Banking crises in New Zealand – an historical overview

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1. Introduction

The global economy is currently experiencing its most significant financial shock since the Great Depression of the 1930s, and as a consequence, the most severe slowdown in broader economic activity since that time. The current shock, triggered by rising credit losses on US residential mortgages, has set in train a sustained period of disruption in financial markets with widening credit spreads and equity price declines, as market participants reassess risk across a spectrum of financial instruments and markets. Perturbations in financial markets have been coupled with balance sheet distress of major financial institutions – global banks in particular - necessitating government intervention to firstly stabilise illiquid institutions and markets, and ultimately to prevent failures of systemically important institutions that are at the centre of the financial intermediation process.

This global financial shock follows a somewhat familiar historical pattern of debt accumulation and increased financial leverage, mediated by innovation in financial markets that has occasionally resulted in a violent cathartic unwinding of accumulated financial imbalances. As Reinhart and Rogoff explain, 'this time is not different' (2008a, p. 1). A cursory examination of history shows that financial crises are common, if not inevitable – "Technology has changed, the height of humans has changed, and fashions have changed. Yet the ability of governments and investors to delude themselves, giving rise to periodic bouts of euphoria that usually end in tears, seems to have remained a constant" (Reinhart 2008).

That said, any generic regularities (and behavioural patterns) that appear to mark financial development are always nested in particular institutional and macroeconomic environments, which helps to explain both their novel characteristics and the varying impact that financial shocks have had on the real economy over history. In the current conjuncture for example, the interplay between excess global savings driven by current account imbalances, easy monetary policy and the specific financial innovation associated with the securitisation of financial instruments largely explains the 'over-trading' and 'euphoria' that drove credit growth, asset prices and financial leverage (Hunt 2008).

Notwithstanding any unique features that might differentiate the current financial crisis from past episodes, a well established process of unwinding or as Kindleberger terms it, 'discredit' is underway (Kindleberger 1996). This is reflected in the deleveraging of balance sheets as both households and firms reduce debt and with it both consumption and investment. For the financial institutions at the heart of the crisis, the deleveraging process is mediating credit losses on loans and securities estimated at around US$4 trillion (IMF April WEO 2009), with the bulk incurred by banks.[2] These losses not only reflect the toxic assets associated with sub-prime securitisation, but credit losses on a broader array of assets as a negative feedback loop between the financial system and the real economy has emerged.

These developments at the global level have affected New Zealand in a number of ways. The sharp decline in global growth has reduced both the world price of our export bundle, and the demand for

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[2] This figure reflects total expected losses on US, European and Japanese originated assets for the period 2007-2010. The IMF also estimates that there is an additional US$300m in losses associated with advanced economy banks' exposure to emerging markets.

our exports.[3] This deterioration in the external environment has reinforced the decline in domestic economic activity and the broader asset quality of financial institutions has begun to deteriorate.[4] New Zealand financial institutions are also under pressure from the liability side of their balance sheets. Heightened risk aversion, and the re-pricing of risk more generally has affected New Zealand's ability to access international capital markets. For banks in particular, this constrained access to short-term funding - for example, the US Commercial Paper market – has created rollover, or funding liquidity risks, where wholesale funding has been harder to get and more expensive.

This offshore funding had, until recently, been crucial in sustaining one of the longest uninterrupted periods of economic growth in New Zealand's post-War history. New Zealand over the past ten years enjoyed low unemployment, capital gains from rising asset prices underpinning consumption and reasonably comfortable debt-servicing burdens, at least initially. However, with domestic savings insufficient to fund the desired level of investment in residential housing, New Zealand banks borrowed from abroad in order to meet domestic credit demand, and were able to do so by virtue of the very benign global financial conditions. Indeed, the global environment provided the handmaiden to the accumulation of debt to unprecedented levels, which in hindsight appears unsustainable.

In an economy where the banking system is an important conduit for global savings the disruption to the global financial system is a significant constraint on the ability of the financial system to continue to lend to credit worthy borrowers and to liquefy the financial system as a whole. The New Zealand banking system holds around 60 percent of the country's gross international liabilities (Bedford 2008, p. 24). Thus the risk to New Zealand's financial system throughout the current crisis has been via a 'sudden stop' in capital, which mediated via the banking-dominated financial system would result in a credit crunch and consequently a sharp decline in aggregate demand.[5] Moreover, the solvency of particular banking institutions would be at risk if credit losses on bank asset portfolios increased sharply as economic activity declined, ultimately requiring similar recapitalisation and other policy initiatives witnessed elsewhere.

Notwithstanding some high profile failures in the non-bank sector, New Zealand's financial system has remained reasonably resilient in the face of significant challenges from the on-going global financial crisis. New Zealand banks are benefiting from the relative health of their Australian parents which continue to maintain a high credit rating and have been strengthening their capital positions. New Zealand banks like their Australian counterparts are continuing to lend to households and firms, although credit growth has definitely slowed. Moreover, funding and liquidity risks have eased over the past few months as conditions in short-term funding markets have improved somewhat, while longer term debt is able to be issued under the auspices of government guarantee. Looking ahead however, banks will have to ensure they are provisioning for bad debts, in line with the expected deterioration in asset quality.

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[3] Material global slowdowns have almost always led to slowdowns, if not recessions, in New Zealand, given our relative exposure to external developments. One exception was the 2001 global slowdown which New Zealand weathered remarkably well (Reddell and Sleeman 2008).

[4] Banking system impaired and past-due assets increased to 1 percent of total lending in December 2008– a three fold increase from a year earlier (RBNZ, *Financial Stability Report* May 2009).

[5] Of the $489 billion in New Zealand financial system assets, registered banks account for 82% (RBNZ *Financial Stability Report*, May 2009, p. 53).

In short, the banking system in New Zealand is not in 'crisis', in contrast to the banking systems of the US and a number of countries in Europe. By banking crisis we shall take to mean that a large proportion of banking sector capital has been eroded (Bordo 2008a, p. 1). Banking crises can be characterised by the classic banking panic associated with depositors seeking to withdraw funds simultaneously from any given institution in an environment of asymmetric information, or an exogenous shock which threatens the solvency of the institution, say from losses on the bank's loan portfolio. 'Systemic' banking crises focus on those episodes which involve disruptions to the process of financial intermediation, as distinct from the failures of individual and perhaps less systemically important institutions.

This paper examines New Zealand's past experience with systemic banking crises, of which there are two exemplars: the late1880s and early 1890s involving the Bank of New Zealand (BNZ); and the BNZ again, in the late 1980s and early 1990s. The two episodes share a number of similarities in addition to involving the same institution:

- Both banking crises occurred during periods of financial globalisation, where the free flow of foreign capital enabled rapid domestic credit creation. In the earlier period the conduit was retail deposits of trading banks in London, and foreign debt finance by pastoral land companies. In the 1980s, the liberalisation of the capital account and financial markets more broadly enabled New Zealand trading banks to access offshore wholesale funding markets.

- In both instances, the rapid credit growth was related to property, which was an 'object of speculation'. In the late nineteenth century this object was rural land prices, while in the 1980s a bubble in commercial property prices, together with a stock market boom characterised the euphoric mood at the time.

- Both were periods of little or no prudential regulation. In the mid-1980s a regulatory vacuum emerged as the process of financial liberalisation unwound decades of financial repression and direct controls on financial institutions. In the 19th century there was no lender of last resort and only minimal regulations contained in the Act of Parliament establishing each bank's right to operate in New Zealand.

- The domestic banking crisis was part of a wider global banking crisis. In Australia 13 of 23 banks temporarily closed their doors in the 1893, while Argentina, Italy and the US also experienced banking crises around the same time. In the late 1980s, the Nordic countries suffered severe output losses emanating from problems in their respective banking systems. A number of Australian banks also experienced problems in the early 1990s related to exposure to commercial property.

- Other financial institutions were also implicated. The 1890s crisis witnessed the demise of pastoral land companies which were a key intermediary in the mortgage market, large capital write downs for the National Bank, and the takeover of another distressed bank as part of the government orchestrated bailout of the BNZ. Financial disintermediation associated with the increase in direct lending by individuals was also a feature of the crisis. The financial crisis in the late 1980s claimed the scalp of New Zealand's 7th largest financial institution – the Development Finance Corporation.

- In both cases there are identifiable international shocks that help mark the limits of the preceding boom, or indeed trigger the unfolding banking crisis. In the late nineteenth century these include the decline in export prices from the late 1870s, the change in international risk aversion associated with the failure of the City of Glasgow bank in 1878, the Barings Crisis in London 1890, and contagion from the Australian banking crisis of the early 1890s. In the more recent episode, the 1987 global share market crash is an obvious candidate.

There are of course differences across each episode, including:

- The different monetary and exchange rate regimes within which the banking system was situated. New Zealand in the nineteenth century was tied, indirectly to the Gold Standard, with domestic monetary conditions governed by the trading banks' holding of sterling reserves in London (Hawke 1985). Any negative economic shock had to be mediated via an internal adjustment in the price level (deflation) given the fixing of the New Zealand pound to the pound sterling at parity by the trading banks. A floating exchange rate in the 1980s gave a buffer to external shocks while allowing authorities the ability to affect domestic monetary conditions.

- The 1890s banking crises had a much longer gestation period given the timing of changes in initial conditions in the late 1870s/early 1880s to the culmination of government intervention in the 1890s. By contrast the stock market crash in 1987 was followed by the first recapitalisation of the BNZ just two years later, followed by another in 1990.

- The resolution process was more drawn out and more costly in the earlier episode. The direct cost of the government bailout in the 1990 episode was 2.3 percent of government expenditure, compared to 11.5 percent in the 1895 recapitalisation. However, the gross fiscal costs in terms of GDP are more comparable given the much smaller share of government expenditure in national output in the 1890s. As a percent of GDP the gross recapitalisation cost was 1.6 percent in the mid-1890s, compared to 1 percent of GDP in the latter case.

The next section situates banking crises in the broader historical and cross-country literature on financial crises. Banking crises are one of three, although not necessarily mutually exclusive, types of financial crisis, together with balance of payments/currency crises and sovereign debt crises. Not all financial crises lead to economic recessions or even slowdowns, but those that do are typically associated with larger output losses than 'typical' recessions.

In sections three and four we discuss the two systemic banking crisis episodes in some detail. This is followed by a brief counterfactual examination of the Great Depression. Despite constituting arguably the largest economic shock in terms of output decline New Zealand has experienced, the financial system proved remarkably resilient. No major financial institution failed, or required government bailout. This echoes the experience of Australia (Fisher and Kent 1996), together with Canada and Britain.

2. Financial crises – an overview

The current global financial crisis is a salutary reminder of the inherent pro-cyclicality of financial systems, and the interaction of this cyclicality with underlying behavioural modalities which can lead to both booms and busts in financial and real economic activity. The growth in credit, leverage and asset prices reinforces the underlying economic dynamic, which can create unsustainable imbalances that ultimately must be corrected. The 'financial accelerator' hypothesis explains this in terms of the willingness of financial institutions to provide credit based on changes in the collateral value of a given asset (or classes of assets), which in turns pushes asset prices higher. This process can go into reverse if something occurs to lower the return or increase the risk of an asset, with financial institutions reducing lending, deleveraging and accentuating the concomitant decline in economic activity.

A behavioural overlay to this procyclical framework suggests that there is a degree of bounded rationality, if not irrationality inherent in the financial system cycle. Kindleberger (1996) for example, who draws from financial theorist Hyman Minksy, provides a simple model of financial crisis where the boom is initially triggered by an exogenous shock to the macroeconomic environment that changes economic agents' expectations about future profits – this could be a technological breakthrough, government intervention or a positive terms of trade shock.[6] This 'displacement' is followed by a boom fed by credit creation (often via foreign capital inflow) either within the existing banking system, or through new financial institutions and products. The boom results in euphoria or 'overtrading' in the objects of speculation tied to the nature of the displacement. Something then occurs to change expectations at the height of the ensuing mania, be it a decline in the price of the primary object of speculation (such as securitised assets in the current context), or the revelation of some swindle or defalcation. This sets in train a 'revulsion' against the objects of speculation and a period of 'discredit' with financial institutions reducing lending and deleveraging to repair balance sheets and possibly 'crash' and 'panic' if solvency is threatened.

A financial crisis is therefore a "disturbance to financial markets, associated typically with falling asset prices and insolvency among debtors and intermediaries, which ramifies through the financial system, disrupting the market's capacity to allocate capital within the economy" (Eichengreen and Portes 1987, p. 2). International financial crise are disturbances that spill over national boundaries, disrupting the market 's capacity to allocate capital internationally.

To this generic understanding of financial crises we can add specific definitions associated with particular classes of financial crisis such as currency, sovereign debt and banking crises.[7] Briefly, a currency crisis involves an attack on the exchange value of a currency resulting in either the forced abandonment of an exchange rate commitment or a large change in the exchange rate. New Zealand

6 We acknowledge that there is a danger of 'over fitting' the two New Zealand banking crisis episodes within the Kindleberger/Minsky framework, where this framework places emphasis on some degree of irrational myopia on the part of economic agents. By contrast, 'fundamentalist' explanations of financial boom/busts do not rely on a theory grounded in behavioural psychology and any departure from the assumptions of rational utilising behaviour. Credit cycles reflect exogenous events where agents alter perceptions of future cash flows which changes their tolerance for risk, and is reflected in the degree of leverage and asset prices. Economic agents behave rationally and respond to evolving news, where these responses can be quite pronounced in an environment of asymmetric information. As Calomiris (2008) notes however, fundamentalist explanations, while they can explain variation in risk over time, cannot necessarily explain the degree of under/over pricing of risk (and asset prices) that seems to characterise many booms and busts (p. 16). Conversely, the Kindleberger/Minsky model which purports to be a universal theory of financial cycles, does not adequately explain why boom/busts vary across time, where the allegedly inherent tendency to overreact is not present.

7 Note, these are not mutually exclusive categories. For example, exchange rate disturbances can lead to bank failures, where depositors liquidate accounts to avoid capital losses from an anticipated devaluation. Devaluation/depreciation of a currency increases the domestic currency value of foreign debt which can pressure financial institutions (or the government) which holds such foreign debt.

has experienced a large number of such crises, particularly in the fixed exchange rate period from 1938-1984. These crises derived, in part, from the desire of policymakers to insulate the New Zealand economy from external shocks with capital and exchange controls, while simultaneously attempting to ensure full employment and high levels of domestic demand.[8] A two-legged economy' emerged in the post-War period, involving a farming sector relying on high export prices earning the foreign exchange necessary to support a heavily protected manufacturing base (Preston 1978). However, a long run problem with export earnings began in the 1960s (Briggs 2003), and the resulting foreign exchange constraints contributing to a state of flux in exchange rate arrangements in the 1970s, and ultimately the currency crisis in 1984.

Sovereign debt crises involve a country being unable to service the interest or principal of its sovereign debt. This can encapsulate outright defaults, repudiations or restructurings, where the terms become less favourable to creditors than the original contract. New Zealand has never defaulted on its sovereign debt and is unique in this regard, being one of only a handful of countries passing from emerging market to advanced economy status without having done so (Reinhart and Rogoff 2008a, p. 2). That said, the ability of the government to issue debt at different times, particularly overseas debt, has been influential in shaping economic development. As we shall see in section 3, the ability of the government to borrow in the London capital markets in the 1870s was a key factor in underwriting the prosperity (and influencing the subsequent speculation in land prices) of that era. At the onset of the Great Depression fears that the London capital market would be shut off led to a policy initiative to conserve foreign exchange for debt servicing.[9] British government unhappiness at several policies initiated by the first Labour government during the 1930s – specifically, the exchange and import controls initiated in 1938 – resulted in harsh terms put upon New Zealand for the conversion of a loan due in 1940, and reinforced the desire to reduce New Zealand's dependence on Britain on the part of Labour officials. In the 1970s the government overseas borrowing increased significantly to fund the current account deficit in response to what appeared to be a temporary terms of trade decline, as well as to support domestic demand during the stagflationary environment. This borrowing added to the general sense of crisis in 1984.

Banking crises, the main subject of this paper, involve as we have already noted, a significant erosion of banking sector capital. Banks play a pivotal role in the financial system as a whole, despite the massive growth in the 'shadow banking system' and have therefore been at the heart of major financial crises in the modern era. Banks provide the means of settlement for the bulk of transactions in an economy; they remain the key financial intermediaries in an economy facilitating real resource transfer, and are an important source of liquidity in any economy. However, banks have a relatively low ratio of own funds (shareholders' equity) to borrowed funds vis-à-vis the typical non-financial corporate firm which imparts an inherent incentive for risk taking. There is the potential for accessing large profits and more limited downside risk, with depositors having relatively limited ability to effectively monitor risk taking behaviour. This propensity for market failure is the standard rationale for prudential supervision and regulation. However, even without well-developed prudential frameworks, incentives could be aligned to help mitigate risk and imprudent behaviour. In the nineteenth century for example, double or reserve liability of shareholders was a feature of many banking systems (Quigley 1992, p. 212). Individual shareholders were liable to contribute an

8 See Easton (1997) for a discussion of the 'balance of payments constrained economy'.

9 See Hawke 1985, Prichard 1970, or Sutch 1966a for a discussion of the 'exchange pool'.

additional amount of capital equal to subscribed capital if the threat of insolvency loomed. This was intended to focus risk bearing and monitoring on the shoulders of shareholders rather than creditors or depositors. This double liability was used by the New Zealand government in the recapitalisation of the mid-1890s.

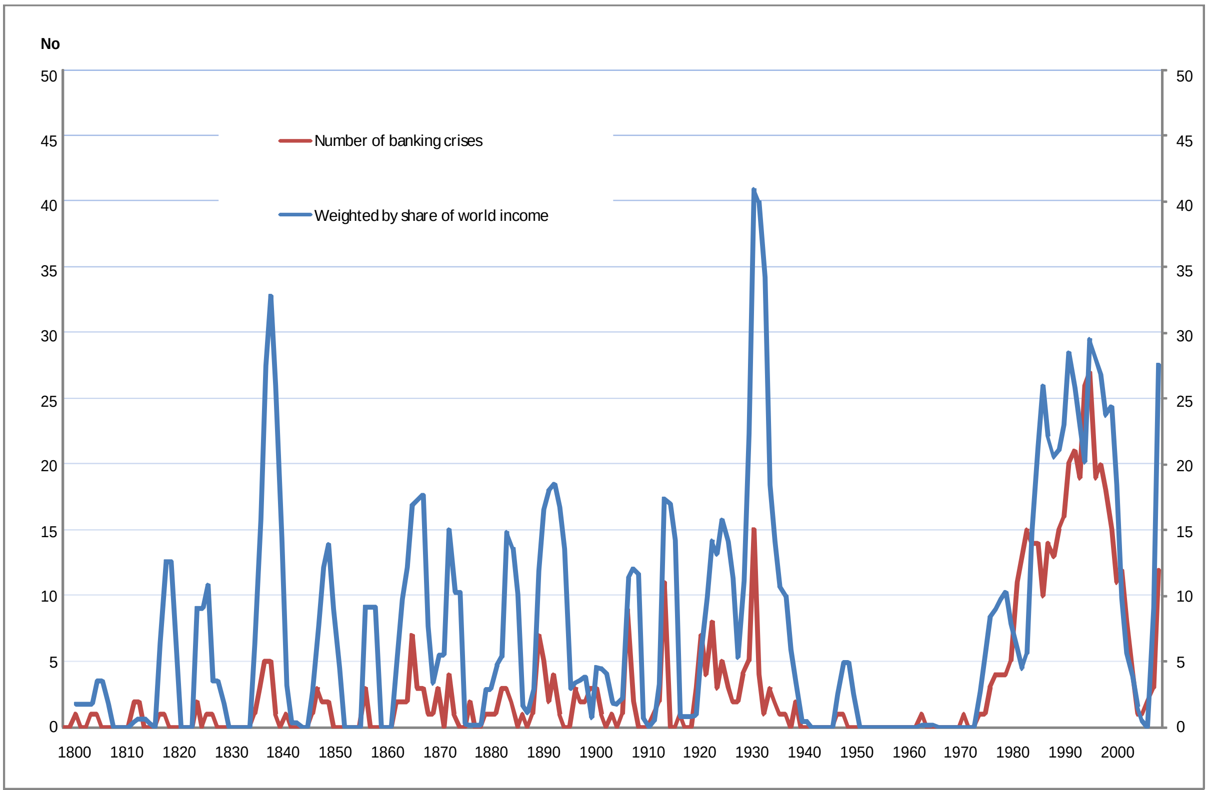
However, whether under the quasi-free banking era of yesteryear, or the more developed prudential frameworks of today, banks clearly fail. And as the research of Reinhart and Rogoff illustrates, there is a striking correlation between freer capital mobility and the incidence of banking crises (2008a, p. 7). Banking crises were common in the 'golden era' of financial globalisation from the 1880s to 1914, indeed the most common form of financial crisis in this period (Bordo 2008a, p. 2). The post-War Bretton Woods era of capital controls and 'financial repression' ending in the early 1970s was remarkable for the virtual absence of any systemic banking crises, although exchange rate misalignments within the dollar-gold fixed exchange rate system meant that balance of payment/currency crises were frequent under this regime as the New Zealand experience shows. Banking crises have reappeared with the advent of capital mobility and broader financial liberalisation affecting both emerging markets and advanced economies alike – banking crises are an 'equal opportunity menace' (Reinhart and Rogoff 2008c). This stands in contrast to sovereign debt crises for example, which tends to be the preserve of emerging markets unable to graduate from 'serial default' (Reinhart and Rogoff 2008a, p. 2). The interwar period stands out as the 'mother of financial instability' affecting both emerging market and developed economies, and involving all types of financial crisis – banking, currency and sovereign debt.

A common theme in the run-up to banking crises, and one that was true of the first era of financial globalisation as it is in the more recent period, is the capital inflow bonanza (Reinhart and Rogoff 2008c, p. 24). This capital inflow, whether it is mediated directly by banks themselves, or via other institutions and markets, leads to credit expansion and a rise in asset prices. With the financial accelerator at work, a positive feedback between the real economy and domestic financial system ensues until circumstances change. Invariably, this change involves a 'sudden stop' in capital from the creditor country either because interest rates increase (the relative return of investing in the recipient country is reduced) or sentiment changes regarding the expectation of default in the borrowing country.

The first era of financial globalisation witnessed massive and unfettered capital flows driven by the relatively depressed conditions in the centre-country of the international financial system – Britain. British investors were attracted to the higher rates of return in resource-rich economies such as Australasia and Latin America. This lending took the form of direct investment, bond finance and bank loans. Australasia benefited from a lower implicit risk premium relative to other regions that were outside the arch of the British Empire, where British property rights were harder to enforce (Bordo and Meissner 2007, p. 6).

As Bordo, Cavallo and Meissner (2007) note for the period 1880-1913, the drying up of this capital bonanza was very important in explaining any ensuing financial crisis. Indeed 40 percent of all 'sudden stops' in the period were followed by financial crises within three years, with a banking crisis the most likely outcome relative to either a currency or sovereign debt crisis. And neither Australia nor New Zealand was immune to periods of heightened risk aversion during the first era of financial globalisation.

Figure 1: Banking Crises – a time series



Source: Reinhart and Rogoff (2008c)

There is an association between financial crises and economic growth, although the question of causality is something of a vexed issue. On occasion financial crises can be said to cause, or trigger subsequent growth slowdowns or recessions, while in other cases the decline in economic activity can prompt distress in the financial system. Such distress can then reinforce the decline in economic activity via a perverse feedback loop between the financial sector and real sides of the economy. There are also those instances where financial shocks, be they global or domestic, do not have any major impact on output.

The current financial crisis has spawned a cottage industry attempting to quantify the effects of banking and financial crises more broadly on economic activity.[10] This literature suggests that financial crisis related slowdowns/recessions have a more deleterious affect on output than 'typical recessions '. Moreover, recessions associated with financial system disruptions tend to be more protracted affairs, while the subsequent recovery is shallower. The basic explanation is given by the relationship between credit growth and the concomitant level of gearing that occurs during booms that lead to busts. Households and firms perceive the need to restore balance sheets following a period of over-leveraging, or are forced to do so by severe restrictions in the credit supply that accompanies systemic banking crises (IMF 2009, p. 116). Private consumption and investment therefore remain weak for a protracted period.

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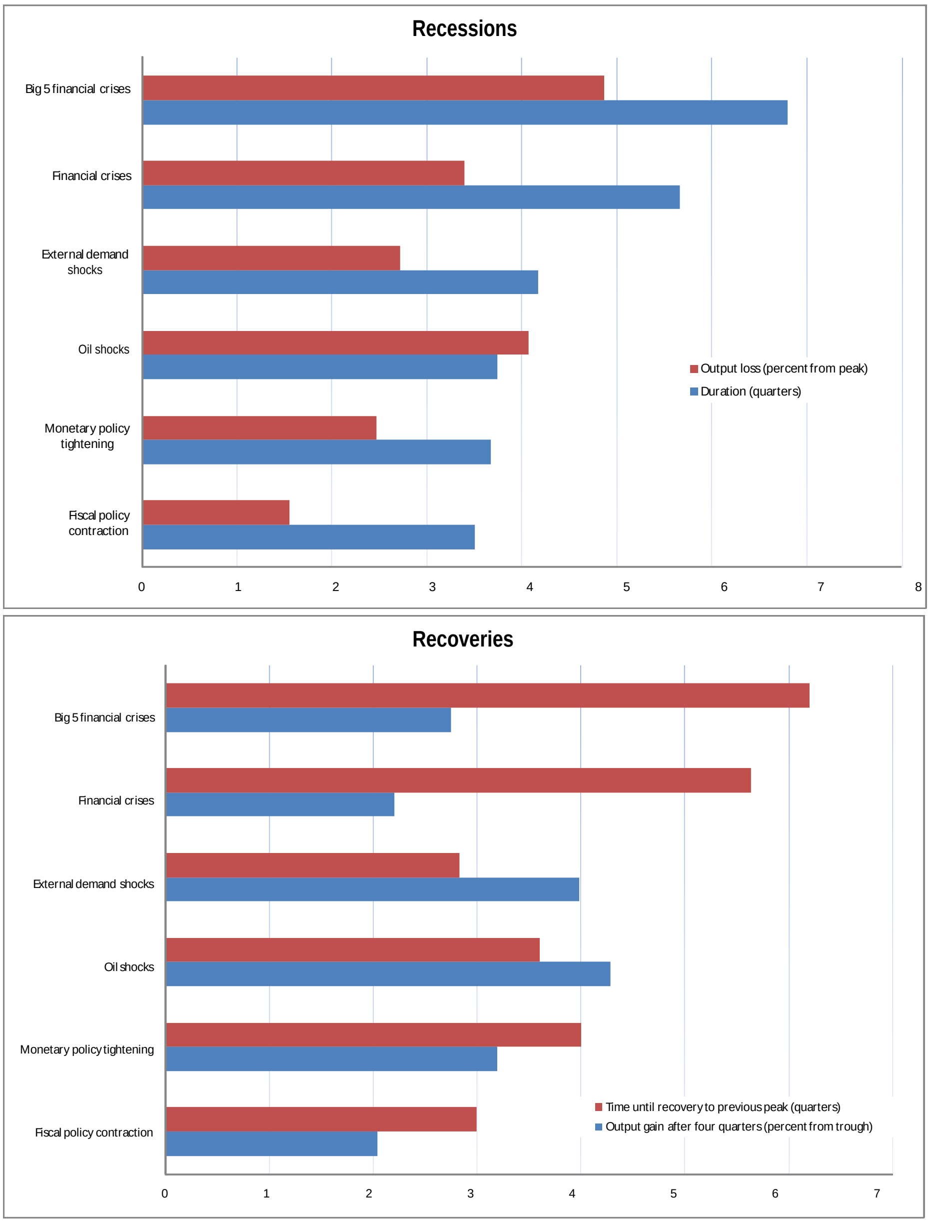
10 See for example: Cardarelli *et al* (2009); Classens, Kose and Terrones (2008); IMF April 2009 *WEO*; Reinhart and Rogoff (2009).

Figure 2: Financial Crises, recessions and recoveries[11]



Source: IMF April WEO dataset.

3. New Zealand banking crises: BNZ late1880s/early 1890s

New Zealand suffered its first major systemic banking crisis in the mid-1890s which culminated in the recapitalisation of the BNZ by the government in 1895. The crisis was the result of a long drawn out period of subdued growth beginning in the late 1870s – a period that has been termed the 'long

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11 Based on data for 21 advanced economy recessions and recoveries since 1960. The big-5 financial crises are: Finland 1990-93; Japan 1993; Norway 1988; Spain 1978-79, and Sweden 1990-93.

depression' by a number of economic historians.[12] The value of the security backing a majority of the loans (land prices) fell during this period and financial institutions found themselves with a portfolio dominated by non-performing loans. These bad loans eventually had to be written off balance sheets and fresh capital issued, or in some cases caused the institution to fail. This deleveraging process accentuated the decline in economic activity over the period, a process reinforced by the increase in risk aversion on the part of investors in Britain who had poured funds into New Zealand financial intermediaries thereby enabling the growth in domestic credit during the boom of the 1870s. Thus financial institutions were being pressured by both sides of their balance sheets – falling asset prices on the one hand, and funding and liquidity pressures on the other. In addition to the formal government bailout of the BNZ, the crisis decimated the pastoral finance company sector; caused significant capital write downs from the National Bank; and led to the takeover of another distressed bank, the Colonial Bank, as part of the government bailout of the BNZ. The crisis also led to an increase in direct mortgage lending on the part of wealthier New Zealand households, which partly mitigated the decline in the supply of credit from financial institutions.

It is worth pointing out at this point that this was not the first instance of difficulties New Zealand financial institutions had experienced – individual banks had failed before. For example, the Commercial Bank of New Zealand Ltd established in 1864, failed because of the Overend and Gurney crisis in London 1866, while the Bank of Auckland failed a year later.[13] The Bank of Otago was absorbed by the National Bank in 1872 (Hawke and Sheppard 1984, p. 7). The Bank of Otago was the main creditor to the Southland Provincial Council which had become insolvent. Moreover the early years of European colonialisation were fraught with financial difficulties associated with the lack of currency (both specie and banks notes due to the limited development of banking) to mediate economic activity, or pressures on the Colonial government to fund its activities such as fighting wars with the Maori. Indeed the lack of currency led to an experiment with an embryonic central bank in the 1850s, the Colonial Bank of Issue, which had a monopoly of currency issue. This institution never gained the trust of the public and the right of individual trading banks to issue their own notes was returned to them when the Bank closed in 1856.

Despite such failures, and notwithstanding the problems later in the century, the New Zealand banking system exhibited a high level of stability, certainly relative to the US for example, where banking panics were frequent. The New Zealand banking system in the nineteenth century was dominated by Australian banks such as the Union Bank, Bank of Australasia and the Bank of New South Wales – a dominance which continues to this day. Indeed, the establishment of the BNZ, in 1861, was in part a response to this Australian dominance.

The Vogel Boom

The 1870s witnessed an explosion of government borrowing to fund infrastructure development and promote migration. New Zealand's implicit credit rating had improved following the conclusion of

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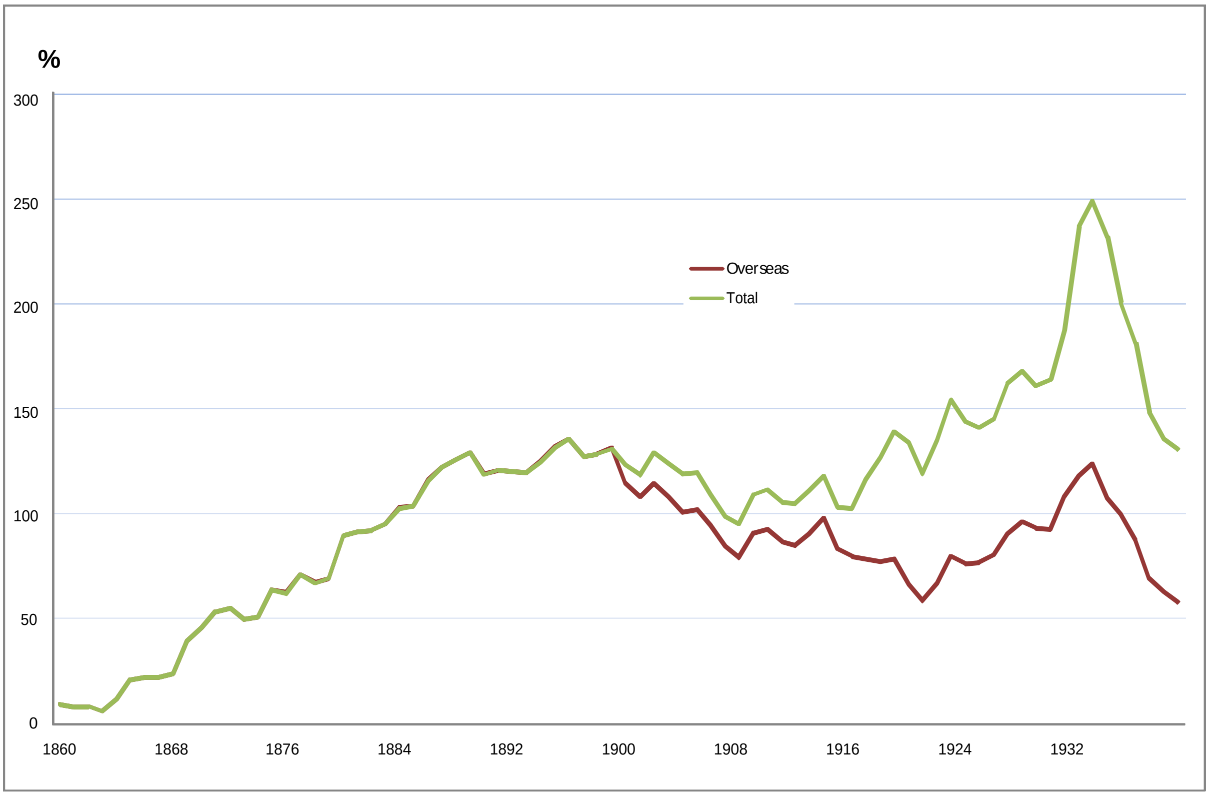
[12] Sutch (1966b) dates the long depression from 1865 related to the peak in gold production, with the 'Vogel boom' of the 1870s viewed as a brief interruption to a long period of secular decline. However, most accounts date the long depression from the late 1870s.

[13] For a useful overview of the early development of New Zealand's banking system see Hawke and Sheppard (1984). For specific institutional banking histories see Chappell (1961) for the BNZ; Holmes (1999 and 2003) and Hawke (1997) for the National Bank; and Merrett (1985) for the ANZ.

the Maori land wars in the 1860s and assumption of Provincial government debt by the central government following the end the provincial system of government in 1867. Government debt increased four-fold from 1870 to 1880. The building of railroads which opened up the country had the effect of increasing the value of rural land. The increase in export prices in the early part of the decade, coupled the positive externalities associated with this infrastructure development resulted in future returns to farming being capitalised in the market price of land.

Thus, in the Kindleberger/Minsky framework, government borrowing to fund development constituted the 'displacement' – the exogenous shock to the macroeconomy that changed expectations about future profit opportunities. To take advantage of such opportunities, economic agents increased their level of gearing, and were able to do so by the extension of credit by trading banks and other financial institutions. As Bedford summarises, "[a]n extravagant State borrowing policy encouraged the dependence upon credit. Before long everybody was pledging his assets to the utmost to extend his credit and thereby take the fullest advantage of the prosperity which seemed to mark every enterprise" (1915, p. 174).

Figure 3: Government debt 1860-1940 (% of GDP)



Source: Statistics New Zealand Long Term Data Series.[14]

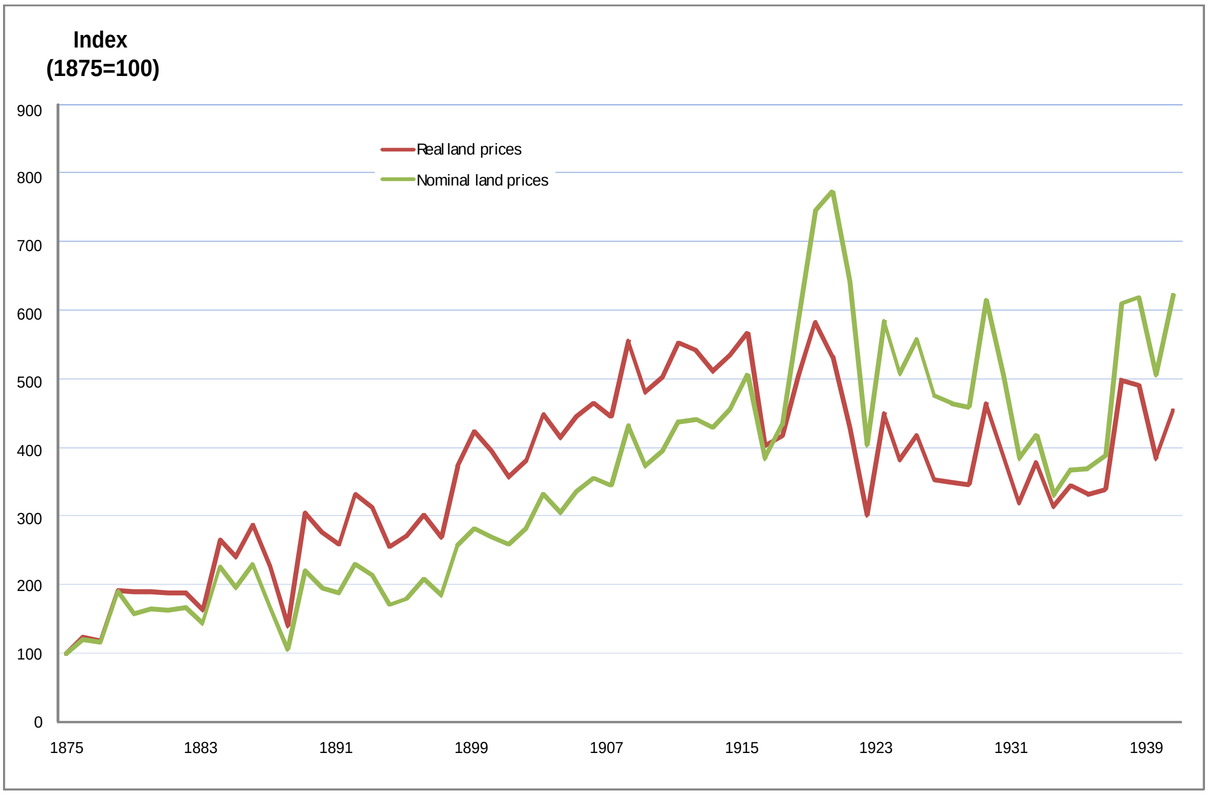
Before long, what seemed like a rational response to a change in circumstances turned into "land gambling" (Condliffe 1930). As Chappell describes in his history of the BNZ, "[e]very class of the community was bitten by the prevailing mania, and the price of every description of land was forced

14 Statistics New Zealand and the Treasury have collected a number of long term socio-economic data series from a variety of sources. The coverage varies depending on the series in question. For the original source of the data underlying each series see [www.stats.govt.nz/tables/ltds].

far in excess of real values. From the seeds sown in this era sprang many of the troubles which beset the bank [BNZ], no less than other lending concerns, in after years' (Chappell 1961, p. 90).

But it would be wrong to place the blame squarely on the shoulders of Julius Vogel, Colonial Treasurer and later New Zealand's Premier. Indeed Vogel was acutely aware of the impact that his borrowing could have, and initially proposed to reserve to the Crown, land which the railways passed through, and to tax owners of land which benefited from the roads/railways. This was defeated by legislation (Sutch 1966b, p. 8). It was the 'provincialists' in Parliament that wrecked Vogel's scheme (Sinclair 1991), seduced by what in hindsight turned out to be overly optimistic expectations concerning the returns to farming and the economy's growth potential in general. Thus, the "government's mistakes were more than matched by the excesses of the banks, the land grabbers, and the speculators" (Sutch 1966b, p. 10).

Figure 4: Land prices 1875-1940



Source: Greasley and Oxley (2005).

Land speculation during the 1870s was fed by the extension of credit, even after export prices started to fall from the mid-1870s (figure 5) and government spending plateaued in the early part of the 1880s.[15] The key financial institutions providing this credit were trading banks and pastoral finance companies, both of which were able to access cheap sources of British capital for most of the period.

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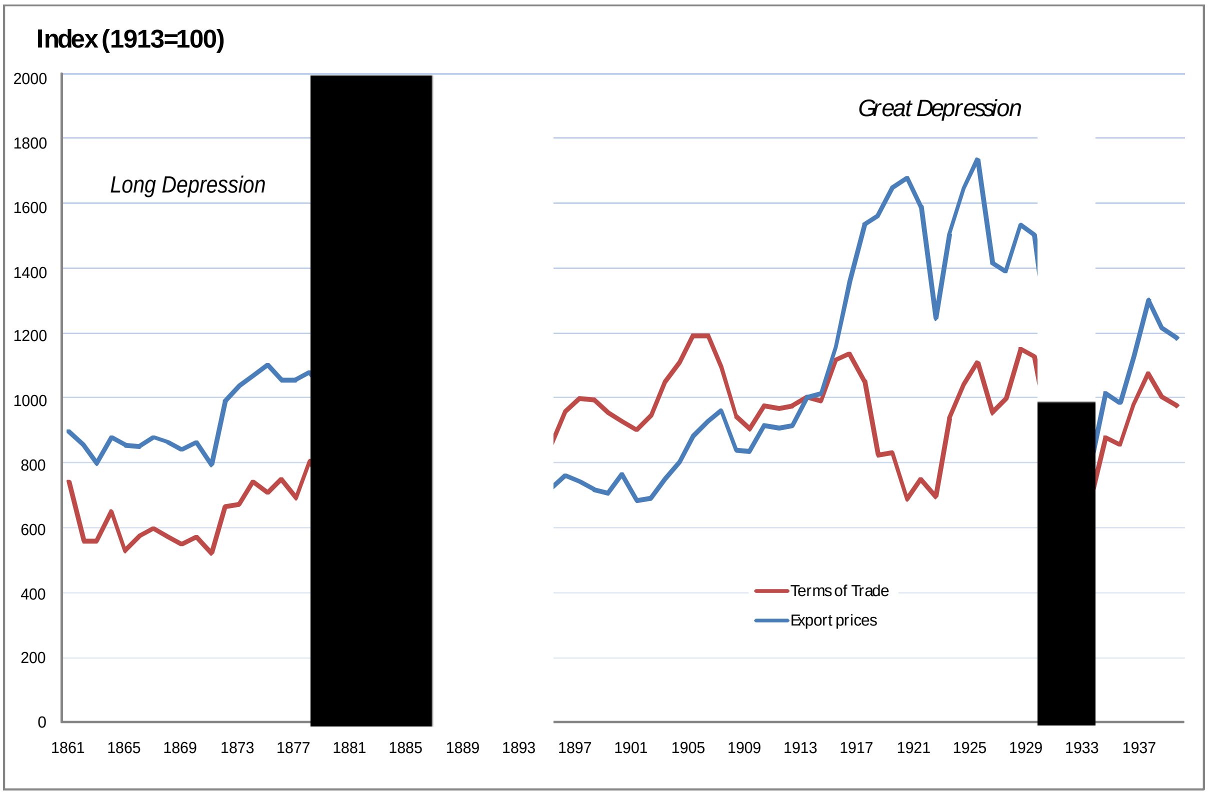
15 In addition, the effect of the fall in wool prices was mitigated in part by lower import prices, a function of a steady decline in ocean freight rates and the improvement in the speed and efficiency of shipping.

Figure 5: Export prices and the terms of trade 1861-1940

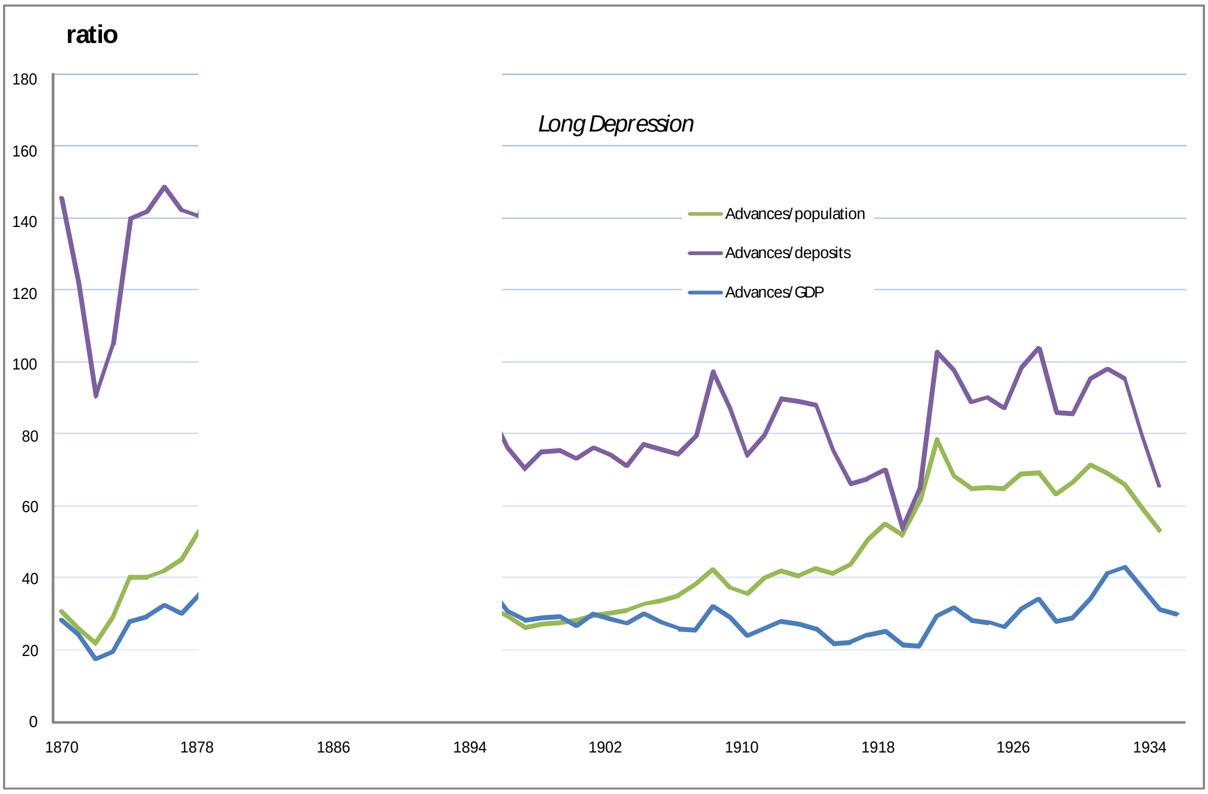


Source: Statistics New Zealand Long Term Data Series.

The structure of the financial system

Trading banks dominated the financial intermediation process and accounted for 71 percent of financial system assets in 1878 (Hawke and Sheppard 1984, p. 84), although this share declined over time owing to competition from non-bank institutions such as pastoral finance companies. Trading banks were able to fund lending growth in New Zealand via retail deposits at their London branches, as well as from domestic sources of savings. British investors were attracted by the interest rate differential between the deposit rates offered by New Zealand banks. Banks were offering 5 percent for six month fixed deposits and 6 percent for 12 months (Prichard 1970, p. 156), compared with mortgage lending rates of 8-9 percent. The demand for long-term finance for agricultural investment for land improvements and livestock accumulation prompted trading banks in New Zealand and Australia to depart from London banking orthodoxy which was based on matching the maturity profile of (short-term) assets and liabilities. This orthodox approach limited bank lending to the discounting of bills of exchange drawn against goods in transit. New Zealand banks however, like their Australian counterparts, were more likely to follow Scottish banks' practice of lending on overdraft. The move to 'land banking' was accelerated by the competition with pastoral finance companies during the Vogel boom.

Figure 6: Trading bank lending ratios 1870-1936



Source: Statistics New Zealand Long Term Data Series, author's calculations.

As Bedford argues however, the "outcome of the competition was that the banks succumbed to the temptation to enlarge their profits by participation in illegitimate business" (1915, p. 174). Ultimately, trading banks entered arrangements with these finance companies, or indeed sponsored such institutions. The BNZ, for example, sponsored the NZ Loan and Mercantile Co Ltd; National Bank sponsored the National Mortgage and Agency Co Ltd; while the Colonial Bank was closely linked to Colonial Investment Society (Hawke 1985, p. 63). Bank lending was less concentrated in mortgage finance, with trading bank share of total mortgages outstanding around 10 percent in 1886 (Arnold 1981, p. 13). Bank lending increased strongly until the mid-1880s as can be seen in figure 6. By way of comparison with Australia, which experienced a severe systemic banking crisis in the 1890s, the level of advances (or loans) relative to GDP was lower, peaking at 53 percent in 1886. Australian bank credit to GDP peaked at 77 percent in 1890 (Fisher and Kent 1996). However, in terms of the level of deposits, New Zealand bank credit reached a peak of 163 percent in 1879, compared to the Australian figure of 130 percent in 1890.

Pastoral finance companies raised their funds via debentures issued to mainly Scottish investors, although they were listed on the London Stock Exchange. The method of debenture was well established in Scotland in this period, with a network of agents involved in advertising and collecting money. The cultural link to Scotland was reinforced by Dunedin's role as New Zealand's main financial centre at the time. Pastoral finance companies dominated institutional lending to the mortgage market, constituting 61 percent of institutional mortgage finance in 1886, compared to 23 percent for trading banks (Arnold 1981, p. 70).[16] Pastoral finance companies had a similar margin on their lending to trading banks.

Overall financial institutional lending to the mortgage market stood at 57 percent in 1886, with direct foreign lending by individuals accounting for 10 percent and direct lending by individuals in New Zealand the remainder. The financial disintermediation associated with direct mortgage lending by both local and foreign individuals involved an informal network of solicitors, land brokers and merchants. Like institutional foreign lending, direct individual foreign lending was motivated by the relative return on investing in New Zealand mortgage assets compared to Britain. Britain had experienced subdued growth since the 1870s and interest rates were low. The yield on British government consols for example was around 3 percent, and developments such as the National Debt Act of 1884 in Britain which converted 3 percent consols into even lower yielding obligations only served to reinforce the attractiveness of New Zealand assets.

However, British investors – both institutional and individuals – came to reassess the risk-return trade-off in the late 1880s as problems with illiquid assets became more apparent in New Zealand. This reduced both the level of London retail deposits of trading banks, the volume of debenture finance for pastoral companies as well as direct lending. In addition, developments such as the Barings crisis in 1890 and the generalised banking crises early in the 1890s prompted a general reassessment of investment in emerging markets.

By contrast, direct lending by New Zealand individuals – "gentlemen, widows and spinsters" (Arnold 1981, p. 103) – increased over the course of the long depression and helped mitigate the contraction in credit supply from financial institutions, particularly during the 1890s. Arnold argues that the record of foreclosure in this period suggests that direct lenders made a better assessment of credit risk compared to either trading banks or pastoral finance companies. The use of local agents and a more intimate knowledge of both the land and the borrower seemed to have placed this sector at an informational advantage. In addition, many individuals may have seen the crisis as an investment opportunity, with speculators buying bad mortgages at a discount and hoping to make a profit on the foreclosure.

The Long Depression and financial crisis

The mortgage market supplied the bulk of credit to the New Zealand economy in the early 1880s− around 60 percent (Arnold 1981) – and the decline in mortgage credit growth (figure 7) over the course of the 1880s proved a drag on economic activity as a whole. The retrenchment was driven by the failure of pastoral finance companies following a liquidity crisis associated with a withdrawal of debenture finance from Britain. Trading banks were also forced to delever and restrict lending in the face of rising non-performing loans (figure 6 and 8). Trading banks also suffered from funding liquidity pressures as the level of London retail deposits fell away. However, the major pressures for trading banks emanated from the asset side of their balance sheets.

The decline in export prices continued apace during the 1880s and this ultimately undermined the value of the collateral underpinning the bulk of loans made in the 1870s and early 1880s.[17] Farmers

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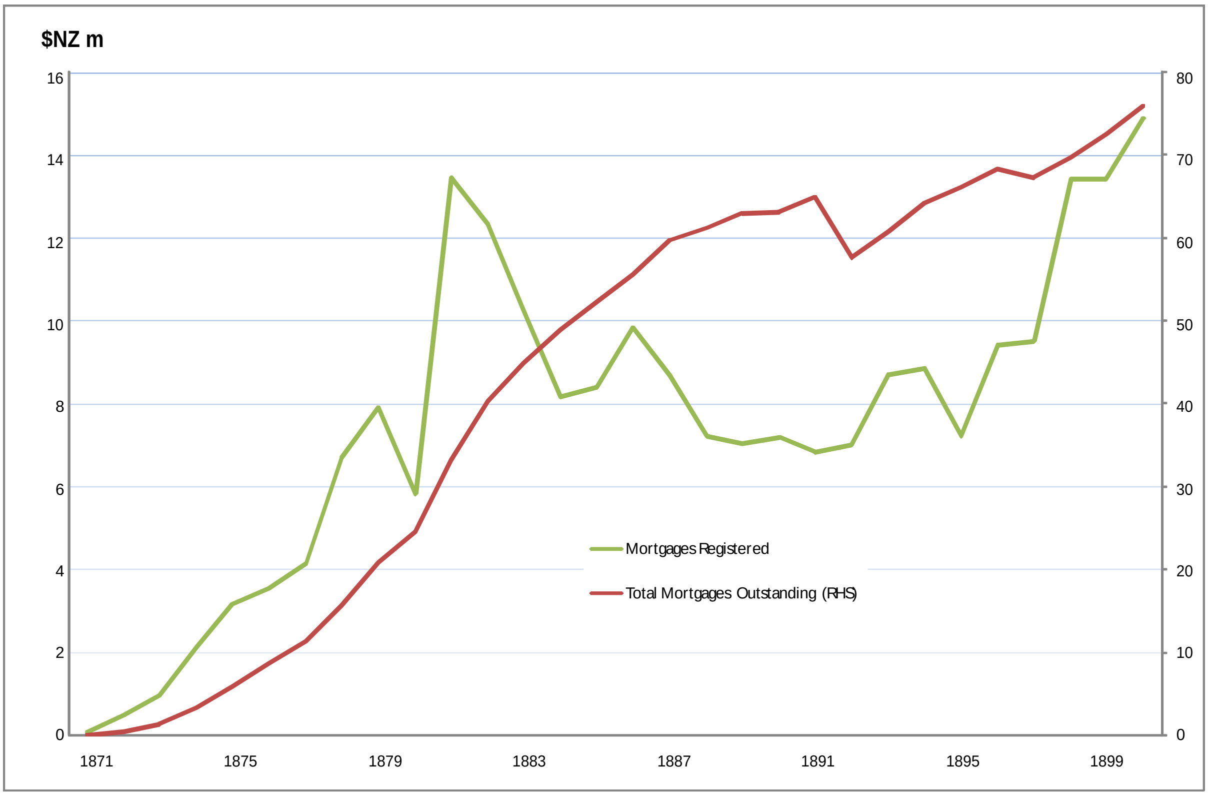
16 The overwhelming majority of mortgage lending was against rural land, although this declined over time as urbanisation proceeded. Mortgage loans were typically 2-5 years in duration, and therefore required constant refinancing (Arnold 1981, p. 54).

were no longer able to generate the returns from their land to service the mortgage interest payments or able to sell the land at a capital gain to pay off the principal. Reinforcing difficulties of those that borrowed heavily was the decline in the general price level over this period which increased the *ex post* real interest rates they faced. For trading banks the subdued growth over the decade increased the credit losses on almost all types of loans. Banks also took over the assets of the pastoral companies they sponsored, particularly where these loans were negotiated jointly. As a result of a lack of profitable opportunities in New Zealand, New Zealand based Australian banks, and the BNZ directed lending across the Tasman during the 1880s, further reducing the supply of domestic credit. Ironically, this lending also soured as the BNZ was ultimately forced to acknowledge losses on its Australian operations in the late 1880s.

Figure 7: Value of Mortgages 1871-1900



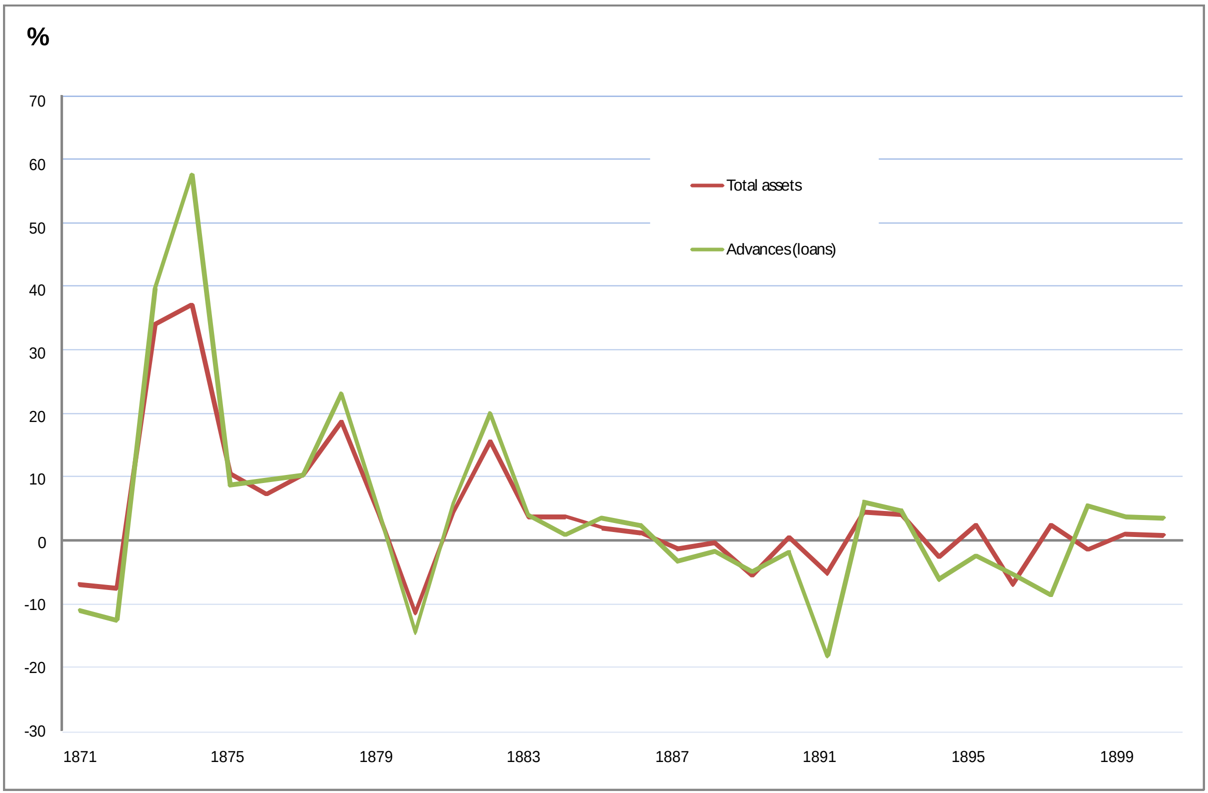
Source: Statistics New Zealand Long Term Data Series.

The banking crisis and the specific travails of the BNZ which will be discussed shortly, was therefore a function of the long depression and arguably accentuated the output declines over this period. Thus the financial crisis did not 'cause' the long depression per se. Most analyses of the long depression focus on the decline of export prices from the mid-1870s, specific trigger events such as the failure of the City of Glasgow bank in 1878 which prompted an initial tightening in London capital markets (Easton 2008), or more structural explanations to explain the decline in the economy's growth potential. Preston argues that a "fundamental structural disequilibrium" in the New Zealand economy was revealed by the decline in export prices and consequently the limits of a wool-oriented extensive model of economic growth (1978, p. 48). This is echoed by Hawke (1985) who explains the long

[17] Wool export volumes increased 50 percent between 1876 and 1886, but wool export values were down 10 percent, driven by lower wool prices (Sutch 1966a, p. 64).

depression by the technological limits imposed by the wool-based economy. This contrasts with the view offered by Bedford (1915) and Condliffe (1930) who emphasise the view that the long depression was in some sense penance for past extravagance (Hawke 1985). In this perspective government borrowing in concert with the rampant speculation in land values generated the "fictitious prosperity" of the 1870s (Barton and Moore 1935, p. 14), only for this 'illegitimate' and almost immoral behaviour to be subsequently punished the following decade.

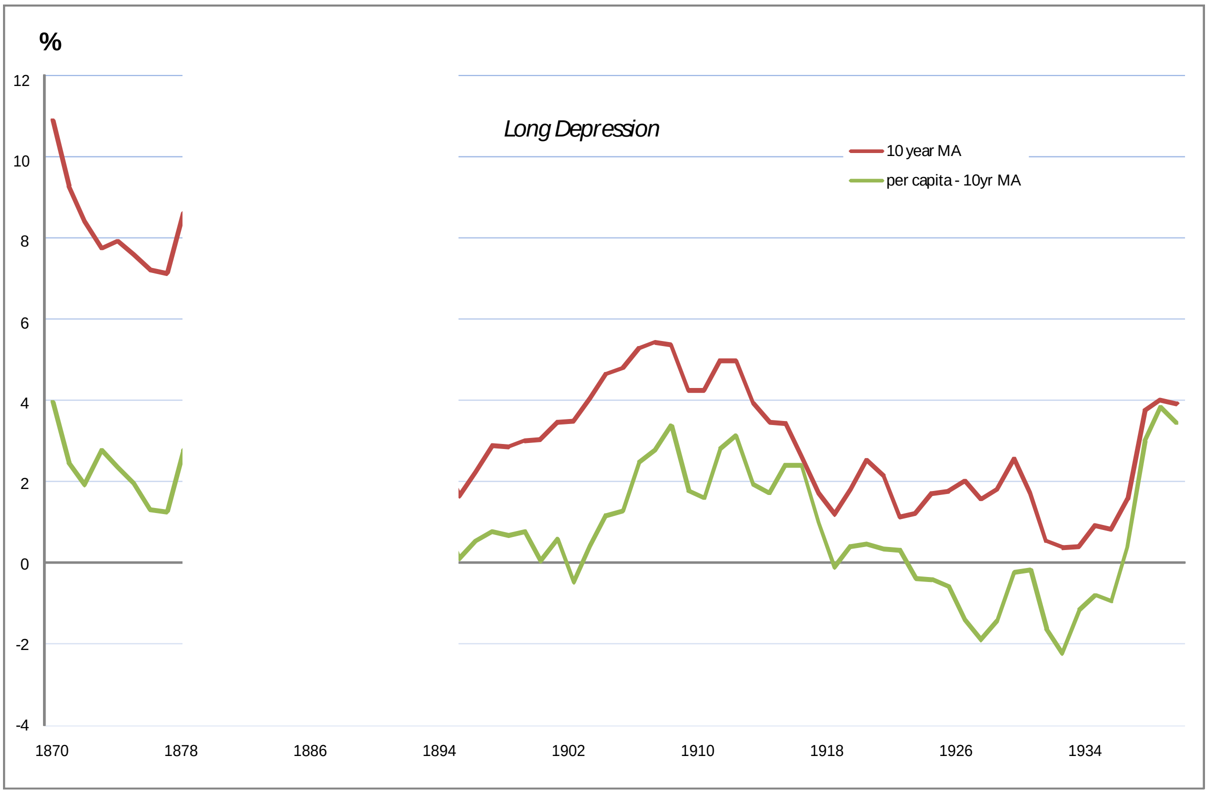
Figure 8: Trading bank asset growth 1871-1900



Source: Statistics New Zealand Long Term Data Series.

Nevertheless, the macroeconomic shock associated with an extended decline in export prices and subdued growth (figure 9) did reveal fundamental balance sheet weaknesses of financial institutions– vulnerabilities which accumulated during the 'overtrading' and euphoric atmosphere surrounding the 1870s and early 1880s. This balance sheet weakness was most aptly demonstrated by the problems besetting New Zealand's largest financial institution – the BNZ.

Figure 9: Real GDP Growth 1870-1940



Source: Statistics New Zealand Long Term Data Series, author's calculations.

BNZ and government bailout

Bedford, writing in the early twentieth century emphasises the reckless abandon that characterised the 'overtrading' of the era, and contrasts the 'legitimate' business of banking with the shift to 'land banking ' and the associated maturity mismatch between short term liabilities and longer term assets. Hawke and Sheppard provide a somewhat more charitable interpretation of change in trading bank business model, where "there was no way that the banks could avoid being involved, and it would have taken management of a superlatively high order for the danger to result in no casualty. The emphasis in any evaluation should be on the skill with which losses were limited" (1984, p. 71-72).

Some banks did demonstrate such skill and on reflection more prudence in their lending relative to some other banks. The ultimate marker being the speed by which losses were recognised on the balance sheet and capital buffers restored in order to prevent insolvency. The actions by the National bank provides a case in point where 30 percent of paid up capital was written down in 1885 and a further £150,000 in 1891 following a share call up to establish a special reserve fund for the provisioning of future losses on assets. Taken together, half of the paid up capital of the bank had been wiped out to meet credit losses. These actions restored profitability and prevented any run by depositors.

By contrast the reckless advances of the BNZ were obfuscated for many years "under roseate balance sheets …with grossly over-valued assets and grossly under-valued bad debts, until 1888, when the accumulated difficulties of the Bank made disclosure unavoidable" (Bedford 1915, p. 144). Between 1878 and 1888 the level of advances had increased £2.25m, whereas deposits increased £1.25m and paid-up capital £0.25m (to £1m). Capital buffers therefore appeared inadequate to absorb any substantial losses on the bank's portfolio of assets, particularly if a classic bank run ensued from depositor concerns regarding the solvency of the bank.

Such solvency concerns also implied systemic risk as the BNZ was the largest financial institution at the time. The bank held roughly 50 percent of retail deposits of the banking system in the early 1880s and a similar share of advances (Hawke and Sheppard 1984, p. 29). Moreover by 1888, the BNZ became the single largest land owner by virtue of the assumption and subsequent management of the non-performing loans secured by rural land.[18] Initially these bad assets, or 'globo assets' as they were termed in reference to the large estates that served as collateral for a significant proportion of loans (£4.3m of bad assets, valued at £3.5m), were administered by a separate department (Consolidated Properties Department) and were partitioned off on the balance sheet as a special liquidation account. [19] This followed a decision in 1888 to write off the entire reserve fund of £500,000 to cover losses; a 30 percent write down of paid up capital (£300,000); and issue new paid up capital worth £425,000.[20] Included in these losses of £800,000 were those stemming from the Australian business, particularly in South Australia, and from losses from the Sydney branch stemming from malfeasance on the part of the branch manager who misappropriated between £10,000 to £15,000 (Bedford 1915, p. 209). There were also losses on loans made in London in secret to enable a prominent individual to speculate on the London stock exchange!

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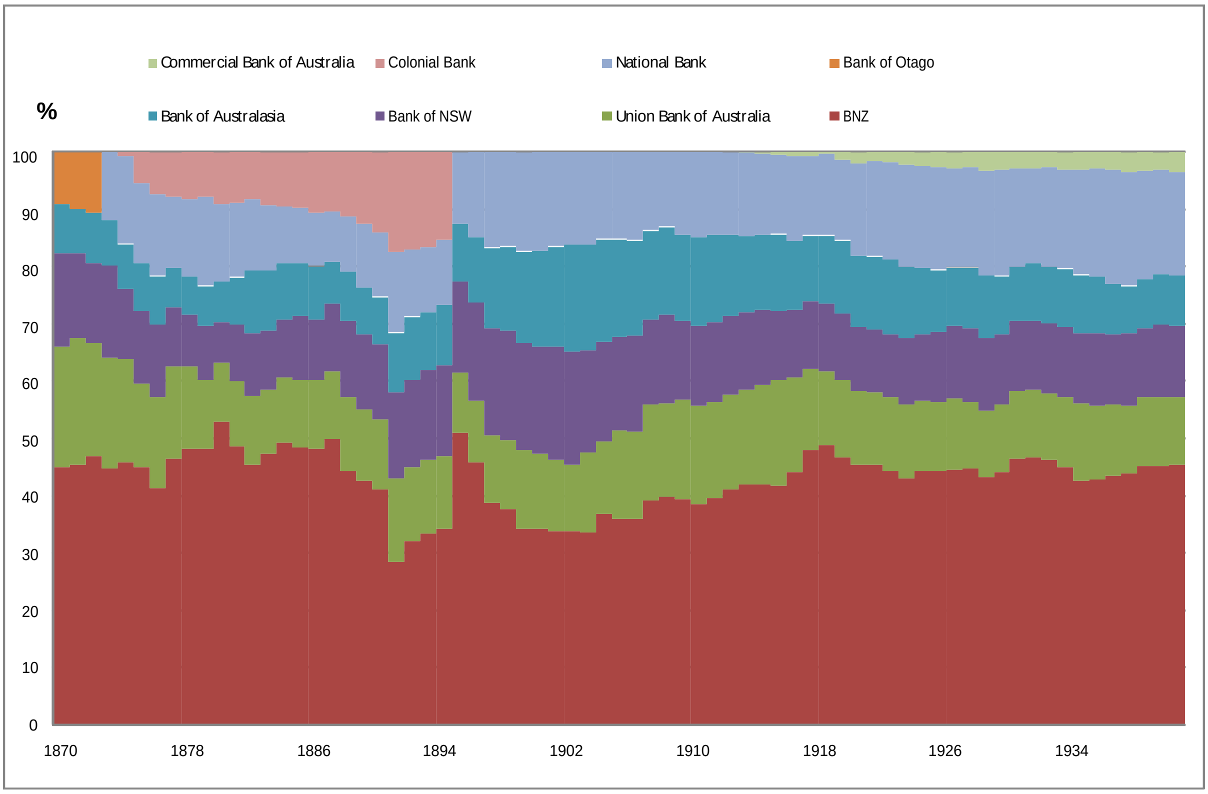
18 The following account of the BNZ's tribulations during the late 1880s and 1890s draws heavily on Chappell's (1961) institutional history of the BNZ. Other detailed accounts are found also in Bedford (1915), and Moore and Barton (1935).

19 A private members bill passed in 1889 enabled the bank to essentially ignore the liquidation account, where dividends could be paid out of the 'good' business.

20 The new share issue involved 25,000 £10 shares at £7 for existing shareholders (£175,000), and another 25,000 of fully paid up £10 shares placed in London (£250,000). This left £75,000 in uncalled capital.

Figure 10: Trading bank shares of total loans



Source: Hawke and Sheppard (1984).

Despite the actions undertaken over 1888, accusations of unaccounted for losses on the balance sheet remained. George Buckley, an ex-president of the bank argued that another £300,000 in losses existed and threaten to 'smash the bank' with such accusations if he didn't receive a generous honorarium. Buckley's claim of further losses disturbed British shareholders and members of the London Board who sent out an independent auditor to assess the health of the bank. As a result further losses were identified, the headquarters were shifted to London, further capital write downs ensued (another £300,000), fresh capital of £75,000 was raised from the uncalled shares that were issued in 1888 and a separate company was set up to remove the globo assets off the balance sheet entirely.

The BNZ Estates Company was incorporated in London in August 1890 with assets assumed from the Consolidated Properties department, and other bad assets valued at a total of £3.2m. The assets were paid from a debenture issue in London which raised £1.3m and a shareholding of the BNZ accounting for the remainder. In the first few years the Estates Company was able to pay a dividend to the BNZ, but over time the company found it difficult to meet its debenture interest obligations (the debentures were paying 5.5 percent) from the return of the properties under its management, and by 1894 was making a loss. This contrasted with the relative health of the 'good bank' which enabled a dividend of 5 percent to be paid to shareholders in the early years of the 1890s. The bank ultimately found itself lending money to the Estates Company and was obliged to reduce its own dividend, or pay no dividend at all. As the only shareholder the separate existence of the company proved purely a nominal matter. As Bedford argues, it is "…impossible to escape the conclusion that, in preference to the creation of the Estates Company in the form adopted, the Bank should have been liquidated in 1890" (Bedford 1915, p. 237).

Shareholders began to lose confidence in the BNZ and the bank's share prices fell sharply in early 1894 as the chimera of the BNZ's dual existence became more apparent. The spectre of a bank run by BNZ depositors loomed large, a possibility heightened by the banking crisis which had unfolded across the Tasman over the previous year. In late 1893 there had been a minor bank run on the Auckland Savings Bank prompted by a rumour of a disgruntled customer by all accounts. The government responded with the Bank Note Issue Act, an act mirroring that passed in New South Wales designed to stem bank runs by making bank notes legal tender.

The Australian banking crises was a function of similar dynamics that had played out earlier in New Zealand. Australia experienced a speculative boom in land prices on the back of massive investment in the wool producing economy financed by the various governments of the colonies and the extension of credit by private sector financial intermediaries. As in New Zealand, trading banks faced increasing competition from new non-bank institutions (Fisher and Kent 1996), and again in contrast to British orthodoxy, landed property, livestock and other illiquid securities were accepted as collateral for loans (Thomson and Abbot 2001). Building societies, an important source of long term finance, as well as pastoral finance companies increased their share of total financial system assets from 12 percent in 1885 to 21 percent by 1892 driven by the competition with trading banks and the generally buoyant economic conditions over the course of the 1880s.

The 'sudden stop' of capital associated with the Barings crisis of 1890 looms large as one of the key trigger events in precipitating the Australian banking crisis, more so than in the New Zealand narrative where problems were evident in the banking system from the mid-1880s. The Barings crisis was triggered by an increase in interest rates over the course of 1889/1890 by the Bank of England in response to declining gold reserves as a result of burgeoning capital outflows, together with the recovery of British and other European economies from sluggish growth in 1880s. This increase in interest rates in the core affected Argentina in particular, and the London investment house Barings who was heavily exposed to Argentinean assets. Barings' difficulties prompted a more general stop in capital flows to emerging markets with subsequent banking crises in a number of countries including Australia.

Between 1891 and 1893 54 Australian non-bank deposit-taking institutions closed, the majority permanently (Fisher and Kent 1996, p. 11). The first trading bank to fail was the Federal Bank of Australia in early 1893, a creditor to a number of pastoral finance companies which had failed. The banking panic started in earnest in April of that year with the suspension of payment by the Commercial Bank of Australia. In all, 13 of 23 banks closed their doors in the first five months of 1893, although 12 were able to reopen following restructuring. This restructuring involved the formation of a new limited liability company with the same name; significant capital write downs; the conversion of some deposits into equity and the deferred payment of the remainder of deposits. The 13 banks which had closed their doors in 1893 wrote of in excess of their initial capital (in 1893) in the years up to 1909, with 40 percent of this capital written off in 1893 alone. The majority of depositors were paid back by 1901, although some had to wait until 1918 to be fully repaid. This reconstruction of the banking sector was primarily driven by the private sector. However, this reconstruction was supported by the passing of amended corporate legislation; the Queensland government did replace the private issue of bank notes with its own notes, and the same government did rescue the National Bank of Queensland (Thomson and Abbot 2001).

The shock to economic activity was large. GDP fell 10 percent in 1892 and another 7 percent the following year and it was not until 1899 that Australian GDP surpassed the previous peak. By comparison the output effect in New Zealand's case was far milder. Real GDP did contract 1.5

percent over 1895 (March year), but rebounded quickly thereafter. However as we have noted, pressures in the financial system which culminated in the formal bailout of the BNZ in 1895 were a function of a very long period of subdued growth over the 1880s, rather than being a causal factor in the sharp contraction in activity which appears the case in Australia. For example annual March year growth averaged just 1.9 percent from 1880 to 1895, compared to 8 percent over the 1870s. The largest annual decline in growth during the long depression occurred in 1880 (March year), where real GDP contracted 6.4 percent related to both the decline in wool prices and the shock to capital flows emanating from the failure of the City of Glasgow bank in 1878.

The immediate shock to output from the banking crisis in New Zealand in the mid-1890s was mitigated somewhat by the relative health of the New Zealand based Australian banks during the banking crisis in Australia itself. Not one of these banks closed its doors and suspended payment in Australia during 1893. That said, cash from their New Zealand operations was drained to meet pressing needs across the Tasman – a criticism that was levelled particularly at Union bank.

While the direct contagion from the banking crisis was fairly muted, nervousness in New Zealand from possible spill over effects, coupled with the increasingly strained financial position of the country's largest bank prompted government intervention in 1894. The BNZ Share Guarantee Act was rushed through Parliament in one sitting in June. The Act gave the government a large contingent fiscal liability in the form of a State guarantee of £2m preference stock at 4 percent interest issued in London for 10 years. Of this £2m in new funds, £1m was required to be invested in easily realisable securities (British and German consols yielding around 2.75%) and the other £1m in the ordinary business of the bank. In addition, no dividend was to be paid on ordinary shares until the assets of the Estates Company had been disposed. The headquarters of the bank were shifted from London to Wellington, and the government had the right to appoint the president and auditor of the bank. In the event of the liquidation of the BNZ, the government had first call on the proceeds given the deposits it held at the bank, followed by other creditors and then repayment of any monies made under the guarantee. The government liability extended to any outstanding amount under the guarantee.

While the government guarantee prevented any immediate liquidity risk materialising, the issue of the performance of the Estates Company remained and with it the disposal of the non-performing assets it was tasked with. The BNZ was still sitting with £1.85m in the companies' shares on the asset side of its own balance sheet, and moreover, was obliged to meet the debenture obligations on behalf of this special purpose vehicle. In July 1895 the bank sent a letter to the Colonial Treasurer, Joseph Ward apprising him of the balance sheet position of the bank, the Estates Company and the Auckland Agricultural Company which was owned by the Estates Company. This resulted in further financial reorganisation.

This involved writing off the entire amount of existing paid up capital (£900,000) and an amount of £45,000 that was sitting in the reserve fund. In addition, a first call on the double liability of shareholders was evoked and subsequently written off - £3 per share amounting to £450,000.[21] The £1m previously invested (in foreign government bonds) under Share Guarantee Act was directed to go to the ordinary business. A second call of £3 per share on the double liability was made to raise new paid up capital of £450,000. The government also directly recapitalised the bank with the take up of

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21 Total share capital stood at £1.5m - 150,000 shares at £10 per share, following the 50,000 shares issued in 1888. Therefore double liability implied that shareholders were liable for another £1.5m.

£500,000 worth of 3.5 percent preference shares. The direct fiscal cost, in terms of government expenditure, of this recapitalisation was 11.5 percent, or 1.6 percent of nominal GDP at the time.

An asset management company was formed to manage the disposal of the globo assets. The Asset Realisation Board (ARB) took over £2.7m of Estate Company assets valued at £1.9, related primarily to landed properties, stock and implements. Another £1.3m in Estate Company assets (valued at £0.85m) related to commercial trading concerns was taken back onto the balance sheet of the BNZ. The purchase of these assets by the ARB was funded by an issue of 3.5 percent debentures for 9 years. This implied another contingent liability for the State as any deficiency in redeeming debentures upon maturity would have to be met out of the government purse – although the government had recourse to the remaining portion of the double liability of shareholders in the first instance.

The final element to the financial restructuring that occurred in 1895 was the takeover of the Colonial Bank by the BNZ. The Colonial Bank had managed to retain the public's confidence throughout this period, did not form any special purpose vehicle to manage bad assets and continued to pay out dividends. However, it appears in hindsight that dividends were being paid out of capital, rather than profits, and that insufficient provision for bad debts was being made. This deception (Bedford 1915, p. 307) was confirmed by a Parliamentary Committee set up in 1896 to enquire into the circumstances surrounding the government bailout of the BNZ. The Committee found that the losses of the BNZ before 1888 were the result of errors of judgement and gross mismanagement on the part of directors. They also found that the balance sheet of Colonial Bank in 1895 did not reflect a true and accurate financial position. In any event, Colonial Bank shareholders took a loss as the BNZ did not takeover all the assets of the entity – only the purportedly 'good' assets. The issue of the Colonial Bank takeover was laced with a degree of political intrigue as the Treasurer at the time, Joseph Ward had a heavy interest in Colonial Bank, and the charge was laid that he helped orchestrate the takeover by BNZ to protect such interests.

The pick up in economic activity from the mid-1890s associated with higher export prices and the benefits that began to accrue from refrigeration assisted the disposal of the assets of the ARB, although this occurred in 11 years, rather than the nine years originally envisaged by the debenture issue in 1895. In the 11 years to 1906 the ARB sold assets worth £1.5m, slightly less than the valuation of £1.9m in 1895. The proceeds from this asset disposal, together with an annual cash transfer out of profits from the BNZ of £50,000 enabled the repayment of debenture obligations. In 1900 the bank was able to repurchase the preference shares of the government, although the Bank of New Zealand Act of 1903 gave the government a holding of £500,000 in unredeemable preference shares with a 5 percent dividend. The Act also involved paying back £1m of the £2m guaranteed stock issued in 1894, and the reissue of the remainder for another 10 years. In 1902 the BNZ was able to pay its first dividend on ordinary shares of 5 percent.

The government intervention in the mid-1890s prevented the demise of a systemically important financial institution, and with it, helped mitigate any further impact on the economy from a major disruption to the process of financial intermediation. Over time, the government was fully compensated for the risk it took in the 1890s, with total dividends received by the government from 1895-1933 of £3.5m, for an average return on capital of 10.75 percent (Moore and Barton 1935, p. 58).

The aftermath of the crisis saw structural changes in the provision of credit in the economy. In the mortgage market for example, the share of credit provided by direct lending from New Zealand individuals increased from 32 percent in 1886 to 54 percent in 1901 (Arnold 1981, p. 61). Financial institutions lost ground driven by the collapse of the pastoral finance companies (43 percent from 57 percent), and the share of direct foreign lending fell from 10 percent to 3 percent. The composition of financial institutional lending changed considerably with the collapse of pastoral companies whose share fell from 61 percent of institutional financing in 1886 to 8.8 percent at the turn of the century. The creation of the Government Advances for Settlers department in 1894 meant that by 1901 the State was providing one quarter of New Zealand's mortgage financing. The role of this government funding, coupled with other policies, helped the economy benefit from the technological changes linked to refrigeration.[22] In addition to this government source of mortgage finance, insurance companies became relatively more important in this segment of the market and together largely filled the void left by the pastoral finance companies. The share of trading bank credit in the mortgage market remained relatively constant.

4. New Zealand banking crises: late1980s/early 1990s

New Zealand experienced its second banking crisis in the late 1980s with the first of two recapitalisations of the BNZ in 1989, and another a year later. This time around the BNZ was a predominately State owned entity following full nationalisation by the Labour government in 1945. The problems of the BNZ and a number of other financial institutions followed a financial shock in the form of the global stock market crash of October 1987 and a concomitant collapse in commercial property prices, which coupled with the large declines in equity wealth, resulted in a period of financial deleveraging. This deleveraging, or 'discredit' followed a seemingly euphoric period of credit growth and leverage in the wake of financial liberalisation and broader economic restructuring beginning in 1984.

In this regard, the reforms which accompanied financial sector deregulation and the broader economic restructuring of the period constituted the 'displacement' in the Kindleberger/Minsky framework. In 1984 a whole raft of controls on the economy were lifted. In the space of two years the quantity restrictions and interest rate controls that had applied to financial institutions were abandoned, the exchange rate was floated and for the first time first time since the 1930s there were no material restrictions on capital portfolio flows.

The financial reforms radically altered the operating environment for financial institutions and their ability to affect the intermediation process. Prior to the reforms trading banks were bounded by controls implemented mainly for monetary policy purposes. These included reserve requirements, mandated low interest rates and the regulation of asset portfolios. In this environment of financial repression, trading banks found themselves at a competitive disadvantage, and disintermediation occurred as a result.[23] The growth of the non-bank sector in the post-war period, which embodied such disintermediation outside the banking sector, consequently necessitated the layers of controls to be progressively applied to finance companies and other such institutions.

22 These other policies included the power of compulsory purchase to break up the great estates, graduated land taxes, alternative tenure arrangements and the creation of the Department of Agriculture in 1892.

23 There were concessions given to trading banks in this period, including the ability to open their own savings banks as subsidiary companies in order to compete with the trustee savings banks and other deposit taking institutions in 1964. With the reforms of the 1980s, the rationale for a separate retail savings bank subsidiary focused on retail banking disappeared.

The rationale of these controls applied to the financial sector rested on the broader efforts of policymakers to insulate the economy from external shocks, while preserving a high level of domestic demand, within the fixed exchange rate system. This 'insulationism' (Hawke 1985, p. 204) served New Zealand reasonably well, at least until the late 1960s. However, the turbulence of the 1970s reflected in the decline in New Zealand's export prices, the oil price shocks, Britain's entry into the European Economic Community, the collapse in the Bretton Woods system of fixed exchange rate and the nascent globalisation of finance capital, all combined to reveal the limits of this economic development model. A secular decline in the terms of trade for example, meant that lower rents were accruing from the farming sector and transferred to the domestic economy to support the manufacturing sector (Easton 1997, p. 31). Controls on the capital account inhibited the flow of private savings to fund the accompanying current account deficits that emerged in the 1970s, a situation that prompted a significant increase in government overseas borrowing from the early 1970s to fund such deficits. Stagflation also revealed the limits in the government's ability to pump prime the economy and support domestic demand through deficit spending.

The post-war banking system was however very secure "albeit, rather inefficient" (Singleton 2006, p. 31). There were the occasional failures of smaller financial institutions in New Zealand during the period, but the stability of the banking system as whole was never threatened. This apparent trade-off between stability and allocative efficiency echoes the broader empirical fact that there were few banking failures during the Bretton Woods era. Banking failures are intimately tied to the free mobility of capital where such freedom can better align the desires of borrowers and lenders *a priori*, but can also lead to problems with the institutions that intermediate the transfer of real resources over time and across borders should 'overtrading' and speculative euphoria ensue.

Euphoria and revulsion

Financial institutions suddenly found themselves in an environment with little formal restrictions on their ability to create credit, but with little actual experience in extending unfettered credit in a prudent manner. As Singleton describes "[u]ntil the share market collapsed in 1987, a spirit of optimism – in some cases amounting to hubris – pervaded the financial industry" (Singleton 2006, p. 105). Such confidence was tied to the displacement in economic agent's expectations related to benefits of financial deregulation and the ability of the economic reforms to improve the economy's long run growth potential.[24] This manifested itself in rising asset prices, particularly equities and commercial property. Stock market prices tripled between September 1984 and their peak in September 1987, while commercial property prices increased 120 percent between 1984 and Q2 1988 (figure 11). Speculation in commercial property was enabled by the extension of credit by banks to a raft of new investment corporations and large property developers. An influx of foreign capital enabled banks and other financial institutions to take advantage of the deregulated environment and meet the demand for credit by the new corporate high-fliers such as Equiticorp, Judgecorp and others.

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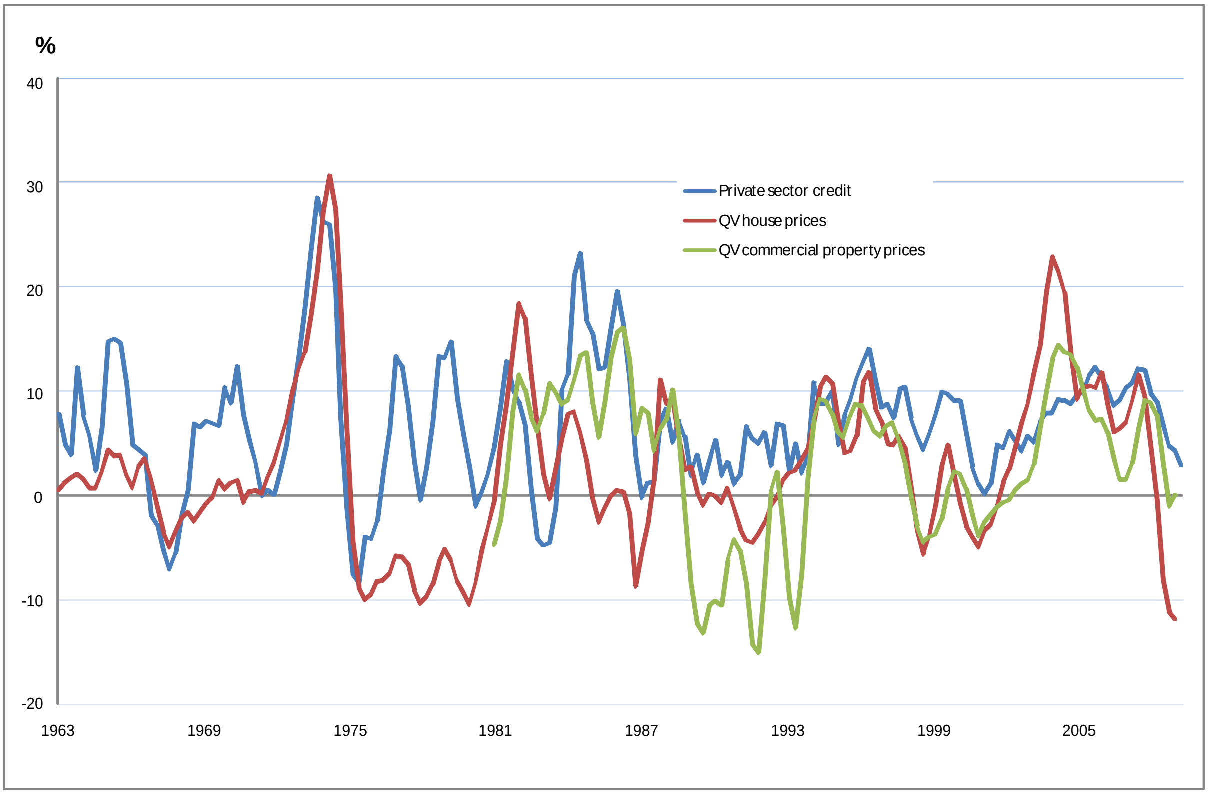
[24] Note, while the New Zealand household was not centre stage in the accumulation of financial imbalances, household liabilities did grow reasonably strongly during the mid-1980s (at around 15 percent), a result of the relaxation of credit controls imparted by financial liberalisation. Residential house prices did increase over the period, but not anywhere near the same extent as commercial property prices (figure 11).

Figure 11: Credit growth and property prices



Source: QV Ltd, RBNZ.

However, as past experience can show, the expectations of economic agents can become divorced from the underlying fundamental returns associated with any positive shock to the economy, with speculation and mania being the result. In hindsight overtrading in stocks and equities appear to reflect a profound over-optimism in the benefits of the reforms in general and financial deregulation in particular. As Easton less charitably argues, it also reflects the fact that the"newly arrived amateurs in the world of finance had a confidence far in excess of their competence", where subsequent developments revealed the "fiction of financial paper-shuffling" that underlay much of the economic activity at the time (1997, p. 244).

In addition to the behavioural frailties that constituted the boom, there was the regulatory vacuum at the time, the existence of which prevented any constraint on risk taking by financial institutions. The development of a prudential framework took time, and it was not until 1987, that the RBNZ obtained any formal powers in this regard, following the 1986 Reserve Bank Amendment Act. This Act created the concept of the 'registered bank'. Under the Act the RBNZ was tasked with 'supervising' registered banks and 'specified institutions' (large non-bank financial institutions). However it had no power to impose binding requirements on specified institutions or on the deemed registered banks (the traditional trading banks). The RBNZ could impose conditions of registered banks on new registered banks only. Once the Act came into effect there was an influx of new banks all trying to attract lending business (many of these banks subsequently withdrew from the NZ market). Some banks, including the BNZ, thought that they needed to compete aggressively with these new banks and to do this lowered their credit standards. Developments in the prudential space did enable the identification of subsequent problems at the BNZ and the DFC, but as Singleton argues, the new regime was slow to grasp the severity of the problems besetting these institutions (2006, p. 222). This was, in part, due to the degree of work involved is setting up new reporting frameworks. Indeed some banks were not doing any basic monitoring of their own risks, and it was only when the RBNZ began requiring them to report certain information that the institution itself became aware of the problems. Finally it should be noted that the bulk of the imprudent lending and risk taking occurred before the new regime came into being in 1987.

In light of this regulatory vacuum during the boom, market discipline did not provide an adequate check on risk taking, although this did vary across institutions, given the varied nature of internal controls and specific strategic decisions on the part of management. As Sir Lewis Ross, Chairperson of the BNZ stated in 1986, "[i]n the deregulated future for New Zealand's financial organisations, the new freedoms will carry new responsibilities. Every bank is a repository of the trust of its customers and owes a special duty of prudent management to them. Deregulation increases the obligations on each back to supervise its activities wisely and repay its customer's trust" (BNZ *Annual Report* 1986, p. 2). Ironically, the BNZ did not ultimately fulfil this burden of responsibility towards its customers as subsequent developments proved.

The trigger event that precipitated the revulsion against the objects of speculation was the global stock market crash that occurred on what came to be known as 'Black Monday' 19th October 1987. The Dow Jones Industrial Average plummeted 508 points, losing 22.6 percent of its total value. The S&P 500 dropped 20.4 percent. This was the greatest loss Wall Street had ever suffered on a single day. The crash ended a five year bull run and was caused by a number of factors including concern over US budget deficits, the overvaluation of the USD and new technology related to programme selling. Given the time difference, New Zealand experienced a 'Black Tuesday' with the Barclays index falling 14.8 percent – the largest single day loss, at least since 1970. By the trough in stock prices in February 1988, the share market had lost 60 percent of its value (figure 12). To this day, the stock market has not recovered to a level comparable to that prevailing before the crash.

The fall in the listed share price of the investment companies and property developers subsequently caused the price of the assets that these companies has invested in to fall precipitously. The decline in property prices was driven by the fire sales of property as these companies delevered, coupled with a fundamental excess supply of property from overbuilding. In turn, the balance sheets of financial institutions that had lent to such corporates were exposed to the falling value of collateral that backed lending – collateral that not only included real assets such as property, but shares and debentures as well.

The stock market crash set in train a deleveraging process that wiped out huge amounts of wealth, bringing down most of the corporate high-fliers of the mid-1980s. It also impaired the health of financial systems in both New Zealand and Australia. This in turn contributed to the decline in economic activity over the late 1980s and early 1990s (figure 13). The reduced access to credit implied by the deleveraging process was however, one of a number of factors that affected GDP growth, or the "long recession", as Easton (2009) terms the period from 1987-1993. Other factors included anti-inflation policies and concomitant high real interest rates,[25] the high real exchange rate

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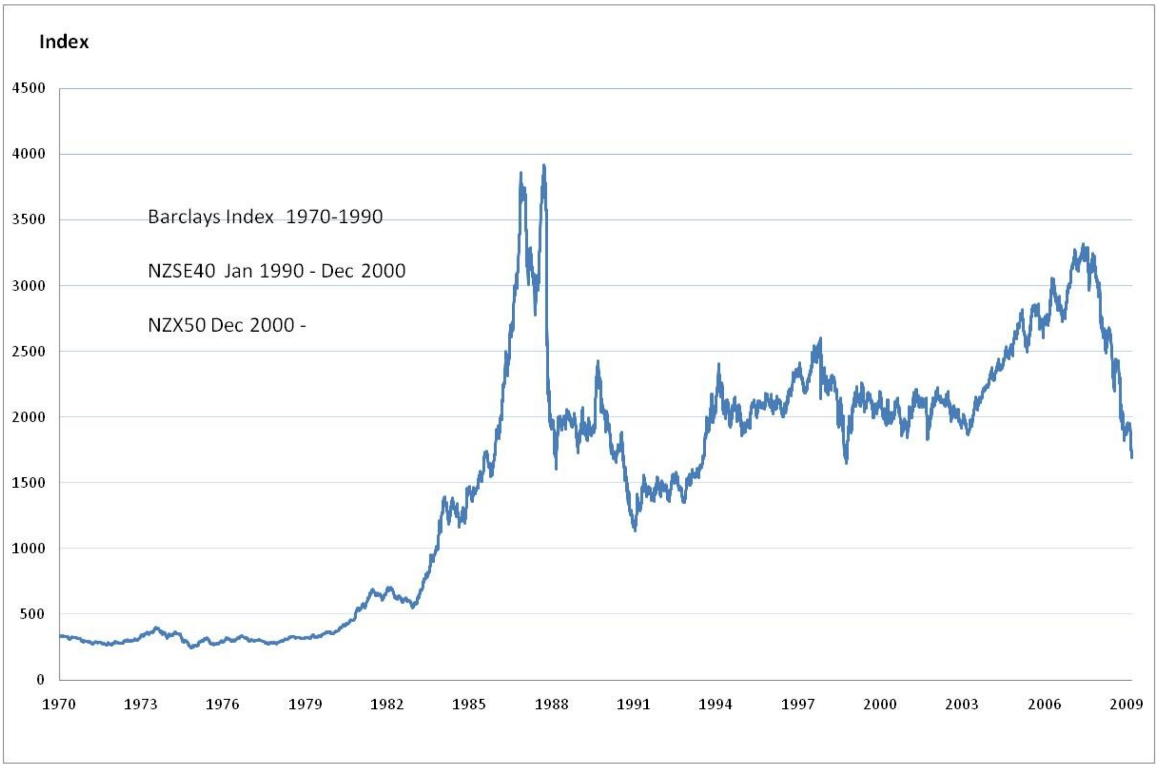
25 What is interesting in this regard is that New Zealand's monetary and exchange rate regime in the 2nd era of financial globalisation was not used to provide any offset to the debt-deflation impulse imparted by financial sector deleveraging. In the 1st era of free capital mobility this was impossible since the fixed exchange rate system which linked New Zealand and Britain meant that there was little ability for policymakers to affect domestic monetary conditions (since this was governed by the level of sterling reserves held by New Zealand banks in London). Under a freely floating exchange rate and

and the global recession of 1991 induced by monetary policy tightening across a number of countries, together with an oil price shock following the 1st Gulf War.

Figure 12: New Zealand equity prices



Source: RBNZ.

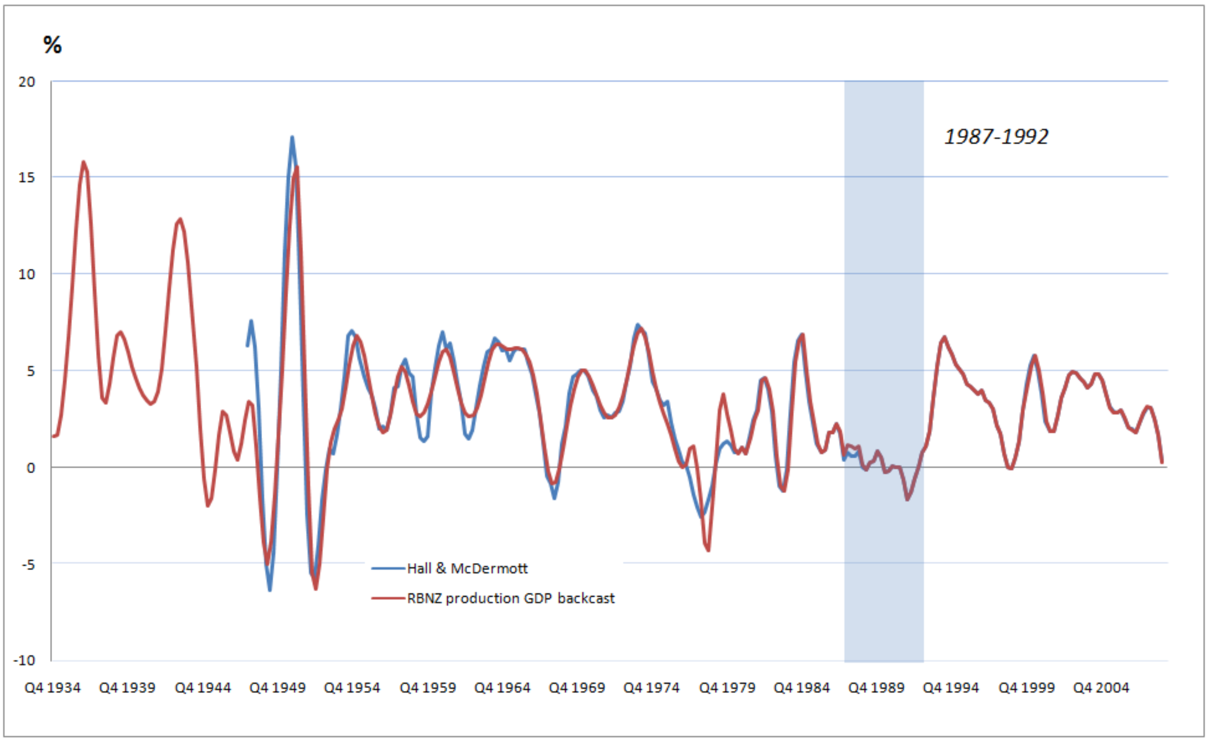
In terms of the impact on New Zealand financial institutions, the financial crisis claimed the scalp of the country's 7th largest financial institution – the Development Finance Corporation. The DFC was heavily exposed to the commercial property sector, and advised the RBNZ in October 1989 that it was technically insolvent and was placed in statutory management. A large off-balance exposure to fx swaps implied some degree of systemic importance, and such obligations were subsequently sold to another bank. In addition, an agreement between DFC's owners (the National Provident Fund and Salomon Brothers), DFC's creditors and the government saw a resolution of the company's debt obligations which involved $112m of State money. With 90 percent of the debt held by overseas financial institutions there were fears that outright default on this debt would adversely affect future foreign investment in New Zealand.

The crisis also saw a run by depositors on the United Building Society in August 1988, concerns with Post Bank before it was sold to the ANZ in December 1989, and the recapitalisation of a small registered bank (NZI Bank) by its owners in the same year. Across the Tasman, a banking crisis saw the demise of the State Bank of South Australia and the State Bank of Victoria, while one of Australia's largest banks - Westpac – was severely affected by its exposure to the commercial property sector. In Westpac's case 8 percent of loans were written off between 1990-1993 (Hess,

free capital mobility the authorities do have the ability to affect domestic monetary conditions. This ability to influence the money supply was used to disinflate the economy from the high levels of inflation seen in the 1970s and early 1980s and so worked in the same direction as financial sector deleveraging.

Grimes and Holmes 2008, p. 5). Further a field the banking systems of Finland, Norway and Sweden experienced systemic crises following credit booms associated with financial liberalisation. Speculation in property was choked off by a rise in German interest rates, and in the case of Finland, a collapse of exports to the Soviet Union. The fiscal costs associated with the Nordic banking crises were large, as were the effects on output (Laeven, and Valencia 2008).

Figure 13: New Zealand Post-War economic growth



Source: RBNZ, Hall and McDermott (2007).

Recapitalisation of the BNZ

At the beginning of the 1980s the BNZ was fully government owned and was the largest trading bank by share of assets. However, at the start of the reforms its relative share of corporate lending was much lower than its share of the retail market. Financial deregulation emboldened the bank to aggressively increase its lending to the corporate sector, and it subsequently developed a close relationship with the likes of Rada, Equiticorp and others. Large loans were often negotiated with little more than a handshake according to contemporary media accounts and such loans were directed primarily to the investment and property sectors.

The initial euphoria and profitability surrounding the bank's activities prompted the government to offer a share float to the public in 1987, following the Amendment to the Bank of New Zealand Act 1979 which enabled this issue of capital to the public. A cash issue of 103m ordinary 50c shares was made at a large premium of $1.25 to the public. Following this offer the government owned 87.1 percent of the bank. The government put the bank up for sale in 1988, despite the bank's share price coming off a high of $1.95 in October 1987. Interested parties included the National Bank and the National Australia Bank (NAB). The government subsequently took the bank off the market, as a profit warning announced in early 1989 – an expected loss of $160m for the year ended March 1989 - caused alarm and was one of the first signs of the trouble ahead.

As it transpired, the actual loss booked by the bank was $648m announced in June, driven principally by the BNZ's investment banking group's exposure to property and investment company risk.[26] As the Chairperson explained in the *Annual Report* of that year, "[t]he rapid growth of BNZ in recent years has unfortunately, been accompanied by some undisciplined corporate lending practices and aggressive international expansion activities which have significantly diluted the value of the Bank's core franchise in New Zealand" (Frank Pearson, BNZ *Annual Report* 1989, p. 3). Moreover, the "Bank lent funds with insufficient appreciation of what impact such lending would have in the context of a small local market where prices, of first rural land and then shares and commercial property, became grossly inflated. Little regard was paid to effective monitoring of its total exposure to each sector, a situation compounded by suspect judgement and serious lapses in security administration (p. 3).

The profit loss announcement spurred the government into action and it organised a private sector dominated recapitalisation of the BNZ worth $610m. A seven for every ten share held rights issue took place involving the issue of 579m new shares that were underwritten by the government. This raised $289.5m in new paid up capital, and an additional $115.8m in funds based on a 20c per share premium attached to the issue. The total amount raised was therefore $405.3m from the rights issue. The government as the dominant shareholder gave up the majority of its entitlement to the new shares to Capital Markets Equity Ltd, an institution associated with Fay Richwhite. Capital Markets Equity Ltd received 428.6m in ordinary 50c shares, and with the 20c premium paid a total of $300m. The recapitalisation diluted the government's ownership from 87 percent to 51.6 percent – although it did inject a modest $20.5m of the $405m into the BNZ. Capital Markets Equity Ltd had a 30.5 percent shareholding, while the share of the other existing public shareholders increased from 13 percent to 17.9 percent. The other element to the recapitalisation involved the issue of preference shares worth $205.4m – these were USD capital securities placed with Japanese investors. These were placed later in the year, and in the interim the government also provided 'bridging finance' in the form of $200m in redeemable preference shares.

However, the collapse of DFC in October 1989 caused the rating agency Moodys to warn that BNZ was under review for downgrading. This prompted an immediate government pledge of support that it would do anything to ensure the health of the entity in which it still held a majority stake. The BNZ announced a profit of $124m for the year ended March 1990, but its financial position was also coming under pressure from losses on its Australian loan portfolio as conditions there deteriorated. As it subsequently transpired, the profit over 1989/90 was embellished by some creative accounting related to a profit smoothing insurance policy. The Securities Commission found that pre-tax profits were overstated by around $66m, although it did clear directors of any allegations of fraud.[27]

Government support ultimately materialised in late 1990 when the new National government elected in November found out the extent of the financial difficulties besetting the bank. The government injected $200m directly into the BNZ in the form of 200m 50c shares purchased at a 20c premium

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26 This $648m figure is net profits after extraordinary items.

27 There was also intrigue surrounding the potential conflict of interest in Fay Richwhite receiving a $42m loan from the BNZ to purchase an Auckland tower block. The later sale of the BNZ and public pressure for an inquiry to which the National government declined, again raised more questions, as the Chair of the Finance and Expenditure Committee was on the BNZ's key debtor's list.

($140m), together with the purchase of 87.5m ordinary shares from Capital Markets Equity Ltd for 70c per share ($60m). For its part Capital Markets Equity Ltd was issued with 131m convertible preference shares at 84c per share for a total of $110m, and with the $60m proceeds of its sale of ordinary shares to the government, injected $50m on net into the BNZ. Following this recapitalisation the government increased its voting rights in the BNZ to 58.2 percent, while Capital Markets Equity Ltd and others had their rights diluted to 26.8 percent and 15 percent respectively.

In addition to the direct recapitalisation, an asset management company was set up by the two majority owners of the BNZ to manage the disposal of $2.8b in non-performing loans that were on the balance sheet of the BNZ. The government bought $420m in preference shares in this new entity− Adbro – while Capital Markets Equity Ltd paid $50m. The recapitalisation of the BNZ and the setting up of Adbro, together with obligations under the DFC resolution forced the government to resume long term borrowing, with the first issue of government stock since 1988. This followed a number of years in which the government's coffers had been flush with the proceeds of the sale of various Crown assets. The direct gross fiscal cost of the 1990 government bailout (including payment to DFC creditors) amounted to approximately 2.7 percent of nominal government expenditure and a correspondingly much smaller proportion of GDP (1 percent). This is a lot lower than the direct cost of the 1890s bailout, in terms of government expenditure at least. It is also lower than the direct recapitalisation costs incurred by the Nordic countries during their banking crises. The gross cost of the recapitalisation of the banking systems for Finland, Norway and Sweden was 8.6, 2.6 and 1.9 percent of GDP respectively (Laeven and Valencia 2008).

The BNZ recorded another loss over the 1990/91 financial year of $71m and the government decided to sell the BNZ. NAB bought the bank for $1.48b, and this netted the government $850m and Capital Markets Equity Ltd around $400m. The sale price of 80c per share was 10c per share higher than Capital Markets Equity Ltd had paid in 1989. The assets of Adbro were incorporated back onto the balance sheet of the BNZ, while the new owners immediately set about writing down shareholder's equity from $1b to $550m. The re-privatisation of the bank caused much public alarm, but the National government resisted mounting pressure to proceed with a Parliamentary inquiry concerning the circumstances of the sale.

As in the 1890s, the systemic importance of a single institution was judged to necessitate government intervention to prevent what may have resulted in a much larger disruption to the financial system, and ultimately to economic activity. [28]

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28 This paper takes at face value the respective decisions to bailout the BNZ in both banking crisis episodes – i.e that the systemic importance of the BNZ provided a legitimate rationale for the recapitalisation. The argument for the socialisation of the losses of private institutions rests on the positive externality that might arise for the financial system as whole by using taxpayer money to prop up individual institutions. The counterpoint to this argument is if the government is simply throwing good money after bad, creating 'zombie' banks. In addition, there is the prior moral hazard problem that is created by the existence of any implicit government guarantee of certain institutions. In relation to the first argument, recapitalisation was quickly followed by the restoration of profitability of the BNZ, without the need for further government funds – the BNZ did not become a zombie institution. Although in the 2nd episode this was achieved only following the sale to the NAB in 1992. The moral hazard argument has some currency in the 1980s example where the institution was itself government owned. However, it is difficult to map the imprudent risk taking behaviour with any

5. The Great Depression and financial stability

The Great Depression stands out as the largest macroeconomic shock New Zealand has experienced– at least as measured by the decline in GDP growth. Between 1931 and 1933 (March years) real GDP declined 12.3 percent, and the 7.1 percent decline in GDP over 1931/32 is the single largest annual decline in GDP based on reliable data.[29] The decline in economic activity was driven primarily via a sharp decline in world growth and New Zealand' export prices following the Wall Street crash in the US in 1929. The international prices for New Zealand's exports fell 46 percent between 1929 and 1933 (figure 5).

What is interesting from the standpoint of this paper is that the exogenous shock of this magnitude *was not* associated with a banking crisis, in contrast to the experience of other emerging markets and advanced economies at the time. As figure 1 shows, there was a spike in banking crises in the early 1930s, and as measured by share of GDP, this constitutes the most severe global banking crisis – at least until recently. The global banking crisis had two elements – one implicating debtor countries who had relied on capital inflows during the 1920s, and the specific issues surrounding the US banking system following the Wall Street crash. As Eichengreen and Portes (1987) argue, the international financial system during the 1920s was fragile. The 1920s were a time of exchange rate misalignments related in part to Britain's return to the gold standard; rapid institutional changes in a number of banking systems driven by the development of narrow investment and industrial banking particularly in Europe; and the shift in volume and direction of international lending led by the US. This lending to Europe was to finance reparations and to service war debts, a flow which began to dry up as capital was redirected to the US in order to participate in the equity market bubble, while there was a broader decline in international lending during the Great Depression itself.

Thus debtor countries of Central Europe, Latin America and Australasia were subject to a dual shock in the form of a decline in capital inflows and decline in external demand (and fall in export prices) stemming from the global recession that followed the Wall Street crash. From the standpoint of sovereign debt, the Great Depression affected many governments' ability to generate tax revenue to service the debt as well as the fx requirements to transfer resources abroad. Despite devaluations that followed in response to large current account deficits that emerged, a wave of sovereign debt defaults ensued beginning with Bolivia in 1931, Southern and Central Europe in 1932/33 and Germany in 1933.[30] These defaults did not impose any immediate threat to the banking system of creditor countries (such as the US and Britain) as most foreign lending was via the issuance of bonds and not bank loans. The banking systems of a number of debtor countries were however, severely affected by the liquidation of foreign bank deposits. This repatriation of short term foreign capital threatened the banking systems of Austria and Germany, and a number of Latin American countries, prompting exchange controls and prohibitions on capital outflows. In the US, problems in the banking system

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internalisation of the (more or less explicit) government guarantee on the part of the directors of the BNZ.

[29] One must note that before 1934, estimates of annual GDP were based on various proxies including those derived from the money supply. Reliable quarterly (production) GDP data begins much later, in 1977 – quarterly estimates from 1934 are based on interpolations of annual data.

[30] Devaluation of the currency also increased the local currency value of sovereign debt denominated in foreign currency.

stemmed from the waves of agricultural foreclosure and insolvency of industrial firms that followed the crash

New Zealand (and Australia) weathered the global shock comparatively well. New Zealand did not experience a sudden stop in capital and was able to continue to access British capital markets. There was however, a fear that this would not be the case following Britain's decision to leave the gold standard in 1931 following a run on sterling. In addition there was also pressure on the currency stemming ostensively from cross-contamination with Australia. New Zealand and Australia effectively shared a common banking system given the presence of sterling balances in London that did not differentiate between the New Zealand based Australian banks and their specific Australian incarnation. Australia was experiencing large balance of payments imbalances in the late 1920s and the London funds of the Australasian trading banks were run down as a result. This imparted a deflationary impulse onto the New Zealand economy, despite New Zealand actually running a current account surplus at the time (Greasley and Oxley 2002, p. 702).[31] The desire to disassociate New Zealand monetary conditions from that of Australia's led, in part, to the debates around the formation of the RBNZ in 1934. The decision to devalue the currency in 1933 was an effort to promote a broader economic recovery via export incomes, as opposed to a response to speculative pressures emanating from a balance of payment crisis.[32]

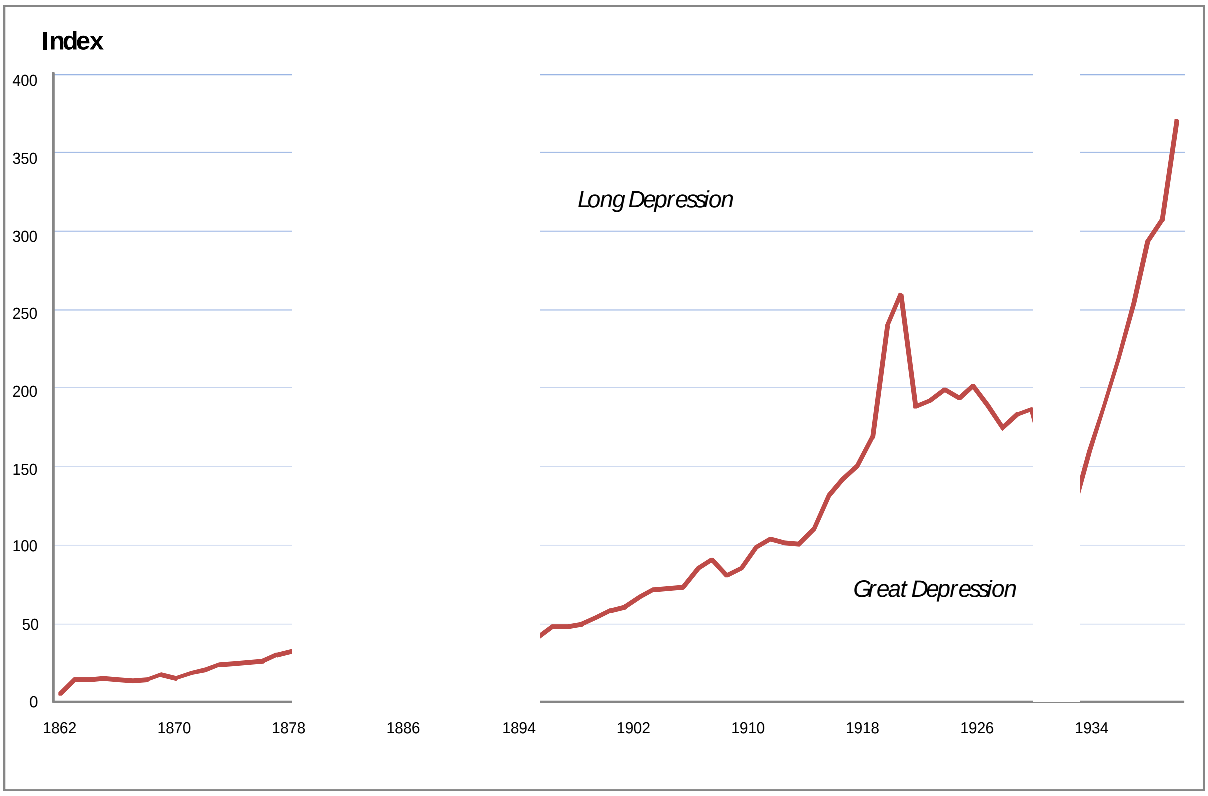
Therefore, New Zealand did not experience a balance of payments crisis during the Great Depression nor did the country default on its sovereign debt. In addition there was no banking crisis. The experience of New Zealand's financial system shares much in common with Australia at the time, for whom the disruption was also relatively mild, certainly compared to the 1890s (Fisher and Kent 1996). During the 1930s only three small non-bank institutions suspended payments in Australia. As Moore and Barton highlight, "[o]ne thing which held both New Zealand and Australia back from the black chaos of a financial cataclysm was the strength of the Banks, and the wisdom and ability of their past and present administration" (1935, p. 21). Furthermore, there was "no evidence that the banks at

[31] Domestic monetary conditions were effectively governed by the level of sterling balances held in London by the trading banks. While New Zealand banks had to be ready to redeem notes for gold if required New Zealand was not a gold standard country per se. New Zealand's monetary regime at the time can better be described as a 'sterling exchange standard' (Hawke and Sheppard 1984, p. 184). If the level of exports declined, then sterling funds in London would be drawn down to pay for any given level of imports. The level of imports would subsequently adjust via a decline in domestic bank lending. Given the conventional management of the exchange rate by trading banks with sterling at par, any excess demand would be met with a rationing of sterling reserves held by the banks. However, given the decline in sterling reserves, New Zealand banks were unable to maintain parity of the New Zealand pound with sterling by the traditional means of rationing, and trading banks 'raised the exchange', or devalued by 10 percent over 1929-1930.

[32] Ironically, the full stimulus effect from the devaluation was delayed until the establishment of the RBNZ in 1934. As part of the agreement to devalue, trading banks received an indemnity to protect themselves from any exchange rate risk, should for example, the exchange rate be subsequently revalued. Trading banks expected such revaluation to occur and so were reluctant to hold any excess sterling balances that accrued from higher export receipts. This excess foreign exchange was unloaded to the New Zealand Treasury who gave banks Treasury bills yielding 5 percent in exchange. Banks had no incentive to use their London funds to expand domestic lending unless this lending bore a return greater than 5 percent.

any stage of the period adopted the policy of restricting credit by refusing to lend for sound projects on reasonable security" (Moore and Barton 1935, p. 226). In this regard the decline in loan growth from 1929-1933 (figure 6) was not related to a pervasive process of balance sheet deleveraging per se, but was nevertheless correlated with the decline in the money supply (figure 14) from the deflationary impulse imparted by the common Australasian banking system.

Figure 14: New Zealand Money Supply (M1)



Source: Statistics New Zealand Long Term Data Series.

That said, the quality of the loan portfolio of trading banks and other institutions was certainly not immune to a real economic shock of the magnitude experienced during the early 1930s. Unemployment reached 12 percent based on the registered number of unemployment, but this was probably understated with the true figure lying closer to 20 percent (Reddell and Sleeman 2008, p. 6). The balance sheets of farmers were also under severe distress given the fall in farm incomes and the *ex post* increase in real interest rates given the decline in general prices of around 11 percent. The interest burden on farm debt increased from 13 percent of gross incomes in 1928/29 to 26 percent in 1931/32 (Reddell and Sleeman, p. 6).

According to Chappell (1961) however, there was a greater willingness, at least on the part of the BNZ, to nurse the accounts of customers that were worst hit instead of foreclose. This included writing down the amount of overdraft, decreasing interest rates, foregoing interest payments and deferring the payment of principal (p. 309). This did not necessarily reflect the benevolence of the trading banks alone, as legislation such as the National Expenditure Adjustment Act 1934, and the Mortgages and Leases Rehabilitation Act 1936 provided for the formal reduction in long term mortgage interest rates. Additional legislation also provided for the 'voluntary' conversion of internal government debt, although any holders of government debt that dissented were subject to higher taxation (Prichard 1970, p. 386).

The balance sheets of banks were also less vulnerable to a severe deterioration in economic activity than they had been in the 1880s or 1980s. There was no credit or property related boom during the 1920s, save for a boom in land prices following the conclusion of WWI. This was driven by a government scheme to resettle returning soldiers which 'turned loose' 22,585 new purchasers, armed with £22.6m of money borrowed from the government (Condliffe 1930, p. 255). This reinforced a general increase in land prices from the mid-1890s driven by the gains from refrigeration. Again accusations of land 'gambling' and land 'trafficking' pervade accounts of this period. According to Condliffe, the "gains from rising prices were heavily discounted in advance, and the values of land rose more steeply than the price of the produce to be taken from the land" (1930, p. 225).

That said, trading banks do not seem to have been implicated in any large scale imprudent lending that characterised the 1870s and early 1880s. Presumably the lessons from the earlier period were fresh in the minds of bankers at the time. The major sources of mortgage financing came via a system of state advances for settlers which provided the main conduit for foreign capital to enable domestic credit growth.[33] Trading banks no longer had the close association with pastoral finance companies, whose role in supplying long term mortgage finance had been pared back dramatically since the mid-1880s. The remaining pastoral finance companies were affected however, by the sharp fall in land prices in the early 1920s, which did prompt a formal moratorium on deposit withdrawals.

For the 1920s as a whole, economic activity was fairly subdued reflecting weak demand in New Zealand's major market, Britain, together with heightened competition from Australia and Argentina in meat exports, and Denmark and Holland in the dairy sector. Export prices were generally pretty weak as a consequence. High levels of agricultural debt, a legacy of borrowing in the period up to the end of WWI, and the low returns from farming from the fall in export prices weighed down the sector. Easton estimates that the return on farm equity from 1922-1929 was 3.4 percent, while farmers were paying 6.5 percent on their mortgages (2008, p. 19). As Greasley and Oxley (2008) also point out, the social depth of landownership in New Zealand set the country apart from other emerging markets and reinforced the weak economic conditions that prevailed at the time. There were some mitigating factors for the rural sector during this period, including productivity gains from the application of fertiliser and the electrification of parts of the farm production process related to milking and shearing.

Nevertheless, the decade was one of a "loss of confidence, hesitancy, disillusionment" (Sinclair 1991, p. 245). Indeed, a number of commentators describe the period from the conclusion of WWI to the acceleration in growth in the mid-1930s as another 'long depression' or as the 'interwar slump' (Briggs 2003). Growth averaged 1.2 percent per annum over this period, dragged down by the dramatic fall in output in the early 1930s (figure 15) in particular.

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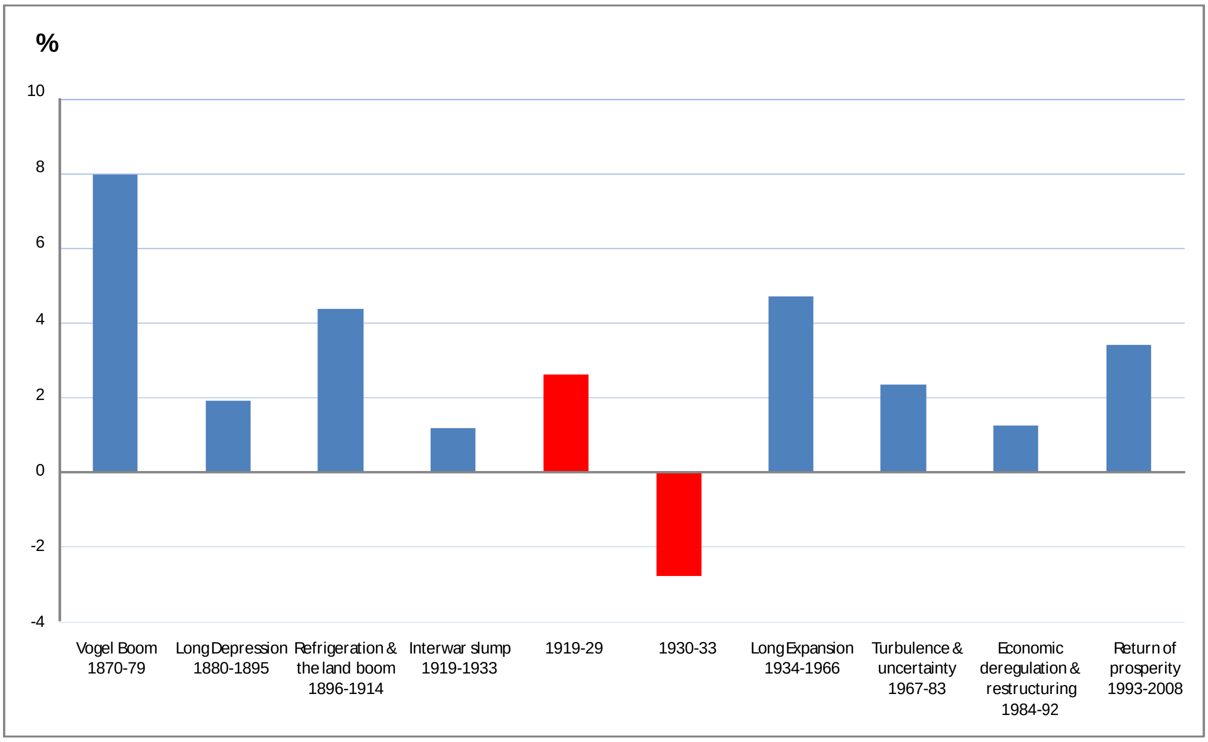
33 Direct foreign investment was also important in this era, related to the building of freezing works and other infrastructure associated with refrigeration.

Figure 15: Periodisation of New Zealand Economic Growth[34]



Source: Statistics New Zealand Long Term Data Series; author's calculations.

In summary, trading banks appeared to avoid the worst of a second speculative era in land prices and the subdued economic conditions of the 1920s prevented another major boom-bust cycle in their lending. Bank balance sheets were therefore sufficiently robust to manage the decline in asset quality over the entire interwar slump, including the sharp deterioration in economic activity in the early 1930s. Capital buffers were much larger, and as Hawke illustrates in his account of the history of the National Bank, the "1930s were a period of reduced profitability, but they were not so much a struggle for survival as the 1880s had been" (1997, p. 173). Indeed, faith in the soundness of the banking system saw the level of fixed deposits increase between 1930 and 1934, at the expense of other forms of investment (Moore and Barton 1935, p. 226).

6. Conclusion

This paper has provided a detailed account of banking system crises in New Zealand, of which there are but two examples. Both banking crisis episodes illustrate a model of financial development and crisis, where an exogenous shock to the expectations of economic agents, interacting with the provision of credit by financial institutions can lead ultimately to over-optimism, speculation and mania. The vulnerabilities that underlie the balance sheets of the financial intermediaries that enable and participate in the overtrading then become cruelly exposed following some negative shock which precipitates an unwinding of imbalances accumulated during the euphoric period. The nature of the shock and the degree of financial sector vulnerability then condition the nature of the deleveraging process, and the extent to which the solvency of the financial system is at stake. While it is not

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34 This periodisation echoes that of Briggs (2003). Calculations are based on annual March year data.

necessarily the only possible model to understand the respective banking crises, the Kindleberger/Minsky framework does arguably provide a plausible one in this context.

The initial condition of the financial system proves to be key in determining whether any shock- be it a real or financial shock – constitutes a threat to the health of financial institutions which are at the heart of the intermediation process. The Great Depression is a useful example in this regard, where one of the largest macroeconomic shocks New Zealand has experienced did not undermine the solvency of the financial system as a whole.

In the current environment, New Zealand's financial system has proved reasonably resilient to the on-going global financial shock. New Zealand banks did not purchase the US mortgage assets that subsequently proved so toxic, while heightened global risk aversion and the concomitant re-pricing of risk has not entailed a full blown sudden stop in capital flows. Nevertheless, the banking system's reliance on overseas funding does create obvious vulnerabilities, and should global conditions deteriorate further and wholesale funding dries up, the situation could dramatically take a turn for the worse.

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