

Box 4

NEW EVIDENCE ON CREDIT AND LIQUIDITY PREMIA IN SELECTED EURO AREA SOVEREIGN YIELDS

Since the onset of the financial crisis, government bond markets have undergone dramatic swings prompted by a flight to safe and liquid assets associated with fluctuations in risk appetite and risk perceptions. In particular, euro area sovereign spreads across national issuers widened earlier this year to the highest levels since the introduction of the euro and then narrowed significantly in recent months.¹ As the policy implications of these developments depend on the underlying causes, it is important to disentangle the effects of perceived changes in sovereign credit quality from other influences, typically referred to as “liquidity effects”. The latter effects reflect investors’ willingness to pay a premium for assets which they expect can be liquidated at

¹ For further recent analysis of developments in euro area sovereign bond spreads, see the Monthly Bulletin boxes entitled “A comparison of the developments in euro area sovereign bond spreads and US state bond spreads during the financial turmoil” (July 2009), “How have governments’ bank rescue packages affected investors’ perceptions of credit risk?” (March 2009) and “Recent widening in euro area sovereign bond yield spreads” (November 2008), as well as the Monthly Bulletin article entitled “The impact of government support to the banking sector on euro area public finances” (July 2009).

a low cost at any moment in time. This box presents new evidence on separating the impact of flight-to-quality and flight-to-liquidity phenomena based on German and French government-guaranteed agency bonds.

Credit risk premia can be approximately controlled for by comparing the yields of bonds with similar credit quality. Specifically, in line with earlier studies for the United States and Germany, it is assumed that the credit risk of agency bonds backed by a full and explicit government guarantee is equal to the sovereign credit risk.² Such government-guaranteed agency bonds can thus help to disentangle credit and liquidity premia in the sovereign market. Since the credit risk component of agency yields is assumed to be the same as that of bonds issued directly by the guaranteeing government, any differences between agency and government bond yields should reflect liquidity effects.

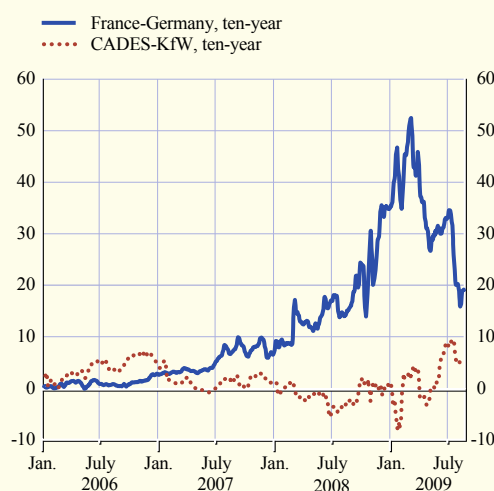
Focusing on the two largest euro area countries, this analysis uses bonds issued by the German *Kreditanstalt für Wiederaufbau* (KfW) and the French *Caisse d'Amortissement de la Dette Sociale* (CADES). While the objectives and core activities of these institutions differ, both of them have an explicit and full debt guarantee from the respective governments. Furthermore, KfW and CADES are the largest euro area agencies in terms of issuance volume and, unlike for other agencies, the number of outstanding bonds is sufficient to estimate reliable yield curves.

Chart A presents the ten-year French-German sovereign and agency spreads. The results are qualitatively the same for other maturities. It is striking that although a pronounced peak was observed for the French-German sovereign spread earlier this year, the agency spread between CADES and KfW remained remarkably stable with an absolute divergence of less than 10 basis points. Charts B and C show the four yield curves on two dates: on 9 March 2009, when the ten-year sovereign spread peaked (at 54 basis points), and most recently. Even on the day when the wedge between the French and German sovereign curves was wide, the agency curves still almost coincided. This clearly suggests that the elevated sovereign spread reflected liquidity factors rather than significant changes in the relative perceived credit quality of the sovereign issuers. Moreover, the close correspondence between the German and French agency curves suggests that differences in liquidity premia between the two agency issuers have been modest, unlike between the sovereign issuers.

The development of the premium paid for liquidity in each of the sovereign markets can

Chart A Zero coupon sovereign and agency yield spreads

(daily data in basis points; five-day moving averages)

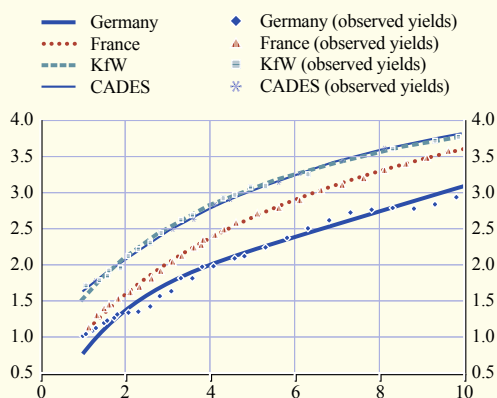


Sources: Bloomberg and ECB calculations.

² A similar logic was exploited in Longstaff (2004) for the United States (using agency bonds issued by the Resolution Funding Corporation) and, more recently, in Schwarz (2009) for Germany (using KfW bonds); see F. A. Longstaff (2004), "The Flight to Liquidity Premium in U.S. Treasury Bond Prices", *Journal of Business*, 77, pp. 511-526, and K. Schwarz (2009), "Mind the Gap: Disentangling Credit and Liquidity in Risk Spreads", working paper, Columbia University.

Chart B Par yield curves on 9 March 2009

(percentages per annum)

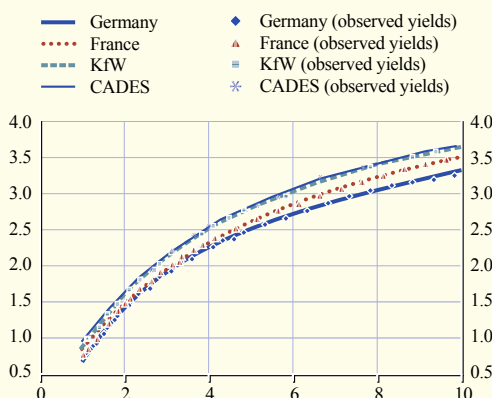


Sources: Bloomberg and ECB calculations.

Notes: The legend symbols refer to the yield-to-maturity on the individual bonds used in the estimation of the respective curves. The pronounced inverse humps on the German government bond curve mainly represent effects related to the German bond futures market.

Chart C Par yield curves on 28 August 2009

(percentages per annum)



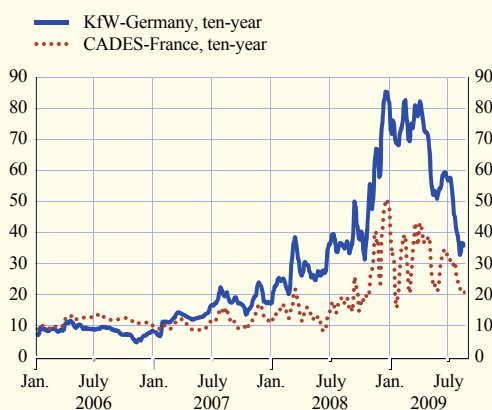
Sources: Bloomberg and ECB calculations.

be assessed by comparing sovereign and agency yields for the same country. Chart D shows that, for both countries analysed here, a surge in these premia was observed in late 2008/early 2009. However, the peak was much higher for Germany than for France, likely reflecting the benchmark status of the ten-year German government bond and positive liquidity spillovers from the highly liquid market for German government bond futures.³ At the same time, the chart confirms that agency and government bonds are not regarded as close substitutes in times of crisis, which may in part be related to different investor bases.

The evidence presented in this box is in line with the flight-to-liquidity interpretation of the developments in sovereign bond markets (as opposed to the flight-to-quality interpretation), which stresses investors' increased preference for assets with the lowest liquidity risk. In particular, the analysis shows that the striking increase in the French-German government bond yield spread should not necessarily be attributed to relative changes in the perceived credit quality of these countries, but rather could reflect changes in liquidity premia. Although this analysis cannot be extended to most other euro area countries due to a lack of

Chart D Zero coupon yield spreads between agency and sovereign bonds

(daily data in basis points; five-day moving averages)



Sources: Bloomberg and ECB calculations.

3 For a detailed analysis of such liquidity spillovers, see J. Ejsing and J. Sihvonen (2009), "Liquidity premia in German government bonds", ECB Working Paper No 1081. The consistently narrow yield spread between CADES and KfW suggests that agency-specific events do not account for the differences between sovereign and agency yields in the two countries.

government-guaranteed agency bonds, it is plausible that liquidity effects have significantly affected government bond yields in other euro area countries as well. For some of these countries, however, the observed large swings in yield spreads have also been strongly influenced by developments in fiscal fundamentals, such as expected budget deficits and debt ratios.⁴

⁴ See the box entitled “The determinants of long-term sovereign bond yield spreads in the euro area” in the above-mentioned article in the July 2009 issue of the Monthly Bulletin, and the references therein.