Portfolio maturity choice of Australian cash management trusts

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Abstract

Money Market Mutual Funds, known in Australia as Cash Management Trusts (CMTs), provide potential benefits for retail investors from pooling of funds and superior portfolio (maturity) management skills. The average maturity of CMT assets exhibits significant variation both cross sectionally and over time, but there is significant correlation between the asset maturities of different CMTs. These variations could reflect decisions about optimal asset maturity by CMT management, given their expectations of future interest rate movements. This paper examines (and rejects) the hypothesis that CMT management has superior interest rate forecasting ability by testing whether asset maturity of CMTs provides any information about future interest rate movements. The correlation between CMT maturity decisions appears to reflect the tendency of some CMTs to adjust maturity in response to current changes in market interest rates.

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1. Introduction

Cash Management Trusts (CMTs), similar to US money market mutual funds (MMMFs), were introduced to Australia in 1980, and are a simple, transparent, form of financial institution. They invest funds subscribed on an at-call basis by retail investors (the unit holders) in short term gilt edge money market securities. This enables retail investors to obtain a return closely linked to wholesale money market rates. In addition to this “pooling” benefit, CMTs may also generate
benefits to investors from their portfolio management activities based on superior interest rate forecasting ability.\(^2\)

This paper addresses the question of whether managers of CMTs have superior interest rate forecasting ability by examining the relationship between asset maturity choices made by CMTs and money market interest rates. If CMTs have, and act upon, superior interest rate forecasting ability, we should expect to see asset maturity changes prior to, and in an inverse direction to, interest rate movements.\(^3\) It is the first such study using Australian data, and extends approaches used in earlier studies using US data on money market mutual funds (MMMFs).

The paper is structured as follows. Section 1 provides background on CMT characteristics and the relevance of maturity choice. Section 2 provides an overview and critique of the relevant previous literature which focuses on whether maturity decisions of US MMMF managers provide evidence of interest rate forecasting ability. Section 3 describes the Australian CMT market, sources of data, and examines whether there is any evidence of common factors influencing maturity choices made by individual CMTs over time which might shed light on CMT maturity choice. Section 4 develops the hypotheses to be tested about relationships between CMT asset maturity and interest rates. Section 5 describes the methods used in, and the results of, the empirical work undertaken to test those hypotheses. Section 6 provides some concluding comments.

2. Maturity choice at cash management trusts

The return paid to CMT investors is directly linked to the return achieved on the asset portfolio of the CMT, after a specified management fee is deducted. Interest is calculated daily and credited to accounts on a quarterly basis. Retail investors may benefit from improved returns, relative to other opportunities, for two possible reasons. First, CMTs, by pooling and investing contributed funds, provide returns near to wholesale rates. Second, CMT managers may have superior interest rate forecasting ability which enables them to achieve superior returns by actively adjusting the maturity of their asset portfolio.

This paper provides a test of the relevance of that second possible function of CMTs, and in so doing provides an indirect test of the Efficient Markets Hypothesis. If CMTs have superior interest rate forecasting ability, portfolio maturity changes should be a good predictor of subsequent market interest rate movements. As can be seen from Fig. 1, there is considerable fluctuation in average maturity of CMT’s and in money market interest rates over the time period under study\(^4\). In essence, this paper examines whether the fluctuations in the average maturity shown there and, more importantly, at the level of the individual CMT, indicate any forecasting ability of interest rates by CMT managers.\(^5\)

Portfolio choice in CMTs has three main dimensions. One dimension is that of asset quality choice involving the share of the portfolio to be invested in different money market instruments.

\(^2\) Because unit holders can withdraw funds on demand without penalty, CMT management is faced with a potential loss of funds under management if the returns they generate for investors are expected to be below those of other CMTs or assets available to investors. Generating superior returns for investors can therefore be expected to be a goal of CMT management, since fee income is linked to the size of funds under management.

\(^3\) Such a view is reflected in the Reserve Bank of Australia’s (1989) comment that “expectations of interest rate movements, …. may have led them to adjust their maturity profiles…” (page 18).

\(^4\) Fig. 1 uses data for four large “survivor” CMTs to illustrate the variability in and range of maturity choices. It also illustrates the change in January 1990, coinciding with a shift to a lower interest rate environment, when the Reserve Bank of Australia began announcing targets for the short term interest rates.

\(^5\) Alternatively, maturity variation may be random, determined by other institutional features of CMT portfolio behaviour, or reflect maturity decisions based on expectations of interest rate movements which themselves have no information content.
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