

## ANNUAL ESTIMATES OF M1 AND M3: 1862-1982

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*Professor David Sheppard of Victoria University of Wellington was invited by the Reserve Bank to submit this summary of new historical series that have been derived for M1 and M3.*

In a recent paper given at the New Zealand Association of Economists Sesquicentennial Conference, entitled 'New Zealand Monetary Aggregates and Total Assets of Leading Groups of Financial Institutions', Sheppard, Guerin and Lee (1990) produced a series of historical financial statistics. They provided estimates of currency outstanding, M1, M2, M3, M3+, encashable assets and the total assets of 18 groups of financial institutions, together with those of the Bank of New Zealand, on an end year basis, over much of the 1862-1982 period.

They compared the behaviour of the New Zealand money stock over this period with similarly defined monetary aggregates in the United States and the United Kingdom as reported by Friedman and Schwartz (1970) and Capie and Webber (1985). In addition, they presented the New Zealand official monetary statistics, which commenced in 1933, with which they compared their money stock estimates. Finally, they recorded the growth rates of the various aggregates over selected intervals and showed how each group of institutions' share of total financial sector assets changed over the period.

This note extends their work by providing new annual (as at December) estimates of the M1 and M3 money stock series for the 1862-1982 period, as presented in Table 1. These series (which differ slightly from those in Sheppard, Guerin and Lee) have been formed after consultation with the Reserve Bank, and are defined in the same way as the new official M1 and M3 statistics which are published by the Reserve Bank for the post 1980 period.

Since data sources differ, the estimated series do not agree exactly with the official series for the periods of overlap between the estimated and the official series (1981-1986 with respect to M1 and 1981-1982 with respect to M3). However, the differences between these estimates of M1 and M3 and the official series of the Reserve Bank are quite small, generally well under 1 per cent. This suggests that they could be used in conjunction with the new official money stock statistics to provide money stock series which extend well over 100 years. Potential users should refer to Sheppard, Guerin and Lee for further details on the construction of these estimates.

### REFERENCES

Capie, Forest and Webber, Alan A.: "A Monetary History of the United Kingdom 1870-1982", Vol. 1, London: George Allen and Unwin, 1985.

Friedman, Milton and Schwartz, Anna J.: "Monetary Statistics of the United States", New York: National Bureau of Economic Research, 1970.

Sheppard, D.K., Guerin, K., and Lee, S.: "N.Z. Monetary Aggregates and the Total Assets of Leading Groups of Financial Institutions 1862-1982", New Zealand Association of Economists Sesquicentennial Conference, Auckland, August 1990.

**TABLE 1: THE NEW M1 AND M3 ESTIMATES AND THE NEW OFFICIAL M1 AND M3 AGGREGATES**

\$ millions

Year Ended 31/12	Estimated New M1	Official New M1	Estimated New M3	Official New M3
1862	1.4			
1863	4.3			
1864	4.2			
1865	4.5			
1866	4.4			
1867	4.1			
1868	4.4			
1869	5.2			
1870	4.6			
1871	5.5			
1872	6.1			
1873	7.1			
1874	7.5			
1875	7.6			
1876	7.9			
1877	9.0			
1878	9.8			
1879	8.7			
1880	9.8			
1881	11.4			
1882	10.4			
1883	9.6			
1884	10.2		37.0	
1885	10.1		42.1	
1886	9.1		41.7	
1887	10.0		43.5	
1888	9.9		44.5	
1889	9.8		47.1	
1890	10.1		45.0	
1891	10.3		45.8	
1892	11.0		50.9	
1893	11.4		49.4	
1894	11.6		48.4	
1895	12.5		49.9	
1896	14.5		47.6	
1897	14.6		48.8	
1898	15.0		49.8	
1899	16.3		50.7	
1900	17.8		54.7	
1901	18.4		57.7	
1902	20.4		61.8	
1903	21.9		64.5	
1904	22.1		66.3	
1905	22.2		70.2	
1906	25.9		77.9	
1907	27.7		84.9	
1908	24.5		82.6	

Year Ended 31/12	Estimated New M1	Official New M1	Estimated New M3	Official New M3
1909	25.9		85.4	
1910	30.0		91.6	
1911	31.7		99.0	
1912	30.9		99.9	
1913	30.6		102.0	
1914	33.5		108.1	
1915	40.1		122.4	
1916	43.2		138.1	
1917	45.8		148.0	
1918	51.4		162.1	
1919	73.0		200.2	
1920	79.2		223.9	
1921	57.3		203.8	
1922	58.6		207.8	
1923	60.8		216.0	
1924	59.1		221.3	
1925	61.4		229.2	
1926	57.6		228.8	
1927	53.2		230.5	
1928	55.9		246.5	
1929	56.9		259.2	
1930	46.2		252.0	
1931	38.9		239.4	
1932	39.2		237.8	
1933	48.7		259.5	
1934	57.4		272.2	
1935	66.8		290.7	
1936	77.6		309.7	
1937	89.3		335.5	
1938	93.7		328.9	
1939	113.1		343.6	
1940	132.6		372.3	
1941	147.9		406.1	
1942	195.5		482.5	
1943	234.9		560.3	
1944	253.0		617.8	
1945	292.6		703.1	
1946	326.7		777.4	
1947	340.4		817.5	
1948	374.4		892.5	
1949	416.2		951.1	
1950	469.0		1021.4	
1951	481.2		1134.5	
1952	479.9		1124.3	
1953	558.8		1126.5	
1954	611.0		1320.1	
1955	608.9		1323.3	
1956	617.8		1344.7	
1957	623.4		1429.3	
1958	575.0		1419.7	
1959	644.3		1551.1	

Year Ended 31/12	Estimated New M1	Official New M1	Estimated New M3	Official New M3
1960	733.7		1729.5	
1961	712.7		1766.4	
1962	712.8		1831.8	
1963	737.4		2080.5	
1964	778.1		2217.6	
1965	776.1		2376.0	
1966	776.8		2597.7	
1967	763.1		2695.5	
1968	757.3		2869.9	
1969	778.0		3134.4	
1970	838.7		3400.4	
1971	920.6		3674.8	
1972	1166.5		4428.5	
1973	1424.2		5473.9	
1974	1437.7		5659.5	
1975	1582.4		6351.3	
1976	1794.0		7368.1	
1977	1822.4		8396.4	
1978	2190.7		10148.0	
1979	2372.9		11980.0	
1980	2484.4		13675.1	
1981	2862.5	2893.0	15995.0	16009.0
1982	3034.5	3063.0	17998.4	18066.0
1983	3541.7	3513.0		20669.0
1984	3900.6	3899.0		25020.0
1985	4380.6	4377.0		31397.0
1986	5076.9	5077.0		37807.0
1987		7179.0		43856.0
1988		7706.0		45342.0
1989		9001.0		47444.0

Sources: Sheppard, Guerin and Lee, 1990, Table 24.21 and Reserve Bank Bulletins.