Developments in credit markets over two decades

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Following financial market deregulation in the mid-eighties, the relative importance of sources of credit for the household, agriculture and business sectors changed markedly. This article examines the changing shape of the credit market for each sector since 1980, with a special focus on credit for agriculture. Changes in the relative size of these three main credit markets are traced from the time of deregulation, showing how fast credit to each sector has grown and the impact of their credit demands on the growth of private sector overseas debt to 2000.

1 Introduction

This article examines by sector the changing sources of and demand for credit since 1980, and links aspects of these changes to New Zealand's private sector overseas debt. It first updates the long-run series of household financial assets and liabilities introduced two years ago in the *Bulletin*[1] and provides a more detailed breakdown of the long-term financial asset series. Secondly, a twenty year agriculture credit series is presented, combining for the first time data from several sources to establish a long-term credit growth path for a sector of the economy currently increasing its borrowing at one of the fastest rates it has ever experienced. Next, business sector borrowing from domestic sources is derived as the residual from these two series. The evolution of credit demand from these three sectors is illustrated in aggregate, and through the changing institutional structure that has provided the funds. The term 'credit' is used to cover comprehensively all forms of debt of these sectors: loans, securities issued and any other non-equity instruments.

2 Household financial assets and liabilities

Household credit, in New Zealand and elsewhere, is perhaps the most widely discussed of the three major private credit sectors, and has been the subject of two previous *Bulletin* articles[2] in this series, in conjunction with household financial assets and net wealth. In this article we focus principally on household liabilities, but comment briefly on household assets. The long-run series, first introduced two years ago, have been extended another year to December 2001.[3] These series also now cover household financial asset and credit data more comprehensively. A new annual survey of managed funds has boosted measured household financial assets in managed funds by 8 per cent, and improved data are available on non-institutional financial assets.

An overview of household financial assets and liabilities is provided in table 1. The additional data from the new annual survey of managed funds and better information on fixed interest investments have caused an upwards revision in measured financial assets by around $5 billion over the level published last year for 2000 (data have been backdated). Household financial assets grew in aggregate around 4 per cent over 2001, with the percentage ratio to disposable income remaining relatively constant. The principal feature of New Zealand's household financial asset data compared to many other OECD countries is its low ratio to disposable income, and its relatively slow growth over the past decade. By contrast, the level of the ratio of housing values to household disposable income is more in line with those of other countries.

Total household debt grew relatively slowly again in 2001, and in ratio terms is only marginally above the 114 per cent level at the end of 1999. Until then, the ratio of financial liabilities to household disposable income in New Zealand had risen very strongly for fifteen years, catching up to levels

1 Thorp, C and B Ung (2000). This article describes in more detail the institutional composition of the aggregate series that is also presented in table 1 below.

2 Ibid and Thorp, C and B Ung (2001). This article provides a breakdown of household liabilities by institution in table 4, page 18, relevant to table 1 below.

3 The data may be downloaded from the website. The link to them is from the June 2002 Reserve Bank of New Zealand *Bulletin* preface.

Table 1
Household financial assets and liabilities 1980 to 2001

as at December *$ billion*	1980	1985	1990	1995	2000	2001
Financial assets						
Deposit-taking institutions	9	18	33	41	48	52
Other fixed interest assets	3	5	8	8	8	8
Life, super and managed funds	6	15	25	38	53	52
Direct equities	3	10	8	13	16	17
Total financial assets	21	48	74	101	124	129
as a percentage of disposable income	*144%*	*174%*	*168%*	*195%*	*195%*	*192%*
Total financial liabilities	7	14	28	46	73	79
as a percentage of disposable income	49%	50%	64%	89%	115%	117%
Net financial wealth	14	34	45	54	51	51
as a percentage of disposable income	95%	125%	101%	105%	80%	75%
Housing value	29	69	113	155	185	192
as a percentage of disposable income	*197%*	*253%*	*257%*	*300%*	*289%*	*285%*
Household net wealth	*43*	*103*	*158*	*210*	*236*	*242*
As a percentage of disposable income	*292%*	*377%*	*358%*	*406%*	*370%*	*360%*

Source: RBNZ, SNZ, NZIER

Excludes student loans. Totals may not add due to rounding.

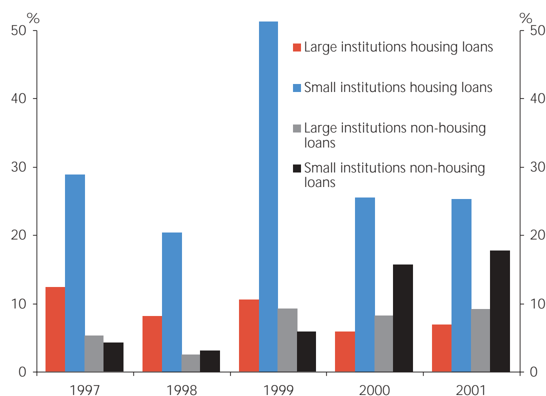
the more indebted OECD household sectors had been at for a decade. Since 1999, the growth of household borrowing has slowed significantly. This performance contrasts with some other countries, such as the UK and Australia, where the household debt ratio has continued to grow over recent years. However, the downward trend in the net financial wealth ratio in New Zealand has continued. Until 2000, many other countries experienced a sharply rising trend in this ratio, driven particularly by rising equity values, while New Zealanders did not benefit from similar gains. Overall, the New Zealand net financial asset ratio is low, compared to many other OECD countries.

Analysis of trends in long-run data on New Zealand households' financial assets, liabilities and net wealth is instructive. However, international comparisons of these data categories, particularly of the composition of net wealth among real and net financial assets, need to be made with considerable care. Comparing trends among countries over time is likely to be the least unreliable use of these data, but comparisons of levels require quite wide tolerances for institutional and measurement differences. New Zealand's comparative position has been illustrated in previous articles[4] and the latest year's data and revisions do not alter the earlier picture. However, for New Zealand, the 2001 annual data do reveal an interesting, albeit marginal, change in the institutional market for household funding and claims in recent years.

From December 1998, lending by 'mortgage managers' (small financial institutions offering residential mortgages that are funded by wholesale sources and subsequently securitised), began to increase, as more managers entered the market. So too did hire purchase and other forms of personal credit from non-banks. The smaller, mainly deposit-taking financial institutions and mortgage managers (surveyed only annually by the Bank) hold only a minor market share (just over 1 per cent) for housing loans, but have more than a 20 per cent share of non-housing personal lending. In the three years to 2001, their total household loan portfolios increased from 3 to 4 per cent of the loan value of the larger group surveyed monthly (over 95 per cent of which is loans from banks). The annual survey group gained 7 per cent of the increase in household borrowing in that period, compared to 3 per cent from 1995 to 1998. As figure 1 overleaf shows, annual rates of growth of their lending have been high.

[4] Thorp C and B Ung (2000) and (2001).

Figure 1
Annual percentage rates of growth of household loans: large lenders compared to smaller lenders



Source: RBNZ

Data as at December

Since the second half of 1998, when a lower interest rate environment emerged, households increased their funding to smaller finance companies, savings institutions and contributory mortgage companies, as they sought greater returns on their savings than were being offered by banks. In the three years to December 2001, these smaller lending outlets have received about twice as much extra funding from the household sector as they have lent to it. For banks, by contrast, growth in household funding was only a little more than a quarter of the growth in household borrowing.

A significant proportion of the funding obtained by smaller financial institutions serving households in recent years has been lent for residential development purposes, principally for apartment buildings and other forms of multi-dwelling property, and more traditionally, on commercial property. A trend to apartment and townhouse living has led to developers seeking loans on criteria beyond those acceptable to banks, providing an expanding market for a second tier of financing.

3 Credit for agriculture

This article introduces a long-run series of loans outstanding to the agriculture sector, beginning in December 1980 and measured at annual intervals. It has its origins in a 1986 *Bulletin*[5] overview of the credit market for agriculture from 1980 to 1985. The new annual data series is available on the website. Table 2 presents these data at five-year intervals, using the 1986 presentation format.[6] Then, data for solicitors' trust funds, trust companies and all 'other' credit sources were based on estimates obtained from surveys undertaken by the Lincoln Agricultural Economics Research Unit.[7] For these categories, estimates in subsequent years are based on other Bank research and notably, a 1998 survey of agriculture sector debt from the Ministry of Agriculture and Forestry.[8] These data are almost entirely lending for farming – there is a very minor agriculture service industry component, and some borrowing may be for farmers' personal purposes, but well over 95 per cent of it will be for farms.

In the early eighties the sources of farm borrowing were quite varied, as table 2 illustrates (although the then government-owned and directed Rural Bank held 40 per cent of the institutional farm lending market). However, significant structural change has subsequently altered the picture markedly.

When structural change began after 1985, stock and station agents were 'farm supply' businesses and seasonal financiers, principally for the sheep and beef industry. The dominant stock and station agent, Wrightson, retained its financing arm until it was bought by a registered bank after 1995, but the relative size of the loan books of stock and station agents declined from 1990 onwards. Between 1985 and 1990, almost all the farm lending from finance company, building society and savings bank groups became part of bank portfolios through merger and bank registration.

From 1986, subsidised farm loan portfolios at the Rural Bank and other government lending sources were restructured, a

5 'The Rural Debt Problem', Reserve Bank of New Zealand *Bulletin*, Vol 49, No 10, 1986, pp 503-7.

6 December data. Where data are not available at December, following March or June balance date data have been used.

7 Estimates from Farmer Opinion Surveys, Pryde (1978), Pryde and McCartin (1982-85), in Pryde and Bain, 'A review of agricultural credit in New Zealand', Lincoln Agricultural Economics Research Unit, Discussion Paper No 93, June 1985. Estimates from John Pryde for March 1985 were extended to December 1985 by the Bank.

8 'National Survey of New Zealand Agricultural Sector Debt 1998', Wilkinson R and P Jarvis, Technical Paper 2000/16, June 2000.

Table 2
Credit for agriculture

as at December *$million*	1980	1985	1990	1995	2000	2001
Stock and station agents	361	552	600	740		
Trading banks	459	961	*(memo item)*			
Private savings banks	37	8				
Trustee savings banks	67	149				
Finance companies	105	267				
Building societies	54	110				
Rural Bank	1242	2440				
Monthly agricultural credit series from 1990	2331	4620	5016	8925	12242	14367
(The monthly series begins at 1990. Earlier annual data is not strictly comparable)						
DFC	6	133	-	-	-	-
Department of Maori Affairs/Te Puni Kokiri	47	111	28	14	-	-
Department of Lands and Survey/Landcorp	126	252	29	9	12	12
Marginal Lands Board	32	-	-	-	-	-
Solicitors' trust funds (est)	250	550	450	250	150	150
Insurance companies	248	452	45	48	-	-
other small institutions/sources (est)	-	-	140	157	377	400
Annual agricultural credit series	3030	5990	5710	9400	12780	14930
Trust companies (est)	135	200	200	250	250	250
Other (estimated)						
Local body loans	38	35	-	-	-	-
Dairy companies	39	50	-	-	-	-
Other sources	68	80	-	-	-	-
Family loans	550	1300	-	-	-	-
Private sources	250	300	-	-	-	-
Other total	945	1765	2200	2000	1800	-
Total estimated agricultural credit	4110	7955	8110	11650	14830	-

Source: RBNZ, various

process that mainly involved debt forgiveness while removing interest rate subsidies. By 1990, debt write-offs had reduced total debt in the annual series by over $700 million. The Rural Bank was privatised and registered as a bank during this period. Insurance companies were the other major source of institutional farm lending until deregulation, but subsequently reduced their activity. The monthly series in table 2 includes, from 1990, farm lending of insurance companies that later became part of registered bank portfolios, which accounts in part for the sharp reduction in insurance company lending between 1985 and 1990 in table 2. By 1990 over 80 per cent of the $5 billion farm debt surveyed monthly by the Reserve Bank was held by registered banks or their subsidiaries. By 2000 almost all of the monthly series represented lending by registered banks.

Beyond the major farm loan sources in the monthly series, there is a group of much smaller financial institutions that lend to farmers. This group includes several smaller stock and station agents, building societies and finance companies (the latter lend mainly for farm equipment). 'Trust companies' are the six trustee companies which operate under special legislation, some of which lend to farmers on mortgage.

Figures for solicitors' trust lending and from the lending sources grouped as 'other' in table 2 were obtained from *ad hoc* sample surveys in the eighties. Only one comprehensive sample survey has been conducted on a similar basis since, for the farming season ended 30 June 1998.[9] Results from it imply that total farm loans outstanding from all these sources during the nineties may have been around $2 billion. The major component by far is loans from family sources, which the 1998 survey suggests were likely to have accounted for more than 80 per cent of the 'other total' in 1995. Annual

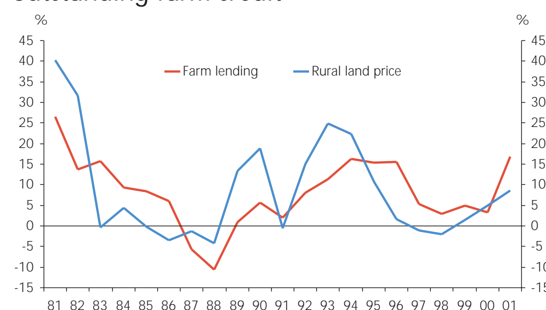
[9] ibid

data on sheep and beef farm lending corroborate these overall proportions of family loans, but also show that few of them bear a commercial rate of interest. Because of the degree of estimation required and the special nature of family loans, the new annual farm lending series does not incorporate the 'other' loans in table 2.

In real terms, deflated by the CPI,[10] outstanding farm debt at December 2000 appears to be only moderately higher than twenty years ago (table 3). Growth is least marked where the estimates for family loans and other sources are included in the assessment. The extraordinary feature of the table is the sharp fall in the real value of loans outstanding to agriculture between 1985 and 1990: by contrast business borrowing rose 47 per cent and household borrowing 36 per cent in real terms in this period. Government sector write-offs account for around $1 billion of the fall in farm loans (in 2000 values): private sector losses would not have been nearly as significant. Between 1985 and 1990 the consumer price level increased over 50 per cent, while rural land prices rose a little over 20 per cent. Nominal farm loan levels in fact rose by around a third among mainstream lenders excluding the Rural Bank, whereas the increase including it was around 5 per cent.

Since December 2000 sheep and beef farming, and the dairy farm sector in particular, have begun to strongly increase investment following the conjunction of good growing conditions, better-than-average overseas prices and a competitive New Zealand dollar from the 1999 farm season onwards. The rate of growth of farm borrowing, which had averaged around 4 per cent for the four years to December 2000, accelerated sharply over the following year. By December 2001 the rate of growth of farm lending was 17 per cent, and in the year to April 2002, had climbed to 22 per cent. Over 60 per cent of total farm borrowing is for the dairy industry, and in the last few years, as it has expanded strongly, dairy farming's share of new lending may have exceeded 70 per cent.

Figure 2
Annual rate of growth of rural land values and outstanding farm credit



Source: RBNZ, Quotable Value New Zealand

Data as at December

Figure 2 shows the pattern of rural land prices and farm loan growth over the past twenty years. In the nineties, the rise in rural land prices accelerated ahead of the rise in the rate of growth of lending. Loan growth rates 'ran on' after land price gains slowed, as more and more farms changed hands and the higher land (and associated product) prices both required and supported greater loan volumes. In 2001, loan volumes increased ahead of rural land prices, although this may be a short-term timing difference. It may also be related to the extension of dairy farming to traditional sheep farming areas, with herd expansion and new capital costs driving loan volumes more than land prices.

Table 3
Credit for agriculture
as at December

$ billion, 2000 values	1980	1985	1990	1995	2000	2001
Monthly series from 1990	7.4	8.4	6.0	9.7	12.2	13.8
Per cent change		*14%*	*-29%*	*62%*	*26%*	*13%*
Annual agricultural credit series	9.6	10.9	6.8	10.2	12.8	14.4
Per cent change		*14%*	*-38%*	*50%*	*25%*	*13%*
Total estimated agricultural credit	13.0	14.4	9.7	12.6	14.8	na
Per cent change		*11%*	*-33%*	*31%*	*17%*	*na*

Source: RBNZ, various

[10] The CPI has been used as a deflator uniformly across the credit sectors surveyed in this article. It is not the only possible deflator, but here has the merit of uniform application.

4 Business credit

Business credit (other than agriculture) obtained from domestic sources is shown in table 4. It highlights the rapid rise in the share of business lending provided by banks following deregulation. These data in aggregate do not reflect the full extent of business borrowing from New Zealand sources for two main reasons. From the early nineties, small businesses have increasingly been able to borrow from banks using housing as security, and the value of this lending not represented here may have been as much as $5-6 billion by 2000. Secondly, loans from private sources and family loans are not captured, just as for agriculture. It is likely however that these informal sources do not represent too significant an omission.

'Government' sources of credit here are those where lending policy was directed closely by the government, and include the Reserve Bank, which lent to agriculture sector producer boards and marketing organisations, mainly the Dairy Board, during the eighties (these loans are consistently categorised as 'business'). The government both owned other financial institutions and, until 1985, through various devices, directed some of their lending and that of most other financial institutions. The distinction made here simply facilitates an institutional basis for comparison of sector credit sources.

Until phased out quickly from mid-1986, Reserve Bank loans represented around half the loans of the government sector to business. The Development Finance Corporation (DFC) was responsible for almost 30 per cent of government sector business credit in 1985, with total government sources then collectively responsible for 20 per cent of business credit. Between 1985 and 1990, the introduction of the bank registration regime, in the context of the deregulation of financial markets, led to banking dominance of the credit market. Business credit from finance companies tended to migrate to bank portfolios, and major savings institutions registered as banks during the period. 'Banks' from 1990 include three major finance company subsidiaries.[11] In the five years to 1990, business credit provided by banks increased from nearly 40 per cent to almost 80 per cent of the business credit market.

Finance company lending to business in the eighties was significant, with their growth in this market in large measure a reflection of their ability to compete for funding outside of the controls applying to banks at the time. Their business lending was principally for plant and machinery, with transport equipment an important focus. In the nineties, finance company lending represented in table 4 was from numerous, relatively small companies, many continuing to specialise in finance for transport and business equipment, but with a growing property development orientation in the total loan book.

Apart from the Post Office Savings Bank (POSB), which was closely directed by the government, savings institutions in the eighties comprised trustee and private savings banks, building societies, the Public Service Investment Society (PSIS) and credit unions. Their legislation, or membership purpose, proscribed the amount of business lending undertaken - these institutions were intended primarily for personal savings and

Table 4
Business (excluding agriculture) sector credit from domestic sources*

as at December

$ million	1980	1985	1990	1995	2000
Institutional source of credit					
Government	1200	2700	700	0	0
Banks	2600	5000	28300	30700	45200
Finance companies	600	2100	1400	1300	2300
Savings institutions	200	600	300	400	900
Managed funds	800	1600	2800	3900	4400
Non-institutional	500	1000	1600	2900	4200
TOTAL	5900	13000	35100	39200	57000

* In June 2003, revisions were made to table 4 for business credit from banks and finance companies in 1990, and for banks in 1995. Original data in order were 23000 and 800 for 1990, and 30400 for 1995. These revisions have been carried through to tables 5, 6, 7 and 8, and are highlighted there.

Source: RBNZ

[11] These are UDC and AGC, as well as BNZ Finance, which became a registered bank in January 1991.

lending. With deregulation after 1985, most of the assets of savings institutions became, through merger and bank registration, bank lending. However, a number of building societies, credit unions and the PSIS remained outside the registered bank framework. Some of these institutions re-oriented their loan portfolios towards business lending, mostly related to the development of residential property and commercial property lending. Private sector bonds held by the Bonus Bonds trust are included in this category.

A small but growing source of business sector credit in the last decade has been from the managed funds industry. The term 'managed funds' encompasses life insurance, superannuation (including pension funds independently managed) and unit trust business, as many fund managers in New Zealand invest funds on behalf of clients with products originating in all three sectors. In the eighties the unit trust business was small, with traditional life offices managing the investments of life insurance policyholders and many pension funds. While business lending was undertaken by way of debenture and direct commercial lending, major sums were also secured by mortgage for farming and residential purposes. With deregulation, the funds management industry began to specialise, reducing direct lending and holding private sector securities to a larger extent. The greater part of managed fund business credit represented in table 4 in the nineties is in the form of private sector securities held in portfolio. However, most of the increase in business credit from managed funds since 1995 is accounted for by property syndication and commercial property lending by group investment funds and mortgage income trusts.

In the early eighties, apart from solicitors' trust funds and the contributory mortgage market, there was a very small non-institutional business credit market, with banks and finance companies providing by far the greatest proportion of business credit. "Non-institutional" in this context means funding to business directly from individuals, nowadays mostly by way of retail corporate bonds, with other direct lending (property-based borrowing through solicitors and contributory mortgage companies) relatively less important now than it was previously. Over a third of the corporate bond market is described as 'retail', implying non-institutional holding of the bonds. The rest of the corporate bonds on issue are assumed to be held in portfolio by the other credit sources shown in table 4.

To a significant degree, the growth in business credit in table 4 is distorted by inflation in the earlier periods. These data are more readily evaluated in table 5 in real terms, expressed in year 2000 prices (the deflator is the CPI).

Between 1985 and 1990 the deregulation that began in the middle of the eighties wrought a substantial transformation in institutional structures. The registration of savings institutions as banks, and the absorption of associated finance company lending into bank books, account for some of the major leap in business credit from banks between 1985 and 1990. However, the major component of the growth recorded following deregulation came from a surge in demand for finance from the business sector as the economy expanded rapidly until the sharemarket crash late in 1987, with banks readily able to fund borrowing following the removal of controls, and competing fiercely for customers.

Table 5
Business (excluding agriculture) sector credit from domestic sources, in real terms*

as at December $ million, 2000 values	1980	1985	1990	1995	2000
Institutional source of credit					
Government	3900	4900	900	0	0
Banks	8200	9000	33700	33300	45200
Finance companies	1800	3900	1700	1400	2300
Savings institutions	500	1200	300	500	900
Managed funds	2500	2900	3300	4200	4400
Non-institutional	1400	1700	1800	3100	4200
Total	18300	23600	41700	42500	57000

* In June 2003, revisions were made to table 5 for business credit from banks and finance companies in 1990, and for banks in 1995. Original data in order were 27400 and 1000 for 1990, and 32900 for 1995.

Source: RBNZ

There was a significant commercial property loan element in lending growth until 1987, when the October financial crisis and subsequent recession revealed the extent of over-building that had been undertaken.

The 140 per cent rise in the total stock of business credit in real terms from 1985 to 2000 compares with an increase of 35 per cent in real annual GDP over the period. More rapid growth in credit outstanding to business than in output is a relatively common feature of financial market developments in OECD countries over this period, although New Zealand's experience is more extreme than the average. There are features of the real economy and recording of business sector data that may explain some of this. As noted, the rapid growth in credit between 1985 and 1990 was to some extent a result of excessive property lending following deregulation and the removal of credit controls. During the latter half of the 1980s, the government privatised a number of large businesses. In establishing commercial gearing ratios, privatisations would have caused some of the increase in demand for bank lending. There is the possibility that some inter-institutional loans have not been netted between banks and other institutions, although that effect would not be large. Understanding these relationships in the New Zealand economy requires further work.

A striking feature of the current New Zealand business credit market is the share of total domestic business credit met by the banks – more than three-quarters in 2000. One reason is that most businesses in New Zealand are very small, so that a smaller share than in other developed countries finds it efficient or possible to issue securities as a means of obtaining credit. Even so, a major proportion of short-term commercial paper issued is held in bank portfolios. Moreover, managed funds are not major holders of commercial paper, in the way that they are in economies with deeper financial markets. As noted earlier, in aggregate New Zealanders have low levels of financial assets. They don't hold large quantities of retail corporate bonds directly. Managed funds in New Zealand have diversified their assets offshore to a greater degree than is normally found elsewhere: around 40 per cent of their funds are invested overseas. Institutional factors, such as the relatively low level of liquidity and limited availability of well-rated corporate bonds, may also be relevant in constraining the issuance of commercial paper.

Finally, businesses borrow directly offshore from various sources; for example, through parent companies, by issuing securities to international markets and from offshore banks. At December 2000, businesses had borrowed a net $19 billion directly from overseas, an amount equivalent to over 40 per cent of the total borrowed from banks here. In the final section of this article we incorporate overseas borrowing in a framework that accounts for the relative size of the business and household credit sectors. There we show the extent to which banks have borrowed overseas to provide the domestic credit reviewed here.

5 Sector credit compared

The relationship between the size of the credit sectors and their rates of growth is instructive.

The relative size of the supply of domestic credit to the two major credit sectors has changed moderately over twenty years, with the household sector overtaking the business sector. However these data undoubtedly overstate household borrowing from 1995 onwards, because of the tendency noted earlier for small business lending to be secured on residential mortgage.

Table 6
Credit by sector*
as at December

$ million	1980	1985	1990	1995	2000
Agriculture	3200	6200	5900	9600	13000
share of total credit	*20%*	*19%*	*9%*	*10%*	*9%*
Business	5800	13000	35000	39100	57000
share of total credit	*36%*	*40%*	*51%*	*41%*	*40%*
Total business credit	**9000**	**19200**	**40900**	**48700**	**70000**
share of total credit	*56%*	*59%*	*59%*	*51%*	*49%*
Households	7200	13600	28300	46200	73200
share of total credit	*44%*	*41%*	*41%*	*49%*	*51%*
Total credit	16200	32800	69200	94600	143200

* In June 2003, revisions were made to table 4 for business credit from banks and finance companies in 1990, and for banks in 1995. Percentage shares and totals have consequently changed in tables 6 and 7.

Source: RBNZ

Table 7
Percentage share of total credit by source*
as at December

Per cent	1980	1985	1990	1995	2000
Government (RBNZ, Rural Bank, GSF, NPF, DFC, Housing Corp, POSB, TPK, Landcorp)					
Agriculture	9	9	0	0	0
Business	8	8	1	0	0
Total business	17	17	1	0	0
Households	13	11	6	1	0
Banks (registered banks plus UDC and AGC from 1990)					
Agriculture	3	3	6	8	8
Business	16	15	41	32	32
Total business	19	18	47	41	40
Households	5	7	29	42	46
Savings institutions (savings banks, building societies, credit unions, Bonus Bonds, PSIS)					
Agriculture	1	1	0	0	0
Business	1	2	0	0	1
Total business	2	3	0	1	1
Households	12	9	1	1	1
Finance companies (includes stock and station agents)					
Agriculture	3	3	1	1	0
Business	4	7	2	1	2
Total business	6	9	3	2	2
Households	3	5	1	1	1
Life/managed funds (life companies, pension funds and managed funds)					
Agriculture	2	2	1	1	0
Business	5	5	4	4	3
Total business	7	7	5	5	3
Households	4	3	1	1	1
Non-institutional (solicitors' trust funds, contributory mortgage companies, corporate bonds, securitisation)					
Agriculture	2	2	1	0	0
Business	3	3	2	3	3
Total business	4	5	3	3	3
Households	8	6	3	2	2
Total	100	100	100	100	100

Source: RBNZ, various[12]

[12] Government Superannuation Fund (GSF), National Provident Fund (NPF), Housing Corporation of New Zealand (Housing Corp), Te Puni Kokiri (TPK)

Table 8
Real rate of growth of sector credit from domestic sources from 1985 base*

Cumulative per cent growth from 1985	1990	1995	2000
Agriculture	-38	-8	15
Business	76	80	141
Total business credit	40	51	101
Households	36	103	196
Total credit	38	73	140

* In June 2003, revisions were made to table 5 for business credit from banks and finance companies in 1990, and for banks in 1995. Percentage growth rates have consequently changed in table 8.

Source: RBNZ

Table 6 illustrates two main features of change in the sectoral allocation of credit. The first is the relative reduction of the demand for credit from the agriculture sector between 1985 and 1990. As shown earlier, in real terms there was a large fall in credit to the sector. But the extent of the growth in business and household credit between 1985 and 1990 played a major part in this reallocation. Deregulation promoted demand for credit from both these sectors at the same time as the new financial market freedoms enabled it to be met. The impact on institutions of these changes was dramatic, as shown in table 7.

Table 7 shows how lending to these three credit sectors is shared among the principal institutional sources of credit. Again, over the course of the past twenty years the changing institutional structure is highlighted. Controls in place until 1985 'compartmentalised' lending sources, with the government responsible for more than half the lending to agriculture and over 20 per cent of business lending by then. The removal of almost all controls from 1985 and the introduction of the registered bank regime were the principal drivers of the marked changes in credit sources shown from that year.

Finally, table 8 shows five-yearly rates of growth of credit obtained by each sector from domestic sources since 1985. Credit to households doubled in real terms from 1985 to 2000. Business borrowing grew more quickly than household borrowing to 1990, but was overtaken as growth in the economy resumed in the early nineties and the household sector began to borrow for housing at a rapid pace. Even so, over the period net growth in business credit from domestic sources was over 70 per cent of that of households.

These increases in credit represent the uses of funds obtained from financial institutions and non-institutional sources in New Zealand. Businesses also borrow directly from overseas, and financial institutions, almost exclusively banks, obtain over a third of their funding from overseas to on-lend to the private sector. The final section of this article considers sector debt taking into account overseas borrowing, and the degree to which the household and business sectors provide funding in New Zealand to meet credit demands.

6 Sector credit and overseas debt

New Zealand has a high level of overseas debt, most of which is owed by the private sector. Gross private sector overseas debt at December 2001 was about 90 per cent of GDP, and net private sector debt over 50 per cent. From 1984, when controls on overseas borrowing were removed, private sector debt increased sharply. Households have high ratios of debt to disposable income, and relatively low levels of financial assets. The greater than two-fold increase in households' debt levels in relation to their income since 1985 has played a significant role in driving net overseas debt much higher than the modest levels prevailing under controls. Businesses (excluding agriculture) have also borrowed strongly since 1985, with debt sourced domestically increasing almost one and a half times in real terms while GDP, for example, increased by a little more than a third. This section uses the preceding data on household and business sector borrowing, together with information on the financial assets of these sectors, to show how their relative influence on measured overseas debt data has evolved between 1985 and 2000.

With the rapid transformation of the institutional landscape of financial markets in New Zealand in the late 1980s, banks were able readily to obtain funding from domestic and

Table 9
Sector borrowing and funding, and overseas debt

as at December *$ million*	1985	2000	Change from 1985 to 2000
Business borrowing from:			
Banks	-5900	-57300	-51400
Other domestic financial sources	-13200	-12800	400
Directly overseas	-11000	-40800	-29800
Total	-30100	-110900	-80800
Business funding to:			
Banks	8100	42500	34400
Other domestic funding	2100	4000	1900
Directly overseas	0	19300	19300
Total	10200	65800	55600
Net business funding:			
Banks	2200	-14800	-17000
Other financial institutions	-11100	-8800	2300
Directly overseas	-11000	-21500	-10500
Total	-19900	-45100	-25200
Household borrowing from:			
Banks	-2400	-65700	-63300
Other domestic financial sources	-11200	-7500	3700
Total	-13600	-73200	-59600
Household funding to:			
Bank deposits	5000	40100	35100
Other domestic funding	32900	68300	35400
Total	37900	108400	70500
Net household funding:			
Bank net financial assets	2600	-25600	-28200
Other net financial assets	21700	60800	39100
Total	24300	35200	10900
Overseas debt			
Gross private sector overseas borrowing	-11000	-101200	-90200
Business sector direct overseas borrowing	-11000	-40800	-29800
Bank borrowing overseas	0	-60400	-60400
Bank lending overseas	0	17400	17400
Net overseas borrowing by banks	0	-43000	-43000
Net direct business overseas borrowing	-11000	-21500	-10500
Total net overseas private sector borrowing	-11000	-64500	-53500
Illustrative allocation of total net overseas borrowing between household and business sectors			
Net household funding/borrowing at banks	2600	-25600	-28200
Total net overseas household borrowing	0	-25600	-25600
(Assume households' net funding deficit at banks is their share of banks' overseas borrowing)			
Net business funding/borrowing at banks	2200	-17400	-19600
(Business share of net overseas borrowing from banks is 17400 in 2000, the residual)			
Net direct business overseas borrowing	-11000	-21500	-10500
Total net overseas business borrowing	-11000	-38900	-27900

Source: RBNZ, SNZ

Note: Values are rounded to the nearest $100 million. Overseas debt data for 1985 are from the March 1986 SNZ long-term debt survey and Reserve Bank surveys and estimates.

overseas sources to satisfy rapidly growing domestic loan demand. They quickly became efficient at lending for housing and other personal purposes. A household sector that by most OECD standards a decade ago was 'under-borrowed', increased the ratio of its total borrowing to housing value from around 20 per cent in 1985 to about 40 per cent in 2000, a ratio that is in line with that of several OECD countries.

As this happened, households in the early nineties ceased to be net funders of banks, and became net borrowers. At the margin, most growth in household financial assets was occurring in managed funds and through the direct purchase of equities. These outlets for household savings do not provide a source of funds for residential mortgages. In the latter half of the nineties in particular, managed funds increasingly diversified overseas the investment of the funds placed with them by households, to the point where 40 per cent of funds under management are now offshore. As has been shown earlier in the article, these funds are not

significant holders of either household or business sector debt.

Business borrowing from banks increased five-fold in real terms from 1985, as banks crowded out or took over other lenders, but larger businesses were also able freely to borrow directly overseas. By 2000, business sector net direct overseas borrowing was almost half as much as its borrowing from domestic banks. Much of the direct borrowing is by subsidiaries from overseas parent companies. Some is equity, in substance, with a loan from overseas made to a wholly-owned subsidiary in New Zealand, which in turn holds business equity. This exaggerates the amount of overseas business 'debt'. On the other hand, household sector debt, as we have seen, contains a significant component of small business debt, which might well offset this effect, were it 'correctly' recorded as business borrowing.

Table 9 presents household and business (including agriculture) domestic sector gross and net debt, and overseas debt measured by Statistics New Zealand (SNZ) in the International Investment Position (IIP). Its purpose is to link the domestic borrowing data to the IIP statement, and to show how a large component of net overseas debt (two thirds of it) is intermediated by banks. Banks borrow overseas and on-lend to both household and business borrowers. Households' influence on overseas debt is entirely through intermediation by banks, while businesses affect the position both by borrowing directly offshore, and indirectly (through banks). By adopting an allocation assumption (below) for debt intermediated by banks, table 9 suggests that since 1985, when New Zealand's capital market was fully opened, the household and business sectors have each been responsible for about half of the growth in net overseas debt.

Drawing on data for business and household borrowing from preceding sections, table 9 shows what proportion of their borrowing each sector has drawn from banks, and from all other financial institutions and non-institutional sources. These data are shown for 1985 and 2000, as well as the change in debt over the period, but the following illustrations are based on December 2000 data, rounded in the text to $ billion ($bn). For businesses, direct overseas debt is $41bn, which when added to the sector's domestic borrowing, shows gross credit to the sector of $111bn. Likewise, the deposits of businesses with banks of $43bn and $4bn with all other repositories are added to business sector lending overseas of $19bn, to give a total of $66bn of 'funding' by business. Some of the business lending overseas is household financial assets in managed funds that invest in overseas bonds, but is recorded as business lending in the IIP.

Household funding of banks is based on the 'household' definition in Reserve Bank surveys. Significant sums placed indirectly in banks by households, such as the more than $2 billion in solicitors' trust accounts, are included in the residual 'business' category. Most household funding ($68bn) is not given to banks, and the total of household funding has risen $71bn in the fifteen years to 2000.

Net business and household funding is obtained by subtracting each sector's borrowing from its funding data. For the business sector, in 2000 the net of its funding and borrowing is an overall deficit of $45bn, with its deficit growing $25bn from 1985 to 2000. Net household funding remains positive overall in 2000 at $35bn, but households borrow much more from banks than they deposit there, for a deficit of $26bn at banks. Excluding directly-held equities, households' net financial assets increased only $11bn over the 15 years to 2000.

The link between these data and the overseas debt figures in table 9 is also illustrated using December 2000 values and net data. For completeness, the table first presents gross private sector overseas debt of $101bn and its two main components, business (or 'corporate') and bank overseas borrowing. Next, bank borrowing overseas is netted against bank overseas lending to give a net bank overseas borrowing amount of $43bn. Adding net direct business borrowing from overseas ($22bn) to bank net borrowing gives total net private sector overseas borrowing of $65bn. Over the period, net private sector overseas debt increased $54bn.

Through the banks, both the household and business sectors are borrowing a share of the net $43bn that banks have borrowed overseas to on-lend domestically. There is no one way of allocating this, nor any need to do so. Purely for illustration purposes, we have chosen to allocate bank overseas borrowing to each sector based on the idea that households' borrowing from banks could be expected to be funded by them. New Zealand's households have a $26bn funding shortfall at banks in 2000. Using this allocation device, the $26bn net borrowing by households from banks can be represented as households' net overseas borrowing. Business overseas borrowing through banks becomes the residual $17bn. This allocation device results in about 60

per cent of net private sector debt being attributable to the business sector, and over 50 per cent of its growth since 1985.

Tracking the origins of household and business sector funding and debt to their representation in the overseas debt data does not amount to analysis of any of the underlying reasons why overseas debt is as high as it is. However, while it has been clear that a significant proportion of bank overseas borrowing has been for household purposes, providing an overview of all gross and net borrowing data for both the business and household sectors puts the latter's role in a broader context. This 'mapping' of household and business gross and net debt positions at 1985 and 2000 to the private sector overseas debt data is intended to lay out the balance sheet relationships that lead to the aggregate debt numbers published in the International Investment Position. The artificial allocation exercise illustrated above may serve to assist work on the more fundamental factors that lie behind these data.

In broad terms, it is clear that the gross financial assets of New Zealanders, as a proportion of their disposable income, are relatively low in comparison with other countries. While high, our household borrowing levels are in line with other 'high borrowing' nations such as the UK, US, Canada and Australia. However, these countries have higher household financial asset levels and thus greater net financial savings available for business borrowing. As New Zealand's overseas debt data show, our savings shortfall is made up from the savings of others, both intermediated by banks and borrowed directly by the business sector.

7 Conclusion

A well-worn adage suggests that if we wish to know where we are going, it is as well to know where we have been, and where we are now. The data series reported in this article establish a past for current data, and are intended to contribute to analytical work in a number of areas. We intend to prepare another article in the future to discuss some policy and other implications revealed in these data series. The household financial assets, liabilities and wealth series has now been updated for the second year, and this year greater experience with some components of the data has enabled further disaggregation of these series. The annual agricultural credit series is published for the first time with this *Bulletin*, and its appearance seems timely in light of the current surge in borrowing in the sector. Tracing sector credit demand through changing institutional conditions in financial markets, as is done here over a twenty year span, provides a useful backdrop for consideration of policy outcomes in financial markets. Finally, unpicking the knot in the data between overseas borrowing, and domestic funding and borrowing, serves as another piece fitted in the savings jigsaw.

References

Pryde, J G and Bain L B (1985), 'A review of agricultural credit in New Zealand', Agricultural Economics Research Unit, Lincoln College, Discussion Paper No 93.

Thorp, C and B Ung (2000), 'Trends in household assets and liabilities since 1978', Reserve Bank of New Zealand *Bulletin*, June, p 17-37.

Thorp, C and B Ung (2001), 'Recent trends in household financial assets and liabilities', Reserve Bank of New Zealand *Bulletin*, June, p 14-24.

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