Financial Deregulation and the Stability of the Demand for Money in Australia

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I. Introduction

Rising inflation rates during the 1970's led to the adoption of monetary targets as a guide to monetary policy in a number of industrialized countries.[1] Australia was one of the first OECD countries to set out projections for the money stock. The major intermediate goal of the Australian monetary authorities has been the growth rate of $M3$; this aggregate is defined as currency in circulation plus total deposits (including CD's) with all trading and saving banks. The growth rate of $M3$ has been announced in advance as a "conditional projection". While not intended as a strict target, but rather as a guide both to markets and the Reserve Bank, it was indicated in the 1976 Budget that a growth rate of $M3$ in the 10 - 12 percent range during the year would be consistent with the reduction of inflation. Similar projections have been published for subsequent years.[2]

A policy of monetary targeting requires a stable money demand function.[3] This means a well-defined and stable relationship between money, interest rates and GNP. As *Judd & Scadding* put it: "What is being sought in a stable demand function is a set of necessary conditions for money to exert a predictable influence on the economy so that the central bank's control of the

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[1] For an account of the spread of monetary "targetry" during the 1970's see OECD (1979).

[2] See OECD (1983). *Corden* (1989) even argues that "contrary to the images created during the stabilization period, Australian monetary policy was not really monetarist in any sense of the term ... In most years there was no suggestion that the authorities were firmly committed to the projections ..." [*Corden,* (1989), p. 160]. Still, "conditional projections" of $M3$ growth were relatively close to actual outcomes.

[3] Of course, a stable relationship between money and key macroeconomic variables is not the only criterion for choosing an intermediate target. It is also important that the target variable can be controlled by the monetary authorities given the available instruments.

money supply can be a useful instrument of economic policy" [*Judd & Scadding* (1982), p. 993]. The evidence on the stability of conventional money demand functions for Australia is mixed. While *Jüttner & Tuckwell* (1974) and *Pagan & Volker* (1981) conclude, for instance, that there is little evidence for instability in the demand for $M1$, *Sharpe & Volker* (1979), *Hunt & Volker* (1981) and *Kanniainen & Tarkka* (1986) have – for various reasons – serious doubts about the stability of the standard demand for (broad) money.[4]

The conduct of Australian monetary policy has been increasingly complicated in recent years by the growing integration of domestic and foreign financial markets and by deregulations of the financial system. *Polasek & Lewis* (1985) conclude that in the early 1980's there has been a marked acceleration of Australia's financial integration with the rest of the world. The recent deregulation of Australia's financial system, which involved inter alia the floating of the Australia dollar in December 1983, may also have had some effect on the stability of the demand for money.[5] *Hall* (1985) argues that especially in the transition period to a deregulated environment, the interpretation of the targeted $M3$ is problematic. Indeed, the government has abandoned the conditional projections of $M3$ in early 1985. Policy setting is now made on the basis of a so-called "check list" in which the authorities review a wide range of financial and economic indicators [see OECD (1987)].

A common feature of most studies on the demand for money is that a long-run equilibrium money demand function is presumed beforehand. Recently, however, there has been a shift from presuming this relationship towards searching "to examine and test for the presence of such a long-run equilibrium relationship between variables directly, (*before* embedding them in equations which also explore short-run dynamic adjustments), by testing whether such variables are cointegrated" [*Goodhart* (1989), p. 311]. Cointegration tests are a method to explore long-run relationships between non-stationary time series. If these variables are cointegrated, there exists a stochastic long-run equilibrium between them. It is an equilibrium in the sense that the non-stationary series do not drift away, but move together in the long-run.

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[4] *Hoa* (1982) argues that instability of the money demand function may be caused by a functionally or parametrically misspecified equation, but, unfortunately he does not test his estimated function for Australia on instability. *Milbourne* (1983) does also not examine the stability of his preferred money demand function.

[5] See *Swamy* and *Tavlos* (1989) for a review of the financial deregulation in Australia and its consequences for the stability of the money demand function.

Various authors have investigated whether monetary aggregates are cointegrated with key macroeconomic variables. *Engle & Granger* (1987) have found that in the US only $M2$ and GNP are cointegrated. *Friedman* (1988) concludes that financial quantity variables have lost their relevance for US monetary policy in the 1980s. In contrast, *Trehan* (1988) concludes on the basis of cointegration tests that in Germany both the Central Bank Money (Zentralbankgeldmenge) – which is a weighted average of the components of the broad monetary aggregate $M3$ – and $M3$ satisfy the requirements for an intermediate target variable. *Cesar, De Haan & Jacobs* (1990) have found that $M2$ in the Netherlands is not cointegrated with GNP and interest rates.

In this paper we examine whether $M1$ and $M3$ are cointegrated with some key macroeconomic variables in Australia. The paper is organized as follows. Section II briefly describes the main features of cointegration. Section III presents our results, and section IV contains some concluding comments.

II. Cointegration Theory

A variable which exhibits no tendency to return to its original level following a disturbance is non-stationary. A simple example is a random walk with drift:

$$y_t = \gamma + y_{t-1} + \varepsilon_t, \; y_0 = 0 \,,$$

where ε_t is, for instance, an uncorrelated and identical error process. The process y_t has a unit root, because the coefficient of the lagged variable has the value one. By differencing such a variable can be made stationary. In case of a stationary variable the effects of a random disturbance die out over time.[6] A series that needs to be differenced d times to become stationary is denoted $I(d)$, or "integrated of order d". Consider two variables x_t and y_t, both $I(1)$. Then x_t and y_t are said to be cointegrated if there exists a linear combination $z_t = y_t - \beta x_t$ ($\beta \neq 0$) which is stationary or $I(0)$. The extent to which x_t and y_t are out of equilibrium is measured by the "equilibrium error" z_t.

Estimating, and testing for the existence of, cointegrating vectors is simple. In the model $z_t = y_t - \beta x_t$, we need to estimate β and have to test for the stationarity of z_t. If both x_t and y_t are $I(1)$, then, in general, a linear combination of x_t and y_t, will be $I(1)$ too. Thus, almost all β's will produce z_t series with asymptotically infinite variances. Only the cointegrating vectors will lead to z_t having finite variance. Ordinary Least Squares yields a good esti-

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[6] Note that a random walk with drift can be written as $y_t = \gamma t + \Sigma_1^t \, \varepsilon_t$, so the effects of a random disturbance last permanently.

mate of β since with OLS the variance of the residuals is minimised. So, β is estimated by OLS in the model $z_t = y_t - \beta x_t$, all variables are in levels and dynamics are excluded from the model.

A striking feature of cointegration is that it offers formal support for the use of Error-Correction-Mechanisms (ECMs) in econometric models [see *Sargan* (1964)]. The idea of ECMs is simply that a proportion of the disequilibrium from one period is corrected in the next. It has been proved that the concepts of cointegration and error-correction are equivalent: if a cointegrated set of variables is found, it must have an ECM representation, and, ECMs produce cointegrated variables [*Engle* & *Granger* (1987)].[7]

Cointegration techniques may be used for various purposes [see *Granger* (1986)]. In the next section we will examine for the case of Australia whether $M1$ and $M3$ are cointegrated with some key macroeconomic variables. We will also analyse whether financial deregulation measures have affected the relationship between the monetary aggregates and real GDP and the interest rate.

III. Analysing Monetary Aggregates

This section presents an analysis of the properties of two monetary aggregates: $M1$ and $M3$. $M1$ equals public's holdings of currency plus current accounts in commercial banks; $M3$ equals $M1$ plus all accounts in savings and commercial banks. Quarterly data on the monetary aggregates were kindly provided by the Reserve Bank of Australia.

Data for GDP in current prices are from the Australian National Accounts (Australian Bureau of Statistics) for the period 1974.3 - 1989.2 and from the IMF International Financial Statistics (IFS) for the period 1959.1 - 1974.2. The interest rate used is the yield on three year government bonds as published in the IFS (line 61a).

We use the natural logarithm of all series, except for the interest rate. Money and GDP in current prices are deflated using the consumer price index as published in the IFS (line 64). All series except for the interest rate are seasonally adjusted using the multiplicative method of micro-TSP (version 6.5).

The first step is to examine whether the time series of the variables of interest have a unit root. We have used the tests as proposed by *Phillips* and

[7] It should, however, be stressed that if a cointegrated system of some monetary aggregate and key macroeconomic variables exists, this does not necessarily imply that money demand is of the ECM form.

Perron (1988) and *Perron* (1988). These tests are modifications of the well known *Dickey-Fuller* (DF) and Augmented Dickey-Fuller (ADF) tests. The DF test consists of running a regression between the first difference of a variable and its lagged level, including a constant and a trend variable. Under the null hypothesis that the variable has a unit root, the coefficient of the lagged level should be equal to zero. The null-hypothesis is rejected if this coefficient is significantly less than zero.[8] To make sure that the residuals are white noise, lagged first differences are sometimes included in the regression. The test is then called the Augmented Dickey-Fuller (ADF) test. Phillips and Perron have adjusted the (A)DF statistics in such a way that they become independent of the distribution of the residuals.

Our testing strategy is based upon *Perron* (1988). The test-statistics are all based upon the following models for a series y_t:

$$(1) \qquad y_t = \mu^* + \alpha^* y_{t-1} + u_t^*$$

$$(2) \qquad y_t = \tilde{\mu} + \tilde{\beta}(t - T/2) + \tilde{\alpha}\, y_{t-1} + \tilde{u}_t \qquad t = 1, 2, \ldots, T.$$

Table 1 presents the statistics that we use. We start with equation (2), which is the most general model, and test for the presence of a unit root, using the statistics $Z(\tilde{\alpha})$, $Z(t_{\tilde{\alpha}})$ and $Z(\Phi_3)$.

The statistics $Z(\tilde{\alpha})$ and $Z(t_{\tilde{\alpha}})$ are based on the estimated value of the coefficient of the lagged variable and its t-statistic respectively. The distributions of these statistics are, however, not invariant with respect to the value of the trend parameter β. The statistic $Z(\Phi_3)$ is, therefore, also used. This statistic tests the joint hypothesis of a unit root and a zero trend parameter. If the null hypothesis of a unit root is rejected, there is no need to go further. If the null hypothesis cannot be rejected, this may be due to the low power of the test statistics of equation (2) if the drift is zero. We test for the absence of the drift parameter μ using the statistic $Z(\Phi_2)$. If the joint hypothesis of a zero drift and trend parameter and a unit root cannot be rejected, it may be more appropriate to use the test statistics, which are based upon equation (1). We then employ $Z(\alpha^*)$ and $Z(t_\alpha{}^*)$. Since these statistics are not invariant with respect to the starting value y_0 of a series y_t, we also employ $Z(\Phi_1)$ to test the null hypothesis of a unit root.

[8] The t-statistic does not follow the usual Student's t-distribution. Critical values are tabulated in *Fuller* (1976).

Note that all statistics can be calculated with different truncation parameters [see *Perron* (1988) for further details].[9] We have calculated the various test statistics with four different truncation parameters: one, four, ten and sixteen.

Table 1: Test Statistics

Test statistic	Hypothesis	Critical values in:
$Z(\tilde{\alpha})$	$\alpha = 1$ in equation (2)	Fuller (1976)
$Z(t_{\tilde{\alpha}})$	$\alpha = 1$ in equation (2)	Fuller (1976)
$Z(\Phi_3)$	$(\mu,\beta,\alpha) = (\mu,0,1)$ in eq. (2)	Dickey and Fuller (1981)
$Z(\Phi_2)$	$(\mu,\beta,\alpha) = (0,0,1)$ in eq. (2)	Dickey and Fuller (1981)
$Z(\alpha^*)$	$\alpha = 1$ in equation (1)	Fuller (1976)
$Z(t_{\alpha^*})$	$\alpha = 1$ in equation (1)	Fuller (1976)
$Z(\Phi_1)$	$(\mu,\alpha) = (0,1)$ in eq. (1)	Dickey and Fuller (1981)

We have examined whether the following variables are stationary: real $M1$ and $M3$, the interest rate and real GDP. In table 2 the outcomes of the unit roots tests are shown for the sample period 1960.1 - 1989.2. The first half of the table shows that we cannot reject the null hypothesis of a unit root for the levels of all series when we use equation 2. However, the statistic $Z(\Phi_2)$ is not significant for real $M1$ and the interest rate. As explained above, this suggests that equation (1) may be a more appropriate representation of these series. The lower part of table 2 presents the relevant tests statistics. Once again, the null hypothesis cannot be rejected.

We have also performed unit root tests on the first differences of all variables. Table 3 present the testing outcomes. All test-statistics are significant at the 1 % level, so that we conclude that all variable are integrated of degree one.

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[9] For example, the test statistic $Z(\alpha^*)$ is computed from:

$$Z(\alpha^*) = T(\alpha^* - 1) - 1/2\,(S_{T\ell}^{*2} - S_u^{*2})\,[T^{-2} \sum_{t=2}^{T} (y_{t-1} - \bar{y}_{-1})^2]^{-1}$$

with alternative lag parameter ℓ where

$$S_{T\ell}^{*2} = T^{-1} \sum_{t=1}^{T} u_t^{*2} + 2\,T^{-1} \sum_{t=1}^{\ell} \sum_{t=t+1}^{T} u_t^* u_{t-T}^* \quad \ell = 1, 2, \ldots$$

$$\text{and } S_u^{*2} = T^{-1} \sum_{t=2}^{T} u_t^{*2} .$$

Table 2: Testing for Stationarity of Levels of Macroeconomic Variables in Australia, 1960.1 – 1989.2

Tests based on equation (2)

	M1				M3			
	1	4	10	16	1	4	10	16
$Z(\tilde{\alpha})$	–11.45	–15.99	–12.30	–11.06	–3.45	–5.24	–5.23	–5.47
$Z(t_{\tilde{\alpha}})$	–2.42	–2.85	–2.50	–2.38	–1.08	–1.41	–1.41	–1.45
$Z(\Phi_3)$	3.09	4.18	3.29	3.0	0.72	1.10	1.10	1.15
$Z(\Phi_2)$	2.49	3.09	2.59	2.45	9.31[c]	7.26[c]	7.27[c]	7.08[c]

	GDP				Interest rate			
	1	4	10	16	1	4	10	16
$Z(\tilde{\alpha})$	–8.79	–7.23	–6.94	–7.14	–15.06	–18.21	–13.53	–9.51
$Z(t_{\tilde{\alpha}})$	–2.23	–2.06	–2.02	–2.04	–2.85	–3.11	–2.71	–2.32
$Z(\Phi_3)$	2.63	2.29	2.23	2.27	4.16	4.93	3.80	2.86
$Z(\Phi_2)$	8.67[c]	10.20[c]	10.58[c]	10.31[c]	3.54	3.91	3.39	3.17

Tests based on equation (1)

	M1				Interest rate			
lags	1	4	10	16	1	4	10	16
$Z(\alpha^*)$	–1.97	–3.26	–1.77	–1.17	–0.98	–1.32	–0.52	0.09
$Z(t_{\alpha^*})$	–0.75	–1.05	–0.69	–0.51	–0.48	–0.60	–0.29	0.06
$Z(\Phi_1)$	0.84	0.61	0.88	0.95	1.23	1.09	1.45	1.89

Critical values	10%	5%	2.5%	1%
$Z(\tilde{\alpha})$	–18.3	–21.8	–25.1	–29.5
$Z(t_{\tilde{\alpha}})$	–3.12	–3.41	–3.66	–3.96
$Z(\Phi_3)$	5.34	6.25	7.17	8.27
$Z(\Phi_2)$	4.03	4.68	5.31	6.09
$Z(\alpha^*)$	–11.3	–14.1	–16.9	–20.7
$Z(t_{\alpha^*})$	–2.57	–2.86	–3.12	–3.43
$Z(\Phi_1)$	3.78	4.59	5.38	6.43

[a] Significant at the 10% level.
[b] Significant at the 5% level.
[c] Significant at the 1% level.

Table 3: Testing for Stationarity of First Differences of Macroeconomic Variables in Australia, 1960.1 – 1989.2

Tests based on equation (2)[a]

	*M*1				*M*3			
	1	4	10	16	1	4	10	16
$Z(\tilde{\alpha})$	–85.78	–96.32	–72.53	–64.55	–77.73	–8.88	–81.33	–82.72
$Z(t_{\tilde{\alpha}})$	–8.41	–8.61	–8.23	–8.22	–7.41	–7.61	–7.51	–7.55
$Z(\Phi_3)$	34.36	36.24	32.59	32.15	26.77	28.36	27.56	27.88
$Z(\Phi_2)$	22.91	24.16	21.72	21.43	17.88	18.94	18.41	18.62
	GDP				*Interest rate*			
	1	4	10	16	1	4	10	16
$Z(\tilde{\alpha})$	–127.9	–111.5	–99.7	–94.3	–106.0	–111.4	–88.7	–71.3
$Z(t_{\tilde{\alpha}})$	–12.2	–12.7	–13.6	–14.4	–9.85	–9.90	–9.84	–10.5
$Z(\Phi_3)$	72.5	77.8	88.9	99.1	47.27	47.87	46.67	51.67
$Z(\Phi_2)$	48.3	51.9	59.3	66.1	31.51	31.91	31.12	34.45

[a] Since all statistics are significant at the 1% level, the significance levels are not shown in the table.

We have also examined the stationarity of the series over the period 1960.1 - 1983.4. For this period the same conclusions with regard to stationarity of the data were reached and the results are, therefore, not shown.

As we have argued in the previous section, testing for the existence of a long-run relationship between variables that are non-stationary implies estimating an OLS regression of the following form:

$$Mi_t = \beta_0 + \beta_1 Y_t + \beta_2 r_t + \varepsilon_t , \tag{3}$$

where M is the log of the real money stock, Y denotes the log of real GDP, r is the interest rate, while $i = 1{,}3$. If the residuals from this regression – which is written in its most general specification – are stationary, the variables are cointegrated. We have tested for cointegration using the Z_α and $Z_{t\alpha}$ statistics of *Phillips* (1987). Critical values of the statistics are tabulated in *Phillips* and *Ouliaris* (1990). In row 1 of table 4 the results of the cointegration tests for the model represented by equation (3) with $M1$ are shown. For the period 1960.1 - 1989.2 we cannot reject the hypothesis that $M1$ is not cointegrated with real GDP and the interest rate. (Only with a truncation parameter of 4, the statistic is significant, but only at the 10% level). We also cannot reject the hypothesis that $M3$ is not cointegrated with these variables (row 2 of table 4).

It is, of course, possible that both monetary aggregates are cointegrated with real GDP only. Rows 3 and 4 of table 4 show the results of testing this hypothesis. It is clear that both $M1$ and $M3$ are also not cointegrated with real GDP only.

As indicated in the first section, the Australian dollar started to float in December 1983. This, and other financial deregulations introduced at that time may have affected the stability of the relationship between money and key macroeconomic variables. We have, therefore, also tested for cointegration over the period 1960.1 - 1983.4. Row 5 of table 4 presents the outcomes of testing whether $M1$ is cointegrated with real GDP and the interest rate. The results for $M1$ are not changed. However, we now can reject the hypothesis that $M3$ ist not cointegrated with real GDP and the interest rate at the 1% level (row 6). These results suggest that there may have existed a long-run equilibrium relationship between $M3$ and real GDP and the short-term interest rate before 1984. This relationship has, however, vanished in recent years.

Finally, we have tested for the subsample whether $M1$ and $M3$ are cointegrated with real GDP only (rows 7 and 8 of table 4). It appears that during the period 1960.1 - 1983. 4 both $M1$ and $M3$ are not cointegrated with real GDP.

Our findings imply that we can estimate a money demand function in error correction form. Since $M3$ is considered the most important monetary aggregate in Australia, we have – for illustrative purposes only – estimated an ECM model for the demand for real $M3$ for the period 1960.1 - 1983.4. The resulting ECM is:

$$\begin{aligned}\Delta M3_t = {} & \underset{(1.7)}{0.003} + \underset{(2.9)}{0.248}\, \underset{}{\Delta M3_{t-1}} + \underset{(3.8)}{0.312\, \Delta M3_{t-6}} + \underset{(4.8)}{0.258\, \Delta GDP_t} - \underset{(2.6)}{0.006\, \Delta r_t} \\ & - \underset{(1.9)}{0.005}\, \Delta r_{t-1} - \underset{(3.9)}{0.010}\, \Delta r_{t-3} - \underset{(3.9)}{0.193}\, EC_{t-1}, \qquad \bar{R}^2 = 0.47,\ DW = 1.9\end{aligned}$$

where EC is the error correction term and t-values are shown in parentheses.

Table 4: Testing for Cointegration, 1960.1 – 1989.2 and 1960.1 – 1983.4

	constant	*GDP*	*r*	test–stat.	1	4	10	16
1960.1 – 1989.2								
*M*1								
(1)	5.61	0.42	–0.01	$Z(\tilde{\alpha})$	–19.2	–22.9	–19.8	–16.9
	(21.3)	(15.7)	(–5.1)	$Z(t_{\tilde{\alpha}})$	–3.31	–3.57[a]	–3.35	–3.14
*M*3								
(2)	1.31	0.93	–0.01	$Z(\tilde{\alpha})$	–10.9	–9.32	–10.4	–13.2
	(5.3)	(37.2)	(–3.9)	$Z(t_{\tilde{\alpha}})$	–1.69	–1.50	–1.63	–1.94
*M*1								
(3)	6.76	0.30		$Z(\tilde{\alpha})$	–16.2	–20.8	–16.6	–14.7
	(45.6)	(21.3)		$Z(t_{\tilde{\alpha}})$	–2.98	–3.34[a]	–3.01	–2.85
*M*3								
(4)	2.13	0.84		$Z(\tilde{\alpha})$	–7.95	–6.51	–7.23	–9.43
	(15.9)	(66.8)		$Z(t_{\tilde{\alpha}})$	–1.45	–1.25	–1.35	–1.64
1960.1 – 1983.4								
*M*1								
(5)	5.78	0.40	–0.01	$Z(\tilde{\alpha})$	–17.3	–21.2	–16.4	–13.4
	(21.7)	(14.9)	(–4.5)	$Z(t_{\tilde{\alpha}})$	–3.28	–3.55[a]	–3.21	–2.99
*M*3								
(6)	1.55	0.91	–0.01	$Z(\tilde{\alpha})$	–35.0[c]	–35.4[c]	–38.3[c]	–34.9[c]
	(9.1)	(53.2)	(–8.1)	$Z(t_{\tilde{\alpha}})$	–4.65[c]	–4.68[c]	–4.82[c]	–4.65[c]
*M*1								
(7)	6.74	0.30		$Z(\tilde{\alpha})$	–14.3	–18.9[a]	–13.9	–11.8
	(38.4)	(18.0)		$Z(t_{\tilde{\alpha}})$	–2.85	–3.22[a]	–2.82	–2.63
*M*3								
(8)	2.66	0.80		$Z(\tilde{\alpha})$	–16.6	–15.1	–15.5	–17.0
	(20.0)	(62.8)		$Z(t_{\tilde{\alpha}})$	–3.06	–2.94	–2.97	–3.09[a]

[a] Significant at the 10% level.
[b] Significant at the 5% level.
[c] Significant at the 1% level.

IV. Some Concluding Comments

There are two important requirements that a monetary aggregate should fulfill to serve as an intermediate target in monetary policy:

1. the rate of growth of the monetary aggregate can be controlled by the monetary authorities;
2. the aggregate should have a stable relationship with income and interest rate(s).

We have found no support for a stable long-term relationship between real $M1$ and key macroeconomic variables. We have also found that currently a stable long-term relationship between real $M3$ and key macroeconomic variables like real GDP and the interest rate does not exist in Australia: $M3$ ist not cointegrated with these variables. In the period before various deregulation measures took place, our results are more in accordance with the view that $M3$ was cointegrated with these variables. Our evidence provides, therefore, support for Corden's claim that over this period "... – unlike later periods – the empirical conditions for monetarism (reasonable stable demand for money function) did apparently exist." [*Corden* (1989), p. 160].

References

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Zusammenfassung

Finanzderegulierung und Geldnachfragestabilität in Australien

Ein gemeinsames Merkmal der meisten Untersuchungen zum Thema Geldnachfrage besteht darin, daß von vornherein eine langfristige Gleichgewichtsfunktion für die Geldnachfrage zugrundegelegt wird. Seit kurzem unterstellt man jedoch nicht mehr die Existenz einer solchen Beziehung, sondern man sucht nach einer solchen Beziehung, indem man prüft, ob monetäre Aggregate mit in die makroökonomischen Grundvariablen wie das BIP und den Zinssatz integriert werden. In diesem Beitrag wird für Australien untersucht, ob $M1$ und $M3$ in diese makroökonomischen Grundvariablen integriert werden. Es erweist sich, daß für den Stichprobenzeitraum von 1960.1 bis 1989.2 weder $M1$ noch $M3$ in die makroökonomischen Grundvariablen integriert werden. Für den Zeitraum von 1960.1 bis 1983.4, d.h. vor dem Inkrafttreten diverser Deregulierungsmaßnahmen, liegen jedoch Beweise dafür vor, daß $M3$ mit in das reale BIP und den Zinssatz integriert wurde.

Summary

Financial Deregulation and the Stability of the Demand for Money in Australia

A common feature of most studies on the demand for money is that a long-run equilibrium money demand function is presumed beforehand. Recently, however, there has been a shift from presuming this relationship towards searching for it by testing whether monetary aggregates are cointegrated with key macroeconomic variables like GDP and the interest rate. In this paper we examine for the case of Australia whether $M1$ and $M3$ are cointegrated with these macroeconomic variables. It turns out that for the sample period 1960.1 - 1989.2 neither $M1$ nor $M3$ is cointegrated with key macroeconomic variables. However, in the period 1960.1 - 1983.4 – i.e. before various deregulation measures took place – there is evidence suggesting that $M3$ was cointegrated with real GDP and the interest rate.

Résumé

Dérégulation financière et la stabilité de la demande monétaire en Australie

La plupart des études sur la demande monétaire ont un trait commun, à savoir qu'un équilibre à long terme de la fonction de demande monétaire est présumé au préalable. Pourtant, cette relation a été remise récemment en question et on fait des recherches sur celle-ci en testant si la masse monétaire est co-intégrée à des variables macro-économiques-clefs, comme le produit social brut et le taux d'intérêt. Dans ce travail, nous examinons pour le cas de l'Australie si $M1$ et $M3$ sont co-intégrés à ces variables macro-économiques. Il en résulte que, pour la période échantillon de 1960/1 - 1989/2, ni $M1$ ni $M3$ ne sont co-intégrés à des valeurs macro-économiques-clefs. Cependant, pour la période de 1960/1 à 1983/4 – c'est-à-dire avant que diverses mesures de dérégulation ne soient appliquées, il est prouvé que $M3$ était co-intégré au produit social brut réel et au taux d'intérêt.