The contribution of US bond demand to the US bond yield conundrum of 2004–2007: An empirical investigation

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Although the federal funds rate started rising from mid-2004 US long term rates continued to fall. A likely contributory factor to this ‘conundrum’ was the contemporaneous increase in US bond demand. Using ARDL based models, which accommodate structural breaks, this paper estimates the impact of foreign and domestic demand on AAA rated US bond yields in the ‘conundrum’ period. This impact is shown to have been everywhere significantly negative. The fact that our model fully explains the ‘bond yield conundrum’ gives support to the hypothesis that the US CDO market was rapidly expanded before 2007 chiefly to absorb the overspill of global demand for safe assets. Moreover, our models demonstrate that there are strong linkages between the 10-year Treasury yield and the long term yields of AAA rated non-Treasury bonds.

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1. Introduction

From 2002 to mid-2007 when the US subprime crisis broke out US bond yields were at unusually low levels. Before mid-2004 these levels could be explained by the greater stability of ‘fundamentals’
Long and short term interest rates in the US (in %)

Fig. 1. The top plot compares the 3-month Eurodollar rate with the 10-year Treasury yield. The bottom plot demonstrates the downward movement of traditional long-term bond yields in the US. Sources: Bloomberg, 2010, FR Statistical Release H.15, 2010.

and low short term interest rates (the ‘great moderation’), but the persistence of these low yields after that point in time was puzzling. Financial markets expected long term rates to rise in tandem with the rise in the federal funds rate as was the case in previous periods of monetary tightening. This did not happen. On the contrary, not only did long term rates not rise they actually continued to fall\(^3\) (see Fig. 1). As Alan Greenspan, the then Chairman of the Federal Reserve, stated before Congress in June 2005: “Among the biggest surprises of the past year has been the pronounced decline in long term interest rates on U.S. Treasury securities despite a 2-percentage-point increase in the federal funds rate. This is clearly without recent precedent. ... Moreover, even after the recent backup in credit risk spreads, yields for ... corporate bonds have declined even more than Treasuries over the same period.” (Greenspan, 2005, p.1). What caused this ‘bond yield conundrum’? Considering that its appearance coincided with a marked upswing in investor demand for US bonds (see Fig. 2) it is possible that a considerable part of the downward pressure on US bond yields stemmed from that demand (Bernanke et al., 2011). To verify this possibility, a number of empirical studies have focused specifically on the impact of foreign government demand for US Treasuries on long term Treasury yields. Foreign official investor demand began to increase after February 1994 when China devalued its currency, but the rate of increase in that demand accelerated even more sharply after 2003 as many emerging market economy governments sought to preserve part of their increasing commodity revenues and export surpluses in safe stores of

\(^3\) In June 2005 the long term rate was 73 basis points lower than it was one year before. In December 2006 the rate was still slightly lower, although the federal funds rate was 425 basis points higher than it was 2½ years earlier and expected to stay relatively stable above the 4% level until 2015 (Kozicki and Sellon, 2005).
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