveridge suggested 3 percent in his *Full Employment in a Free Society* (1944). Others, myself included, have suggested 2 percent. The proposals advanced in this paper pre-suppose securing an informed professional and political consensus on a feasible full employment target rate, suitable for specification in a policy agreement.

Expansive monetary and fiscal policies influence aggregate employment through their effects on private consumption and investment. Policies that successfully stimulate economic activity and increase aggregate incomes enable increased consumer spending and encourage investment in new productive facilities. Increases in consumption and investment each encourage increases in the total level of local production and employment.

Although operating in distinct areas, monetary and fiscal policies are linked through the monetary system, which is sensitive to interest rate policy changes and to government financing decisions.

The primary instrument in the hands of the Governor of the Reserve Bank is the official cash rate – the interest rate the Reserve Bank pays on trading bank balances held with it. This serves as a reference point against which trading banks determine the interest rates they are prepared to borrow from and lend to customers. High interest rates will discourage private borrowing from banks and thereby constrain bank lending. Low interest rates will encourage private borrowing from banks and may thus increase bank lending, but this tendency can weaken in depressed times. By varying the official cash rate, the Reserve Bank influences the quantum of credit created by the trading banks and thereby the total money supply.

The chief question raised in this paper is whether, on occasion, and under what circumstances, the Minister of Finance or some designated official might usefully exercise the sovereign power of the State to augment the money supply directly, by instructing the Reserve Bank to create more money through direct lending to the Treasury, i.e. through fiat money creation. Note that fiat money also includes RBNZ bank notes routinely issued as legal tender, but here I focus on deliberate lending from the Reserve Bank to the Treasury

Fiat money creation in this broader sense has a long history, but during recent decades has lain outside the macro control framework adopted in New Zealand and most other high-income economies. In New Zealand, the radically different rules established under the Public Finance Act 1989 placed primary emphasis on reducing government debt to prudent levels, by managing the balance between operating expenses and operating revenues over the longer haul. Over two decades, the ratio of sovereign debt to GDP was reduced from around 60% to below 20% just prior to the Global Financial Crisis. These were years of greater or lesser austerity. The emphasis was on economic restraint and getting debt down. Fiat money creation was simply not seen as an option.

The Global Financial Crisis and Covid-19 changed all that. Necessity makes the unthinkable thinkable. Policy-makers were inventive and were also able to draw on new thinking about macro-economic management and appropriate responses to major economic shocks. One important strand in this thinking, Modern Money Theory, builds around a core insight: that economies which are sovereign – in the sense that they are the monopoly issuers of national currencies freely tradeable on international exchanges – are technically unconstrained in their capacity to increase the supply of their fiat currencies.

Technically free, but not economically unconstrained, as MMT writers readily acknowledge. Our own history, operating under fixed exchange rates, shows that judging and mapping the boundary between technical freedom and economic constraints is no easy matter.

My *Fiscal History, Fiscal Policy* (IGPS 2019) quoted from the 1966 report of the New Zealand Monetary and Economic Council, *The New Zealand Financial System*. After discussing funding constraints faced by private actors in the economy, the Council noted:

> Government expenditure … is not constrained by similar considerations, that is, by the possibility of raising sufficient taxation or borrowing from the public to match its expenditure decisions. Money creation, for example, by borrowing from the Central Bank, is an additional possible means of financing expenditure available in appropriate circumstances to Government but not to ordinary spenders. Strictly speaking, the level of Government expenditure is determined by decisions as to the type and volume of public services that the Government considers should be provided in the general welfare. The extent to which Government should cover its expenditure by taxation, borrowing, or by money creation depends primarily upon an assessment of the extent to which the Government wishes to influence the general level of activity in the economy. In times when there is widespread unemployment of resources, it may be appropriate to finance expenditure by money creation, rather than by taxation or by borrowing. In times of full

> employment, however, such action would almost certainly increase inflationary pressures.[1]

This closely aligns with the views of modern monetary theorists, but it was written during an era of fixed exchange rates. The qualification is important. The price of foreign exchange is always consequential because it affects the balance between exporters, producers for the local market, and importers. Floating rates free policy-makers from setting the exchange rate and increases their freedom of movement with respect to other policy objectives, but the policy implications have long been contested. The announcement that one of the aims of the 2020 Large Scale Asset Purchase Programme was "to depreciate the New Zealand dollar" marked a significant shift from the default official position of letting the market determine the level.

The final two sentences of the MEC quotation above mirror the position of modern monetary theorists by linking the justification for fiat money creation to the contemporary macro-economic situation. In times of widespread unemployment, *it may be appropriate* to finance expenditure by money creation, but in times of full employment such action *would almost certainly* contribute to inflation.

So, this is a question of balance. Whilst agreeing that there are times when it is appropriate to augment the money supply through money creation, we need to identify the boundary conditions that determine whether fiat money creation (or its negative, fiat money destruction) is appropriate in the prevailing circumstances.

I return to these conditions later, but first I traverse three areas where I find myself somewhat at odds with contemporary MMT exponents. I accept the core insights but suggest that the inherent limitations are often underplayed.

The three issues are:

- The propensity of the fully employed economy to initiate and reinforce an inflationary process.
- The fully employed economy requires a substantial diversion of spending power from the private to the public sector. Taxation is integral to this process.
- Some form of job guarantee is an important underpinning for full employment, but on occasion surges in unemployment can swamp our best-intentioned efforts.

These issues deserve a fuller analysis than I give them here. But having begun my working life in an era of full employment and seen that dream lost, I think the most useful contribution I can make is to juxtapose my reading of events with some of the core issues which will make or break contemporary attempts to manage the New Zealand economy to full employment.

[1] Monetary and Economic Council, *The New Zealand Financial System*, Report No. 10, March 1968 (Wellington: R. E. Owen, Government Printer), p. 61.

**Inflation and full employment: The propensity of the fully employed economy to initiate and reinforce an inflationary process**

In chapter 21 of their *Fiscal Policy in Sovereign Nations*, William Mitchell, L. Randall Wray and Martin Watts, arguing against the proposition "that it is the adoption of **fiat** money that causes inflation", include the following in a highlighted Reminder Box:

> The world experienced a significant inflation event in the 1970s *following* the energy shock which was set off by geopolitical forces. … In many countries of the developed world, there were strong trade unions who were seeking to restore their members real wages, *so an inflationary process commenced* [my italics].[2]

I think this seriously misstates history. The inflationary explosion of the oil crisis came on top of a more than decade-long inflation that had puzzled economists seeking to explain the linkages between changes in output, employment and inflation. To what extent did the pursuit of full employment itself drive the inflationary process?

This issue was live in the founding text of macroeconomics, J. M. Keynes' *The General Theory of Employment Interest and Money* (1936). In his chapter "Theory of Prices", page 296, Keynes enunciates, as a theoretical starting point, what he characterises as the Quantity Theory of Money:

> So long as there is unemployment, *employment* will change in the same proportion as the quantity of money; and when there is full employment, *prices* will change in the same proportion as the quantity of money.[3]

Inflation ranked as a major Western and New Zealand concern for years before the oil crisis, which was itself in part a response to the inflation-induced fall in the relative price of oil. In 1971, long before the oil crisis, the New Zealand Monetary Council's *Inflation and the Labour Market* devoted a chapter to the causes of the current inflation, referring to events in the previous decade. In the 1960s and 1970s, major political energy was devoted to the problem and many political reputations damaged or destroyed in the process. Incomes policies, which attempted to secure moderation in wage increases and price rises, absorbed substantial political and bureaucratic resources.

In a 1976 paper, Joan Robinson, a younger contemporary and associate of Keynes, wrote:

> The problem does not lie in monopoly but in the class war – workers must struggle to keep their share in the product of industry and corporations must struggle to prevent them from increasing it.
>
> There is not only a class war between employers and workers as a whole. There is an internal struggle of each group to maintain its relative position. Looking back now, after experience of inflation at 20 per cent per annum, anything less than

[2] William Mitchell, L. Randall Wray and Martin Watts, *Fiscal Policy in Sovereign Nations* (London: Red Globe, 2019), p. 340.

[3] John Maynard Keynes, *The General Theory of Employment Interest and Money* (London: Macmillan, 1951 [1936]).

> 5 per cent seems moderate and acceptable. But even 3 and 4 per cent, year after year, was a great nuisance.
>
> Expectations of 3 percent were quite enough to set going speculative booms in property of every kind, causing huge arbitrary redistributions of wealth and fabrication of values. …
>
> Inflation at 3 or 4 per cent was quite enough to set going the struggle for relative shares and to break through the solid belief that a dollar was a dollar. Resistances and conventions were progressively undermined so that any chance shock would set the vicious spiral spinning in earnest.
>
> The shock came from the other part of the price system. The price level in the market economy is in two parts – the cost-plus system in the industrial sector and the supply and demand system in the markets for primary commodities. A sharp rise in activity in the industrial sector raises the price of raw materials, puts up the cost of manufacturers relative to money-wage rates and so sets up a demand to raise wages in turn.
>
> Even before OPEC threw a spanner in the works, a sharp rise in material prices had occurred. This was the spark that fell upon the inflationary tinder that had been accumulating over the years. …
>
> Now that this element of inherent vice in the free-market system has broken out in a virulent form, it is not easy to see any way to return to the era of continuous growth with an 'acceptable' level of inflation.[4]

How far these historic judgements relate to current circumstances is an open question. But the issues raised clearly need to be borne in mind in assessing proposals for the use of more active fiscal policies. And also, in devising policies to reduce inequality by rebalancing income between labour and capital.

**The role of taxation: A well-functioning market economy requires a substantial diversion of spending power from the private to the public sector – taxation is integral to this process.**

I recall my earlier quote from the New Zealand Monetary and Economic Council (1966) which closely aligns with modern money theory:

> Government expenditure … is not constrained by … the possibility of raising sufficient taxation or borrowing from the public to match its expenditure decisions. Money creation, for example, by borrowing from the Central Bank, is an additional possible means of financing expenditure available in appropriate circumstances to Government.

The qualification, "appropriate circumstances", is important. Whilst the technical ability of the State to fund any expenditure through fiat money creation is positively asserted, the question that hangs in the balance is, is it economically justified in the prevailing circumstances?

[4] Joan Robinson, "The Age of Growth", in *What are the Questions? And Other Essays: Further Contributions to Modern Economics* (Armonk, N.Y.: M. E. Sharpe, 1981), pp. 35–6.

This is not a caviling question. In contemporary New Zealand, central government outgoings absorb about one-third of annual output. In the March 2021 year, collective consumption and central government capital formation absorbed 18.0 and 2.7 percent of GDP respectively. In addition, the State chose to redistribute some 11.0 percent of GDP through social welfare programmes and paid interest on its debt, 0.8 percent of GDP.

Whatever the immediate source of funding for these programmes, the underlying reality is that we, acting through the modern State, are wanting to dispose of or redistribute about one-third of current output, as constituted by the sum-total of wages, salaries and profits.

If we want to use or dispose of one-third of that income collectively, then we need to reduce private spending power to an equivalent extent. In the March 2021 year, the principal tools were income taxes and indirect taxes, 18.4 and 11.0 per cent of GDP respectively. They were paid by a populace that seemingly accepted the quantum of these imposts as a fair enough charge for the State's contribution to our collective welfare.

What role then for fiat money creation? It depends on circumstances. If the economy is running below its full employment potential the additional stimulus of fiat money creation may be warranted. If the economy is at capacity, then probably not. And if we find that the economy is running beyond capacity, with inflationary pressures mounting and/or a worrying balance of payments, then money destruction may be the unwelcome necessity.

For me, the main issues around fiat money creation relate to its potential role in helping move the economy to full employment whilst successfully maintaining internal and external balance. These issues are usefully and extensively canvassed by Mitchell, Wray and Watts in *Macroeconomics*. I return to them below but, in passing, log a caution against readings of fiat money creation as some sort of cornucopia that renders consideration of taxation unnecessary. Whilst the authors emphasize the need for balance, some of their language in *Macroeconomics* seems to me to encourage a looser reading.

For example, in their Introduction, on page 13 they state: "The most important conclusion reached by MMT is that the issuer of a currency faces no financial constraints. Put simply, a country that issues its own currency can never run out and can never become insolvent in its own currency." The first sentence is true in a restricted technical sense, but the second sentence drastically qualifies it. "No financial constraints" seems to mean no more than that a currency issuer can always issue more currency, regardless of possible changes in its market value. I think it evident that many MMP proponents interpret phrases such as "no financial constraints" much more broadly. If there are no financial constraints, why not just go ahead and spend?

In contrast I assert that a democratic polity wishing to control the allocation of some one-quarter to one-third of total output will be constrained, in its financing options, to secure access to real resources of a similar order of magnitude, primarily through taxation.

Equations (7) to (9), below, summarize the financing options, taxation, borrowing and monetary financing.

If we successfully manage the New Zealand economy to full employment, we will arrive at a point where any new public initiative will be seeking access to real resources that could be used for other pressing public or private purposes. To spend more in one direction will imply spending less elsewhere, either by reducing some other public expenditure or by taxing private incomes to induce reductions in private spending.

At that fully employed point, competing calls for the use of resources must be reconciled as an ongoing process in real time. These are not small questions, but affect public health, education, the development and maintenance of infrastructure, law and order, crime and punishment, income redistribution, income maintenance, assistance to the disadvantaged, and so on. In area after area the practical question of what can most usefully be done provides a far greater challenge than prioritizing how to find the money to pay for a good policy prospect.

**The scope of a job guarantee: Some form of job guarantee is an important underpinning for full employment but on occasion surges in unemployment can swamp our best-intentioned efforts**

A government guarantee of a job at the prevailing minimum wage is an important element in the full-employment frameworks developed by modern money theorists. Mitchell, Wray and Watts argue the case for direct job creation by government, as follows:

> We conclude that raising aggregate demand, increasing human capital, and raising the incentives to private employers will fall short of ensuring the right to work. While each of these policies might be useful in its own right, they must be supplemented by direct job creation by government. Most governments engage in some form of job creation for the purpose of relieving unemployment. Arguably, the nations that achieved anything close to full employment in the post-war years used a variety of programmes to keep unemployment low. They all maintained, in one form or another, a buffer of jobs that were available to the least skilled workers, who otherwise were likely to be unemployed.[5]

That reads uncannily like a description of the New Zealand economy in the early post-war decades. That pattern was destroyed by the events and policy changes of the 1980s.

The provision of a state guaranteed job pre-supposes a set of institutions capable of delivering that guarantee. It is one thing to design and operate institutions which cope with job displacements resulting from minor fluctuations in a well-functioning economy. It is another matter to design institutions to cope with major economic shocks, such as the great depression of the 1930s, the radical dislocations of the 1980s, and events such as Covid-19.

[5] William Mitchell, L. Randall Wray and Martin Watts, *Macroeconomics* (London: Red Globe, 2019), p. 295.

In 1936, and again in 1991, just over one in ten members of the male labour force were unemployed.[6] On both occasions systems were slowly established to cope with the shock. The work camps of the 1930s have become the stuff of legend, and the problems of devising work and support programmes during the 1980s led to a severely diminished official appetite for such programmes.

These problems do not suggest that we should not make the effort to design and maintain an ongoing publicly funded programme, operating through local authorities and non-governmental organizations, that offers socially useful work at the minimum wage. But they do suggest that such programmes will only survive if they are well designed and monitored.

A further condition of survival is likely to be recognition that a well-functioning job guarantee scheme is unlikely by itself to cope with major economic shocks such as the great depression, the 1980s re-structuring or Covid-19.

At the time of New Zealand's 1980s restructuring, I argued the need for a wide-ranging response to the mounting unemployment problem. This need remains. Whatever its potential, I think proposals for a jobs guarantee need to be situated within their wider context. No single instrument is likely to deliver a comprehensive solution to the problem of unemployment.

> I have previously argued the case for designing assistance programmes within a wider framework where we attempt to marry a wide range of options for the unemployed with the government's proper concern for cost effectiveness in such programmes. The key steps seem to me to be:
>
> 1. a community commitment to provide programme places for a definite proportion of those registered as unemployed;
> 2. provision of as wide a range of programmes as possible, including direct employment subsidies, training programmes, and direct employment in community and public works programmes;
> 3. leaving the choice of who goes on to those programmes open to the people concerned so far as that is possible. The community accepts responsibility for the unemployed but it should enable and encourage them to accept responsibility for choice within the unhappily restricted range of options available to them;
> 4. cost effective provision: taking all costs and benefits into account, the community should be prepared to pay the same additional amount to assist a person into private sector employment, as to place them on a training programme, in a co-operative, or to use them on public works; and
> 5. continued appraisal of the adequacy of these programmes in terms of the original objective of securing sufficient programme places for the targeted proportion of the unemployed.[7]

So yes, let's develop our capacity to provide basic public sector employment at the minimum wage but recognize the need to do this within a wider policy framework, including labour

[6] Brian Easton, *In Stormy Seas: The Post-War New Zealand Economy* (Dunedin: University of Otago Press, 1997), p. 196.
[7] Dennis Rose, "Job Creation Strategies in New Zealand in a Changing World" (IGPS, 1988)

market institutions that pay attention to the evolving pattern of labour demand, the diverse skill sets required, and the efficient functioning of labour markets.

## 2. Money creation and the national accounting framework

In this chapter I relate trading bank credit creation (as influenced by the Reserve Bank's official cash rate) and the creation of new fiat money by government borrowing from the Reserve Bank to the broad shape of the economy as sketched in the national accounts.

The basic national accounting identity, which summarizes macroeconomic variables over a period, e.g. annually, is:

$$Y + M = C + I + X \quad (1)$$

[Total supply, consisting of GDP, i.e., *Y* (which equals wages, *W*, plus profits, $\pi$), plus imports of goods and services, *M*, equals the sum of final consumption, *C*, capital formation, *I*, and exports of goods and services, *X*].

It is useful to break output at factor cost, *Y*, into three segments: (1) private sector output, $Y_P = W_P + \pi_P$; (2) public sector output, $Y_G = W_G + \pi_G$; and (3) the output of foreign companies operating in New Zealand as measured by wages paid and profits earned, $Y_F = W_F + \pi_F$.

Similarly, I disaggregate final consumption into private and government consumption and capital formation in New Zealand into private, government and foreign sectors.

This gives us an expanded national accounting identity, in which I bring all terms over to the left-hand side (the whole now sums to zero).

$$(W_P + \pi_P) + (W_G + \pi_G) + (W_F + \pi_F) - (C_P + C_G) - (I_P + I_G + I_F) + (M - X) = 0 \quad (2)$$

Which can be re-arranged, to bracket all entries into three groups: (1) the private sector (which is credited with wage incomes earned in all three sectors); (2) the government sector; and (3) the rest of the world.

$$\underbrace{(W + \pi_P - C_P - I_P)}_{\text{Private sector}} + \underbrace{(\pi_G - C_g - I_G)}_{\text{Government}} + \underbrace{(M + \pi_F - X - I_F)}_{\text{Rest of world}} = 0 \quad (3)$$

This formulation ignores government taxes and transfer payments by government. These are important to our story, so we add and subtract offsetting entries for *Tax* (*T*) and *Transfers* (*TR*) within these three sectors. All three pay taxes, but within the government sector we net out taxes paid on public enterprise profits.

$$\underbrace{[W + \pi_P - T_P + TR - C_P - I_P]}_{\text{Private sector}} + \underbrace{[T_P + T_F - TR + \pi_G - C_G - I_G]}_{\text{Government}} + \underbrace{[M - X + (\pi_F - T_F) - I_F]}_{\text{Rest of world}} = 0 \quad (4)$$

What we now have is a version of the three-sector financial balance. The first bracket summarizes private sector transactions and yields a balance between incomings and

outgoings which, if positive, adds to the net balance between private assets and private liabilities and, if negative, must be financed by drawing down assets and/or increasing liabilities. The second bracket summarizes government transactions and yields a balance which will match the public sector's net borrowing/investing position. The third bracket, which combines annual balance of payments flows with physical capital formation in New Zealand by foreign parties, provides an indirect measure of the net change in assets and liabilities held by foreigners in New Zealand.

How do these national accounting flows relate to credit creation by banks and/or by fiat money creation? Or more broadly, to the choice between monetary and fiscal policies directed to economic expansion? At this point we leave the world of specific period accounting identities and enter the more uncertain territory of economic relationships and causal linkages that play out through time. The variables of interest are current dollar measures that defy more than approximate disaggregation into price and volume components. Money, the unit of account and medium of exchange, is particularly elusive. Accepted as a store of value, it can also be generated on the hoof by trading banks and by government.

We make a start by examining the three bracketed components in equation (4), above. I take the left-hand, private sector entry first, bracketing the first five items to provide a measure of the private sector's operating balance, *OBP*, i.e. private savings. I note that the difference between this and private sector capital formation must equal the private sector's net acquisition of other, already existing, assets and liabilities, *NEALP* (Net Existing Assets and Liabilities, Private).

$$[(W + \pi_P - T_P + TR - C_P) - I_P] = OBP - I_P = \Delta NEALP \quad (5)$$

$$OBP = I_P + \Delta NEALP \quad (6)$$

Equation (5) combines two fundamentally distinct types of measure. The left-hand references are all to periodic measures of income and expenditure (I subsequently report annual data, but data are also available quarterly). The right-hand variable, Δ*NEALP*, the private sector's net acquisition of assets and liabilities, measures differences between successive balance sheet values for assets and liabilities. I highlight these differences by including Δ as a marker. Note also that *N* marks the offsetting of liabilities against assets.

The private sector operating balance, *OBP*, sums the balances, positive, zero or negative, of all private sector entities. Δ*NEALP*, the private sector's net acquisition of already existing assets and liabilities, similarly summarizes actions by all private actors adjusting their holdings of all types of assets and liabilities. A vast array, its range is limited only by human imagination and the law. But because most changes in private asset holdings will be offset by counter-party changes in liabilities within the same sector, the aggregate operating balance will be small. We can divide private assets and liabilities (and Δ*NEALP*) into four sub-categories: (1) tradeable securities; (2) credit created by trading banks (private depository corporations); (3) real assets such as farmland, forests, machinery, buildings and houses (all subject to revaluation through time); and (4) everything else, consisting essentially of direct lending and borrowing between separate parties.

For the main part, trading bank credit creation occurs within the private sector when a trading bank credits a borrower's account with cash equal to a loan taken out. The borrower's own books are similarly balanced. But trading bank credit creation can cross sectoral boundaries as, for example, when a New Zealand bank lends to a foreign company.

Currently, the standard form of monetary expansion sees the Reserve Bank lowering the official cash rate in the expectation that cheaper interest rates offered by banks will encourage entrepreneurs to borrow and invest in increased productive capacity, with some part of that investment being funded by bank credit. The increase in capital formation, $\Delta I_P$, will be matched by some combination of increases in GDP accruing to local producers, ($\Delta Y_P + \Delta Y_G$), and increases in imports and in earnings by foreign enterprises operating in New Zealand, ($\Delta M + \Delta Y_F$). Whatever increases occur in local production, they will likely be positive for employment, as will future increases in production made possible by the increased stock of productive capital. Policy-induced changes in interest rates will also have widespread effects over all classes of existing assets, encouraging some to buy and others to sell. For example, access to cheaper credit will affect demand for existing houses. For the policy-maker, the aim is to provide economic stimulus without triggering unwarranted speculation.

In contrast, a fiscal expansion, whether financed by fiat money creation or by government borrowing, acts through a range of possible changes in government spending and revenue. Classic forms include increases in government capital formation ($\Delta I_G$), increases in government consumption ($\Delta C_G$), increases in transfer payments to private persons ($\Delta TR$), and, on the other side of the account, reductions in taxes ($\Delta T$). All these form part of the central bracket in equation (4), reproduced below as the left-hand side of equation (7), with the first five entries bracketed to give a measure of the government operating balance, *OBG*. The difference between this balance and government capital formation equals government's net acquisition of other assets and liabilities, $\Delta NEALG$.

$$[(T_P + T_F - TR + \pi_G - C_G) - I_G] = OBG - I_G = \Delta NEALG \quad (7)$$

$$OBG = I_G + \Delta NEALG \quad (8)$$

With a fiscal expansion, key questions arise around the extent to which increases in government spending (or reductions in tax take) flow through increases in private spending to increases in local production and employment, and the extent to which the boost drives imports and earnings by foreign enterprises operating in New Zealand.

These are complicated issues and there is a large literature attempting to quantify the size of the fiscal multiplier (the ratio of the induced increase in GDP to the fiscal stimulus). I will not summarize that literature here but note that a fiscally neutral fiscal expansion – one that potentially funds itself through taxes levied on induced increases in local production and employment over time – requires locally accruing GDP to increase by a multiple of the fiscal expansion. Fiscal initiatives such as construction of infrastructure, which enable sustained increases in output over time, are likely to have larger multipliers than more transient stimuli.

To these large uncertainties we add another contested dimension: the possible role of fiat money creation. A first task is to fit this within our accounting framework with reference to the summary measure *NEALG*, which spans the complex array of central government's asset

and liability portfolios. I group these into three categories: government debt issued as tradable securities, *DEBT*; monetary financing with Treasury recourse to Reserve Bank credit, *MF*; and everything else, consisting essentially of direct, non-tradable government lending to, and borrowing from, third parties, e.g. student loans and government pension fund liabilities, *NDALG* (net direct assets and liabilities, government).

Algebraic summation of these elements is complicated by the signage of three types of measures: (1) current flows, *OBG* (a balancing item that may be positive or negative), and capital formation, $I_G$ (positive); (2) two measures of changes in liabilities, $\Delta DEBT$ and $\Delta MF$ (with increases recorded as negatives); (3) one net measure of assets less liabilities, $\Delta NDALG$ (which may be positive or negative).

$$OBG = I_G - (\Delta DEBT + \Delta MF) + \Delta NDALG \qquad (9)$$

It is useful to compare this formulation with an equation from Mitchell, Wray and Watts's *Macroeconomics*, which summarizes the financing of a fiscal deficit (reported by them, page 322, as an ex post accounting identity rather than an ex ante financial constraint).

$$G + iB - T = \Delta B + \Delta M_h \qquad (20.1)$$

[$G$ is government spending, $i$ is the nominal interest rate, $B$ is existing Treasury debt, $T$ is tax revenue, $\Delta B$ is the change in the stock of government debt held by the non-government sector, and $\Delta M_h$ comprises the change in monetary base.]

Note that Mitchell, Wray and Watts's equation references a fiscal deficit, whereas our equation (9) accords a plus sign to an operating surplus. Keeping this mirror image in mind, the left-hand side of MWW, ($G + iB - T$), corresponds to our *OBG*. The core elements of the right-hand sides of the two equations relate to debt and monetary financing ($\Delta DEBT$ corresponds to $\Delta B$ and $\Delta MF$ to $\Delta M_h$), but my equation (9) is more comprehensive and includes government capital formation, $I_G$, and government dealings in other assets and liabilities, $\Delta NDALG$.

The extension is consequential and reminds us that the sale of new government securities and monetary financing stand as alternatives, not only as a means of funding a deficit in the government's current operating account, but also as possible means of funding capital formation, $I_G$, and public investment more generally, $\Delta NDALG$. The merits of possible alternatives depend upon the circumstances of each case and on the broader strength and structure of government's capital position.

## 3. Monetary and fiscal responses to Covid-19

The international Covid-19 pandemic forced governments around the world to adopt far-reaching regulatory and administrative programmes. These are expensive, and governments have found themselves thrust into an uncertain environment that demands rapid innovation in fiscal and monetary policy to secure the large-scale access to funds needed to support emergency programmes.

The main fiscal support measure was the Wage Subsidy Scheme – $12.1bn in 2020 and $1.2bn in 2021 – supplemented by other spending measures targeted at cushioning the impact of Covid-19 on the domestic economy. In addition, the Reserve Bank purchased $22.0bn in 2020, and $35.5bn in 2021, of assets under its Large-Scale Asset Purchases (LSAP) Programme, with the intent of injecting money into the economy "to lower borrowing costs to households and businesses and to depreciate the New Zealand dollar".[8] LSAP purchases stopped in July 2021.

I now develop an accounting summary of New Zealand Government responses as recorded by Treasury and the Reserve Bank. The Treasury's *Financial Statements of the Government of New Zealand* for the year ended June 2020 are less than ideal because they incorporate the accounts of the Reserve Bank with those of the government as a whole, and consequently do not articulate transactions between the Reserve Bank, as manager of monetary policy, and the Treasury, as manager of fiscal policy. The Bank publishes detailed balance sheet workbooks and I have used these to disaggregate the Crown Accounts to show *Reserve Bank* and *Total Crown excluding the Reserve Bank* accounts separately, for the last three June years.

Figure 1, next page, sets out my summary of the public finances. June year data are shown both as $m and as percentages of corresponding year GDP. The top-left quadrant summarizes current revenue and expenses for Total Crown as per the Statement of Financial Performance. The top-right quadrant summarizes annual changes in balance sheet values of Total Crown liabilities and assets as per the Statement of Financial Position. These net changes in balance sheet values are interpreted as annual flows which are directly comparable with the figures shown in the top-left quadrant. The bottom two quadrants disaggregate the Total Crown balance sheet changes into those for the Reserve Bank and those for the Crown at large but excluding the Reserve Bank. The figures for Total Crown Excluding Reserve Bank are derived as residuals from comparisons of Treasury and Reserve Bank data. They are approximate. The inclusion of matching counter-party transactions within these two accounts affects asset and liability totals, which do not directly sum to the corresponding totals for Total Crown in the top-right quadrant. A supporting Excel workbook and explanatory note are available from the author. I would welcome suggestions for improvement or, even better, regular publication of official estimates enabling a direct reading of financing flows between the Reserve Bank and the Crown accounts.

[8] Government Financial Statements, B11, 2020, p. 20.

## Figure 1

**CROWN, RBNZ, AND CROWN EXCLUDING RBNZ June years**

| **TOTAL CROWN** | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| **Statement of Financial Performance** | $m | $m | $m | % GDP | % GDP | % GDP |
| **Annual Revenue** | | | | | | |
| Direct taxation (Note 4 Sovereign revenue) | 56,394 | 55,258 | 64,116 | 18.2 | 17.4 | 18.9 |
| Indirect taxation (Note 4 Sovereign revenue) | 29,329 | 29,263 | 33,246 | 9.5 | 9.2 | 9.8 |
| Other revenue (residual) | 33,419 | 31,482 | 31,973 | 10.8 | 9.9 | 9.4 |
| Total Crown revenue (B11 page 42) | 119,142 | 116,003 | 129,335 | 38.4 | 36.6 | 38.1 |
| | | | | | | |
| **Annual Expenses** | | | | | | |
| Social security and welfare (B11 page 43) | 33,902 | 49,900 | 42,892 | 10.9 | 15.7 | 12.6 |
| Health and education ( B11 page 43) | 33,940 | 38,050 | 39,982 | 10.9 | 12.0 | 11.8 |
| Finance costs (B11 page 43) | 4,298 | 3,754 | 2,272 | 1.4 | 1.2 | 0.7 |
| Other expenses (residual) | 39,236 | 47,212 | 48,576 | 12.6 | 14.9 | 14.3 |
| Total Crown expenses (B11 page 42) | 111,376 | 138,916 | 133,722 | 35.9 | 43.8 | 39.4 |
| Total Crown revenue less expenses | 7,766 | -22,913 | -4,387 | 2.5 | -7.2 | -1.3 |
| Note: Net gains and losses | -6,925 | -7,529 | 20,663 | -2.2 | -2.4 | 6.1 |
| Revaluations | 6,861 | 3,046 | 24,974 | 2.2 | 1.0 | 7.4 |
| Changes in net worth | 7,702 | -27,396 | 41,250 | 2.5 | -8.6 | 12.1 |

| **RESERVE BANK** | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| **Annual balance sheet changes** | $m | $m | $m | % GDP | % GDP | % GDP |
| | | | | | | |
| **Changes in liabilities** | | | | | | |
| Currency in circulation | 438 | 1,209 | 234 | 0.1 | 0.4 | 0.1 |
| Monetary base liabilities to other depository corporations | -724 | 16,158 | 6,658 | -0.2 | 5.1 | 2.0 |
| Crown settlement accounts | -3,809 | 11,953 | 20,864 | -1.2 | 3.8 | 6.1 |
| Other liabilities to central government | -642 | 112 | -434 | -0.2 | 0.0 | -0.1 |
| Shares and other equity capital | -156 | 388 | -39 | -0.1 | 0.1 | 0.0 |
| Other foreign currency financial liabilities | -266 | 62 | 41 | -0.1 | 0.0 | 0.0 |
| Other local currency financial liabilities | -347 | -479 | -2,361 | -0.1 | -0.2 | -0.7 |
| Change in total liabilities | -5,506 | 29,403 | 24,963 | -1.8 | 9.3 | 7.4 |
| | | | | | | |
| **Changes in assets** | | | | | | |
| Foreign currency cash balances | 164 | -3,741 | -4,513 | 0.1 | -1.2 | -1.3 |
| Other foreign currency financial assets | -4,354 | 7,188 | -7,188 | -1.4 | 2.3 | -2.1 |
| Investments in NZ Government securities | -337 | 2,749 | -2,256 | -0.1 | 0.9 | -0.7 |
| Large Scale Asset Purchases Programme (incl indemnity) | 0 | 22,046 | 38,576 | 0.0 | 6.9 | 11.4 |
| Other local currency financial assets | -979 | 1,161 | 344 | -0.3 | 0.4 | 0.1 |
| | | | | | | |
| Change in total assets | -5,506 | 29,403 | 24,963 | -1.8 | 9.3 | 7.4 |
| | | | | | | |
| Memo: Nominal GDP (revised) B11 FSGNZ 2021 | 310,306 | 317,247 | 339,603 | | | |

| **TOTAL CROWN** | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| **Annual changes in financial position** | $m | $m | $m | % GDP | % GDP | % GDP |
| **Changes in liabilities** | | | | | | |
| Issued currency | 438 | 1,209 | 234 | 0.1 | 0.4 | 0.1 |
| Settlement deposits with Reserve Bank | -712 | 16,136 | 6,439 | -0.2 | 5.1 | 1.9 |
| Government bonds and Treasury Bills | -6,191 | 15,376 | 2,554 | -2.0 | 4.8 | 0.8 |
| Other financial liabilities (everything else) | 23,483 | 23,423 | -5,281 | 7.6 | 7.4 | -1.6 |
| Net worth | 7,702 | -27,396 | 41,250 | 2.5 | -8.6 | 12.1 |
| Change in total liabilities | 24,720 | 28,748 | 45,196 | 8.0 | 9.1 | 13.3 |
| | | | | | | |
| **Changes in assets** | | | | | | |
| Cash and cash equivalents | 908 | 1,679 | -3,172 | 0.3 | 0.5 | -0.9 |
| Property plant and equipment | 18,607 | 8,877 | 26,714 | 6.0 | 2.8 | 7.9 |
| Financial investments (everything else) | 5,205 | 18,192 | 21,654 | 1.7 | 5.7 | 6.4 |
| Change in total assets | 24,720 | 28,748 | 45,196 | 8.0 | 9.1 | 13.3 |

| **TOTAL CROWN EXCLUDING RESERVE BANK** | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| **Annual balance sheet changes** | $m | $m | $m | % GDP | % GDP | % GDP |
| | | | | | | |
| **Changes in liabilities** | | | | | | |
| Government bonds and Treasury bills (excl RBNZ holdings) | -6,191 | 15,376 | 2,554 | -2.0 | 4.8 | 0.8 |
| RBNZ investments in NZ Government securities | -337 | 2,749 | -2,256 | -0.1 | 0.9 | -0.7 |
| Large Scale Asset Purchases Programme (incl indemnity) | 0 | 22,046 | 38,576 | 0.0 | 6.9 | 11.4 |
| Other financial liabilities | 24,108 | 23,818 | -3,180 | 7.8 | 7.5 | -0.9 |
| Net worth (excluding RB shares and other equity capital) | 7,858 | -27,784 | 41,289 | 2.5 | -8.8 | 12.2 |
| Change in total liabilities | 25,438 | 36,205 | 76,983 | 8.2 | 11.4 | 22.7 |
| | | | | | | |
| **Changes in assets** | | | | | | |
| Cash and equivalents (excluding RBNZ foreign currency) | 744 | 5,420 | 1,341 | 0.2 | 1.7 | 0.4 |
| Crown settlement accounts with RBNZ | -3,809 | 11,953 | 20,864 | -1.2 | 3.8 | 6.1 |
| Other RBNZ liabilities to central government | -642 | 112 | -434 | -0.2 | 0.0 | -0.1 |
| Crown capital formation | 9,523 | 9,568 | 10,762 | 3.1 | 3.0 | 3.2 |
| less Sale of Crown real assets | -1,157 | -1,202 | -1,101 | -0.4 | -0.4 | -0.3 |
| plus Revaluations of property plant and equipment | 10,241 | 511 | 17,053 | 3.3 | 0.2 | 5.0 |
| Net financial investments | 10,538 | 9,843 | 28,498 | 3.4 | 3.1 | 8.4 |
| | | | | | | |
| Change in total assets | 25,438 | 36,205 | 76,983 | 8.2 | 11.4 | 22.7 |

What does Figure 1 tell us?

I focus attention on three elements: (1) the movement from surplus to deficit in Total Crown financial performance; (2) the financing of this deficit in the Total Crown Excluding Reserve Bank capital account; and (3) the Reserve Bank capital account. Figures relate to financial years ending in June 2019, 2020 and 2021.

**The move from surplus to deficit.** The top-left statement of Total Crown financial performance shows a large shift in the balance between current revenue and expenses. Expressed as percent of GDP, the balance switched from a 2.5 percent surplus in 2019 to deficits of 7.2 percent in 2020 and 1.3 percent in 2021. Covid-induced reductions in economic activity affected tax and other revenues in 2020, but tax revenues recovered strongly in 2021. Total Crown Revenues fell by 1.8 percent of GDP in 2020, recovering to 38.1 percent of GDP in 2021. Total Crown Expenses increased dramatically from 35.9 percent of GDP in 2019 to 43.8 percent in 2020, reducing to 39.4 percent in 2021. The main components of the overall change in expenses were increases in social security and welfare (including wage subsidies), other expenses, and health and education. Finance costs fell.

**The financing of the deficit.** This is most easily addressed with reference to the bottom right quadrant which summarizes annual balance sheet changes in assets and liabilities for Total Crown Excluding Reserve Bank. (Figures for capital formation and sale of real assets are annual gross flows.)

**Figure 2: Financing the deficit**

| | Percent of GDP<br>June year 2020 | |
|---|---|---|
| | 2020 | 2021 |
| Increase in NZG securities held by the world at large but excluding RBNZ and LSAP holdings | 4.8 | 0.8 |
| Increases in RBNZ holdings of NZG securities and in Large Scale Asset Programme purchases | 7.8 | 10.7 |
| Net changes in other financial liabilities | 7.5 | - 0.9 |
| **Total increase in liabilities (excluding net worth)** | 20.2 | 10.5 |
| Increases in Total Crown holdings of cash (excl. RBNZ foreign currency holdings) and in Crown settlement balances with Reserve Bank | 5.5 | 6.4 |
| Crown capital formation | 3.0 | 3.2 |
| Less sale of real assets | - 0.4 | - 0.3 |
| Revaluations of property plant and equipment | 0.2 | 5.0 |
| Net increases in financial investments | 3.1 | 8.4 |
| **Total increase in assets** | 11.4 | 22.7 |
| Change in net worth | - 8.8 | 12.2 |

The balance between Total Crown current revenue and expenses, when adjusted for minority interests, equals the Operating Balance before Gains and Losses, a leading indicator of government financial performance. In relating these measures to changes in Crown Net Worth, we need to allow for accounting gains, losses and revaluations. Sometimes minor, often large, these are huge in the final year of our data, 2021, which saw the 1.3 percent of GDP Crown deficit transformed by positive net gains of 6.1 percent, and revaluations of 7.4 percent, to yield an overall improvement in Crown net worth equaling 12.1 percent of GDP.

These large accounting gains and losses limit our ability to read the close detail of deficit financing. Putting the muddied record for changes in *other financial liabilities*, and in *financial assets* aside (this can be read in the supporting workbook), we observe that in both 2020 and 2021, combined funding from the sale of NZ Government securities to the world at large and Reserve Bank purchases of NZ Government securities, primarily through the LSAP programme (totaling, 12.7 and 11.4 percent of GDP in the two years respectively), were of similar scale to the combined total of the current operating deficit, Crown capital formation, less sales of real assets, plus a buildup in Crown Settlement balances and cash (totaling 15.3 and 10.7 percent of GDP in the two years respectively).

On the asset side of the account, the successive 5.5 and 6.5 percent increases in Total Crown holdings of cash and settlement balances suggests that the total inflow of capital funds was more than was needed to finance the deficit and other capital commitments. These increases are approximately two-thirds the size of RBNZ NZG securities and LSAP purchases. Other capital commitments included Crown capital formation, 3.0 and 3.2 percent of GDP in the two years respectively.

**The Reserve Bank capital account**

The capital account transactions of the Reserve Bank are summarized in the bottom-left quadrant of Figure 1. Our main interest is in transactions between the Reserve Bank and the rest of the central government sector, particularly with the Treasury as the keeper of the public books and the Crown's principal advisor on fiscal policy.

The Reserve Bank's liabilities also include currency in circulation and the settlement balances held by trading banks with the RBNZ. These monetary base liabilities increased by 5.1 percent of GDP in 2020 and 2.0 percent in 2021, reflecting in part, deposits made by entities selling LSAP assets to the Reserve Bank. The Crown's own settlement accounts at the Reserve Bank increased by 3.8 percent of GDP in 2020 and 6.1 percent in 2021. There was little movement in other RBNZ liabilities other than an increase in currency in circulation in 2020.

The asset side of the account was dominated by increases in Reserve Bank holdings of LSAP assets, 6.9 percent of GDP in 2020 and 11.4 percent in 2021. Other asset changes include consecutive reductions in the Reserve Bank's foreign currency cash balances and a marked 2020 increase in other foreign currency assets, 2.3 percent of GDP, which was largely

reversed in 2021. Figure 3 summarizes the transactions between the Reserve Bank and the Treasury, as custodian of the public accounts.

**Figure 3: Transactions between the Reserve Bank and Treasury**

| | 2019 $m | 2020 $m | 2021 $m | 2019 % GDP | 2020 % GDP | 2021 % GDP |
|---|---|---|---|---|---|---|
| **Changes in RBNZ assets** | | | | | | |
| Investments in NZ Government securities | -337 | 2,749 | -2,256 | -0.1 | 0.9 | -0.7 |
| Large Scale Asset Purchases programme | 0 | 22,046 | 38,576 | 0.0 | 6.9 | 11.4 |
| **Changes in RBNZ liabilities** | | | | | | |
| Crown settlement accounts | -3,809 | 11,953 | 20,864 | -1.2 | 3.8 | 6.1 |
| Other liabilities to central government | -642 | 112 | -434 | -0.2 | 0.0 | -0.1 |
| **Changes in assets less changes in liabilities** | 4,114 | 12,730 | 15,890 | 1.3 | 4.0 | 4.7 |

The figures in the bottom row correspond, almost exactly (cf 4,115, 12,696 and 15,869), to net changes in the Reserve Bank's net claims on central government as recorded in its Analytical Balance Sheet, Workbook HR3, plus, for 2021, the RBNZ balance sheet change in the Crown indemnity for LSAP programme.

More substantively (as I see it), they provide a measure of the extent of monetary financing during these two years. In terms of my earlier equation (9), reproduced below, they correspond to $\Delta MF$.

$$OBG = I_G - (\Delta DEBT + \Delta MF) + \Delta NDALG \qquad (9)$$

The other variables in (9) also have their analogues in the Total Crown Excluding Reserve Bank quadrant of Figure 1, but I leave the matching of those elements to another occasion.

The financing flows between the Reserve Bank, other depository institutions (primarily the trading banks) and the Crown constitute quantitative tools that complement the established price-based focus on the Official Cash Rate as the primary instrument influencing the creation of money by trading banks. The quantitative easing associated with the GFC and Covid-19 exemplifies a three-pronged policy response: lowering the official cash rate; central bank injection of cash to the economy at large; and central bank provision of cash to central government in support of fiscal initiatives.

Because the *Government Financial Statements* do not differentiate the Reserve Bank as a distinct accounting element within their reporting framework, it is not possible to get a clear view of the relative importance of these different avenues of stimulus and restraint. This is a serious shortcoming. At the very least, Treasury should be regularly reporting on the main transactions occurring between the fiscal core of government and the Reserve Bank. Such reporting is a pre-condition for the more active use of fiat money creation in pursuit of the full employment objective, as discussed in the next section.

## 4. Fiscal policy for full employment

This section sketches a policy framework intended to assist attainment of the goal of full employment without prejudicing other macroeconomic objectives.

### Full employment

The determinants of employment and unemployment are longstanding concerns within economics. J. M. Keynes accorded them central status in *The General Theory of Employment Interest and Money,* and policies directed to full employment were a foundational concern of twentieth-century macroeconomics. William Beveridge, in his 1944 report *Full Employment in a Free Society* (paragraph 9), argued for "a reduction of unemployment to not more than 3 per cent, as compared with the 10 to 22 per cent experienced in Britain between the wars".

In 1948 the United Nations' *Universal Declaration of Human Rights* promoted the employment goal as a right to work coupled with protection against unemployment:

> Article 23 of the Universal Declaration of Human Rights
> 1. Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.
> 2. Everyone, without any discrimination, has the right to equal pay for equal work.
> 3. Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.
> 4. Everyone has the right to form and to join trade unions for the protection of his interests.

The words "protection against unemployment" do double duty, implying both economic management to minimize involuntary unemployment, as well as support to persons unable to secure employment meeting the standards enumerated in the rest of the article.

Some decades later, in 1993, John Rawls argued for firm commitment to the employment goal as one of five "institutions" necessary to give substance to constitutionally asserted rights.

> Society as employer of last resort through general or local government, or other social and economic policies. Lacking a sense of long-term security and the opportunity for meaningful work and occupation is not only destructive of citizens'

> self-respect but of their sense that they are members of society and not simply caught in it. This leads to self-hatred, bitterness, and resentment.[9]

Michael J. Sandel's *The Tyranny of Merit: What's Become of the Common Good?* (2020) examined the outcome of a longstanding focus on workforce upskilling in response to unemployment. Whilst accepting the need for upskilling, he was concerned by how its fruits are seen, both by those tempted to see success simply as the result of their own efforts, ignoring background circumstances, and by those who lose out through lower incomes and loss of esteem. Sandel argues for increased recognition of the importance of work, as how we all contribute to the common good.

> Policy proposals to compensate for inequality by increasing the purchasing power of working- and middle-class families, or to shore up the safety net, will do little to address the anger and resentment that now run deep. This is because the anger is about the loss of recognition and esteem. While diminished purchasing power certainly matters, the injury that most animates the resentment of working people is their status as producers. This injury is the combined effect of meritocratic sorting and market-driven globalization.
>
> Only a political agenda that acknowledges this injury and seeks to renew the dignity of work can effectively speak to the discontent that roils our politics. Such an agenda must attend to contributive as well as distributive justice. This is because the anger that is abroad in the land, is at least in part, a crisis of recognition. And it is in our role as producers, not consumers, that we contribute to the common good and win recognition as we do so.[10]

Employment nurtures esteem.

Anthony B. Atkinson, in his wide-ranging *Inequality: What Can be Done?* (Harvard University Press, 2015), focuses on minimizing involuntary unemployment as one of fifteen proposals for measures intended to substantially reduce the extent of inequality.

In Chapter 5, "Employment and Pay in the Future", he argues that because of the changing nature of work, with increasing fragmentation of tasks and time,

> the labour-market goal should be stated not in terms of maximising employment, but in terms of minimising involuntary unemployment, where this is measured in a way that reflects the new features of the twenty-first century labour market.[11]

He notes that attainment of the employment target depends on macroeconomic circumstances and the degree to which it is consistent with other goals, such as the inflation target.

> I am not seeking to predict the outcome of such a balancing exercise. Rather I am asking about the extent of our ambition. What is the employment counterpart of the 2 per cent

[9] John Rawls, *Political Liberalism* (New York: Columbia University Press, 1993), p. ix.
[10] Michael J. Sandel, *The Tyranny of Merit: What's Become of the Common Good?* (London: Allen Lane, 2020), p. 20.
[11] Anthony B. Atkinson, *Inequality: What Can be Done?* (Cambridge, MA: Harvard University Press, 2015), p. 139.

> inflation rate? One possible point of reference is the level achieved in the immediate postwar decades. On this basis a target unemployment rate of 2 per cent would not seem over-ambitious.[12]

Similar reasoning led me to adopt the same 2 percent unemployment target in my 1990 NZ Planning Council paper, *The Fully Employed High Income Society*, and again in my 2019 IGPS paper, *Fiscal History, Fiscal Policy*.

But if we are to deliberately introduce into our policy framework an unemployment target with a status equivalent to the inflation targets enshrined in agreements between the Minister of Finance and the Governor of the Reserve Bank, we need a firmer basis for that rate, rather than any one person's opinion.

A 2 percent target for involuntary unemployment is admittedly ambitious and contrasts with Beveridge's 3 percent and the 4.25 percent "non-accelerating inflation rate of unemployment" (NAIRU) adopted in New Zealand Budget documents in recent years.

Beveridge's 3 percent comprised 3 equal and approximate components – seasonal, frictional, and international influences. The New Zealand Budget NAIRU estimates are much influenced by recent trend levels and conditioned by current institutions and circumstances. The NAIRU also suffers from its implicit focus on a single category of factor incomes (the wage rate seen as a function of unemployment), without reference to the inflationary potential of changes affecting other factor income streams (including changes in competitive relationships and in external terms of trade).

We should not underestimate the possible difficulty of reaching an informed professional and political consensus on what unemployment rate is consistent with minimizing involuntary unemployment. But if we are to have such a target, we need to find a way to determine that number. I plan to address this as time permits. Suggestions welcome.

Two of Atkinson's other 15 proposals also relate to the concerns of this paper. His third proposal embodies the unemployment target and advocates underpinning this ambition "by offering guaranteed public employment at the minimum wage to those who seek it". In short, he, like Rawls, signs on to the jobs guarantee.

Atkinson's Chapter 4, "Technological Change and Countervailing Power", examines ways in which power might be rebalanced between those who get ahead and those who are left behind. A large and important topic with no simple answer, but his Proposal 2 carries direct implications for the discussion here.

> Proposal 2: Public policy should aim at a proper balance of power among stakeholders, and to this end should (a) introduce an explicitly distributional dimension into competition policy; (b) ensure a legal framework that allows trade unions to represent workers on level terms; and (c) establish, where it does not already

[12] Ibid., pp. 139–40.

> exist, a Social and Economic Council involving the social partners and other nongovernmental bodies.[13]

The detail of this need not detain us, but the overall direction provides a reminder that policies aimed at moving the economy to full employment and reducing inequality will require action at many points, will affect the interests of others, and will be opposed by some.

Which takes me back to the first of my three caveats to the MMT proposals. Inflation is the generally acknowledged risk associated with excessive recourse to fiat money creation. The inflation of the 1960s and 1970s that undermined the post-war Keynesian consensus arose primarily, in my view, from unresolved distributional issues between capital and labour. Analogous issues will arise as we rebalance the economy towards full employment and greater equality.

## Securing sustainable levels of output, employment, and incomes: Designing a control framework for more active fiscal policies

Political, public, and professional responses to the GFC and Covid-19 have freed up thinking on public sector deficits, government borrowing and monetary financing. Indeed, in New Zealand's case, the figures quoted earlier, and house price inflation, suggest we created rather more Reserve Bank credit than was needed. However that may be, the risk is clearly there. Fundamentally, the balance between tax, debt and monetary financing depends on circumstances, and recourse to fiat money creation will only be successful if it avoids excess. Not an easy task in an uncertain world, with long leads and lags in economic transmission.

This suggests a need to create a control mechanism to ensure that the power to create fiat money is exercised effectively and responsibly, within an established framework, having regard to its likely impacts on macro-economic and social goals.

Figure 3 presents an alternative perspective on the policy relationships discussed earlier in Section 2. The final column reiterates the main intervention points for monetary and fiscal policy. More substantively, it separates interventions into two streams. Fiscal and monetary policy are necessarily interconnected but, in this paper, I am arguing for a reassignment of responsibilities, with monetary policy primarily concerned with control of inflation and fiscal policy charged with securing sustainable levels of output, employment and incomes.

In contrast, the current policy framework assigns both inflation control and employment to the Reserve Bank and focuses fiscal policy on the attainment of debt targets. My 2019 IGPS Working Paper, *Fiscal History, Fiscal Policy*, argued for a comprehensive reformulation of the "Guidelines for Fiscal Management", contained in Section 26G of the Public Finance Act, emphasizing broader economic objectives, including full employment. I am now arguing for an elevation of the employment objective to a status equivalent to that currently accorded to the control of inflation.

[13] Ibid., p. 237.

In the Figure 3 framework, monetary policy focuses on inflation control and financial stability, and fiscal policy is charged with securing sustainable levels of output, employment and incomes (three closely correlated variables). My working focus is on employment (assuming output and incomes will follow along) and, following Anderson, I suggest the labour market goal should be specified in terms of minimizing involuntary unemployment. As discussed, we need to seek a professional and political consensus on an appropriate target.

**Figure 4: Monetary and fiscal policy framework**

**The New Zealand Government, Parliament, Minister of Finance**

| **Reserve Bank of NZ** | **Monetary instruments** |
|---|---|
| ***(Monetary control centre)*** | Official cash rate and other instruments influence bank credit creation for private sector |
| Inflation control<br>Financial stability | Fiat money creation/destruction provides funds to, or withdraws funds from, government and/or banks |

| **The Treasury acting for central government *(Fiscal control centre)*** | **Expenditures (funded by some combination of taxes, public borrowing, and fiat money creation)** |
|---|---|
| Full employment | Government consumption |
| Other fiscal goals (as specified in Section 25G) | Transfer payments<br>Capital formation |

The key features in the Figure are the right-hand listing of the main monetary and fiscal stimulus points and the linked accounting of fiat money creation/destruction between the monetary and fiscal control centres of government.

In developing this story, we need to acknowledge the institutional asymmetry between the Reserve Bank and the rest of central government. The Bank is a small agency with tightly focused, but fundamentally important roles, inflation control and financial stability. Central government is vastly larger, with a broad mix of responsibilities including macroeconomic outcomes analogous to the RB's inflation target, but more typically characterized by provisioning the range of publicly provided services in administration, law and order, health, education, business, labour markets and the environment.

Full employment requires action on many fronts, sustaining the total level of demand, managing the quantum of fiat money, some form of job guarantee, industry policy, programmes in education and training, workplace design and employment law, income support, and programmes for disadvantaged groups. These tasks require inputs from persons with distinctive skill sets in a range of agencies.

This diversity contrasts with the tight focus available to the Governor of the Reserve Bank in setting the OCR. A counterpart public servant promoting full employment would face a much more complicated task.

The associated role of managing government recourse to fiat money naturally butts up against Treasury Public Finance Act responsibilities relating to Crown debt and borrowing, which, as I argued in *Fiscal History, Fiscal Policy* (p. 17), need to be nested within a more wide-ranging set of economic and social guidelines than currently specified in Section 26G of the Public Finance Act. So, there is complexity here within the fiscal element, in addition to the range of other employment promoting programmes.

But the employment goal is fundamental and demands its own "voice" within the fiscal framework. The current coupling of it with price stability in the Reserve Bank's frame seems to me a mistake. The Bank does need to hold employment within its field of vision but charging the Bank with attaining two major policy objectives, using a single instrument, invites the Bank to internalize the trade-off between those goals. The balance between the two objectives needs to be struck in an open and contested way.

Judgements on the fiscal stance necessary to promote full employment, including possible fiat money creation, are high-level judgements most naturally drawn within an agency such as the Treasury, equipped with skill sets in economic and financial analysis and forecasting, along with a detailed knowledge of the public accounts. So, my suggestion is to accord this responsibility to a senior official within the Treasury, possibly to the Secretary, working with the support of an Employment Policy Committee, and within limits specified in a policy agreement with the Minister of Finance.

Further work is needed on the macroeconomics of this proposal. Relationships between the quantum of money, levels of real income, prices, interest rates and the exchange rate, are uncertain and contested. They are described in a range of competing paradigms, and statistical uncertainties often frustrate attempts to make theoretical judgements and to measure (or even detect) seemingly obvious connections.

Such difficulties accepted, there is a need to build a picture: (1) of what we know, from New Zealand data, of the connections and correlations between money supply, real economic activity, employment, real incomes, the external balance of payments, and prices (including interest rates); and (2) how these variables relate to the central government operating balance.

The proposition that needs to be tested quantitatively is the extent to which a fiscal stimulus, however financed (by fiat money creation and/or by Crown borrowing), is likely to induce increases in output, incomes and employment, and the extent to which this stimulus might be attenuated by price increases or by deterioration in the balance of payments.

In all of this, the exchange rate is fundamentally important. Taken in isolation, an increase in one country's money supply relative to that of the rest of the world could be expected to cause an equiproportionate depreciation of its currency. Empirical exploration of relationships between exchange rates and other variables is particularly fraught, but I run with the idea. If there is an inverse link between money supply and the exchange rate, fiat money creation could be expected to devalue the New Zealand dollar and so encourage increased local production for export and for import substitution, with consequent benefits of increased

local employment and reduced net external liabilities. These are important possibilities, but we need to know more about the strength of the underlying connections.

The potential influence of fiat money creation on the exchange rate also needs to be compared with other approaches to inducing depreciation (for example, resource rents and import levies). As already noted, the official position has, for some decades, been to let the market determine a freely floating exchange rate. But the exchange rate is hugely consequential, affecting the balance between exporting, importing and production for the local market, along with income and employment outcomes for employers and workers engaged in these sectors. Resource rents and import levies would affect the price boundaries between these activities. The nominal exchange rate question, and the real exchange rates affecting different sectors, properly form part of the working brief for an Employment Policy Group.

My proposal to grant the power to create fiat money to a designated official obviously has a constitutional dimension. Is this a power that can be safely delegated under rules, or should it be reserved to the hands of a minister responsible to Parliament? I do not attempt to resolve this here but note it as a question that needs to be more fully addressed.

Finally, would the creation of a two-pronged macro approach where the Reserve Bank influences the creation of bank credit though setting the Official Cash Rate and the Treasury on occasion directly alters the supply of money by calling up fiat money from the Reserve Bank involve some sort of contradiction? One party playing on the price of money and the other directly creating, or destroying, money. The two instruments are closely related and those operating them in pursuit of their statutory objectives might find themselves in conflict for that reason.

To the extent that this reflects a conflict of policy objectives playing out against the facts of the current situation, it reflects a substantive problem that needs to be worked through. Within their own domains, both the monetary and fiscal authorities will be aware that their primary goals, price stability and employment are intimately connected and possibly conflicting. In just the same way as the Reserve Bank Governor's primary focus on price stability should carry a proviso to bear in mind the monetary requirements of sustainable increases in output, so the proposed employment focus in fiscal policy should come with a caveat relating to the potential inflationary implications of proposed increases in fiat money.

The overall intention is to get the price stability and employment objectives onto the policy agenda with equivalent status. Where that generates conflict, it needs to be acknowledged and worked through in a transparent public forum.

I see no inherent contradiction between empowering one public servant to influence the price of money, and thereby bank credit creation to the private sector, and empowering another public servant to influence the quantum of another component of the money supply – fiat money used for public purposes. There is certainly no greater problem here than exists under the Reserve Bank's LSAP programme executed in parallel with management of the Official Cash Rate. That said, it is clearly the case that these choices would be played out at the

boundary between public sector and private sector credit and thus influence the overall balance between private and public economic activity. But that boundary is extensive and adjustable at many points.

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12 November 2021

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