

Monetary policy transparency and pass-through of retail interest rates

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Abstract

This paper examines the degree of pass-through and adjustment speed of retail interest rates in response to changes in benchmark market rates in New Zealand during the period 1994–2004. We consider the effects of policy transparency and financial structure of the monetary transmission mechanism. New Zealand is the first OECD country to adopt a full-fledged inflation targeting regime with specific accountability and transparency provisions. Policy transparency was further enhanced by a shift from quantity (settlement cash) to price (interest rate) operating targets in 1999. Using Phillips–Loretan estimates of cointegrating regressions we find complete long-term pass-through for some but not all retail rates. Our results also show that the introduction of the Official Cash Rate (OCR) increased the pass-through of floating and deposit rates but not fixed mortgage rates. In line with previous studies we find the immediate pass-through of market interest rates to bank retail rates to be incomplete. Although we find no statistical evidence for asymmetric response of retail rates to changes in market rates other than for business lending rates in the pre OCR period, differences in the magnitude of mean adjustment lags indicate that banks appear to pass on decreases to fixed mortgage rates faster. Overall, our results confirm that monetary policy rate has more influence on short-term interest rates and that increased transparency has lowered instrument volatility and enhanced the efficacy of policy.

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1. Introduction

While there are numerous studies on monetary policy transmission, the retail interest rates pass-through process is relatively under-explored, at least until recently. Early studies on the transmission mechanism of monetary policy assumed immediate and complete pass-through of changes in official rates to retail bank rates (for example, Bernanke and Gertler, 1995; Kashyap and Stein, 2000; Altunbas et al., 2002). Recent studies, however, show that the pass-through may be incomplete and that the adjustment speed may be sluggish. The pass-through and adjustment speed also differ across financial institutions and across financial

products, implying the speed of monetary transmission may vary across different segments of the banking sector (see Cottarelli and Kourelis, 1994; Mojon, 2000; Bondt, 2002; Hofmann and Mizen, 2004). Further, some studies find that the adjustment speed may be asymmetric (see Chong et al., 2006; Kleimeier and Sander, 2006).¹

In New Zealand context, the subject of our study, Espinosa-Vega and Rebucci (2003) analysed, among other countries, the pass-through from the overnight interbank rate to deposit (call and 6-month) rates and a weighted average of business lending rates. They found that the long-term pass-through is incomplete and reported a mean adjustment lag

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¹ Nabar et al. (1993) provide a theoretical justification of stickiness in retail bank interest rates and Newark and Sharpe (1992) and Mester and Saunders (1995) of pass-through asymmetry.

of about two months for all three rates. Tripe et al. (2005) examined the impact of the introduction of the Official Cash Rate (OCR), a policy-controlled benchmark interest rate, on money market and residential lending rates in New Zealand. They observed that the introduction of the OCR has reduced the volatility of both wholesale and residential lending rates. Further, they reported that the degree of long-term pass-through from money market rates to floating mortgage rates has increased in the post OCR period. However, they found that for fixed mortgage rates with a maturity of one, two and three years, the degree of long-term pass-through decreased slightly after the introduction of the OCR. Tripe et al. (2005) did not examine the short-run dynamics between money market rates and mortgage rates whereas Espinosa-Vega and Rebucci (2003) did not examine if the adjustment was asymmetric.

The current empirical pass-through literature has two major shortcomings. Firstly, it fails to take into account the effect of expected future changes in market rates when investigating the long-run relationship between retail rates and market rates. Secondly, the widely-used Engle–Granger approach does not permit valid inferences to be drawn for the long-term degree of pass-through using standard distribution theory.

This study contributes to the literature on the transmission mechanism of monetary policy by applying the Phillips and Loretan (1991) methodology to assess the degree of pass-through and adjustment speed of retail interest rates when benchmark interest rates change in New Zealand. We analyze the following three issues: firstly, we consider the long-term pass-through of money market rates to various retail interest rates such as deposit and lending rates including the base lending rate and mortgage rates of different maturities. Secondly, we examine the short-term pass-through and adjustment speed of retail interest rates to changes in market rates using a structural error correction (SEC) model to test whether the adjustment speed is symmetric or not. The Phillips–Loretan (PL) method provides an efficient and robust way of estimating the long-run parameters that enter the error correction term of the SEC model. In turn the error-correction term plays a key role in describing the dynamics of short-run adjustment of retail bank rates to changes in market rates.² Thirdly, we investigate whether the increased transparency in monetary policy operating procedures as a result of a shift from a quantity (settlement cash) to a price (interest rate) instrument had an impact on the pass-through and adjustment speed of

interest rates.³ We would expect that by directly managing the overnight cash rate the monetary authority would be able to influence more effectively both the level of other short-term interest rates and monetary conditions more broadly (see Reserve Bank of New Zealand, 1999).

In March 1999, there was a major shift in the monetary control mechanism in New Zealand, a change from quantity targets (settlement cash balances) and towards price based – Official Cash Rate settings. Although under either of these two regimes the transmission of monetary policy would operate primarily through interest rates, the question is whether and to what extent the OCR regime will be effective in influencing the degree and adjustment speed of pass-through from policy instruments to retail rates. We would expect that under a price regime the role of interest rates in the transmission mechanism will become much more transparent. We would thus expect that there will be a closer relationship between the OCR and short-term interest rates. As a result, there will be an increase in the size of pass-through and (short-term) interest rate volatility will decrease.⁴ Settlement cash balances, unlike interest rates (and exchange rates), do not normally have a stable relationship with nominal income or inflation and generally lead to considerably higher interest rate volatility compared to an interest rate target. Under these circumstances we would expect that an interest rate target will further enhance both the role of signaling and leverage in the implementation of policy.⁵ In fact, the evidence suggests that settlement cash targets played very little role in signaling policy intentions or providing a reliable and effective policy leverage for achieving intended changes in monetary conditions (see Reserve Bank of New Zealand, 1999).

2. Methodology

The long-term relationship between the retail interest rate and the benchmark market rate is expressed as:

$$y_t = \alpha_0 + \alpha_1 x_t + \varepsilon_t, \quad (1)$$

where y_t is the bank lending or deposit rate; x_t represents the corresponding policy or money market rate; ε_t is the

² Again, the PL method is suitable for carrying out tests for structural breaks, viz., testing whether or not the extent of pass-through is enhanced by a change in the operating procedures of policy during the sample period, in equations with I(1) variables.

³ Mojon (2000) argues that aside from competition among banks, the degree of retail bank rate stickiness is also influenced by the monetary policy regime. For example, by shifting from an exchange rate to an interest rate operating target policy is more likely to lower interest rate volatility and increase pass-through provided that it is credible and well communicated to the public. In general, changes in official rates are more likely to influence retail rates to the extent that they are perceived to be permanent rather than temporary.

⁴ A change from settlement cash to a price target should clearly enhance the part of leverage that relates to predicting the effects of changes in policy instruments on monetary conditions. Whether the adoption of a price target also leads to more effective control, viz., more power of instruments in affecting monetary conditions is less clear.

² The PL method is appealing in that it is a simple, single-equation estimator that is also equivalent to a system of maximum likelihood (ML) estimates (e.g., the Johansen estimator). Unlike the Johansen procedure PL does not provide a test of cointegration, it assumes cointegration. There is a robustness issue with the Johansen ML estimator in that it tends to behave abnormally when the equilibrium error is persistent. Also, unlike the Johansen procedure, the PL estimator explicitly accounts for the effects of future policy changes in estimating the long-term pass-through relationship.

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