Liquidity Shocks: Fear in the Interbank Lending Market and its Effects

Introduction

In this paper, we will try to explain what are the Euro Interbank Offered Rate (Euribor) and Euro OverNight Index Average (Eonia) rates, what drives the spread between them and specifically why this was the case during the 2008 financial crisis.

Euro Interbank Offered Rate (Euribor) rates are the basis for the prices of interest rates for all kinds of financial products (interest rate swaps, interest rate futures, saving accounts, mortgages, and so on). They are a set of average interest rates at which the 20 banks with the highest business volume in the euro zone money markets are prepared to lend to one another in unsecured fashion. Euribor is determined and published every day at 11:00 am, CET. There are 8 different Euribor rates with maturities of 1-2 weeks, 1, 2, 3, 6, 9 and 12 months. Euribor rates are based mostly on agreements between European banks but also, economic growth and inflation influence the level of the rates.

Instead, the Euro OverNight Index Average (Eonia) is a proxy of the 1-day Euribor rate. Specifically, it is the average rate at which Eurozone banks transacted unsecured overnight loans. Eonia is published every day at 7pm, CET.

The efficient market hypothesis ensures that that prices would be fair and that profiting from arbitrage is a near impossibility. This implies of sorts that the spread of Euribor and the Eonia would be close to 0.

The Rate Corridor and The Financial Crisis

To deal with the issue of liquidity, as said before, banks lend to each other. However, an alternative, safer way to ensure liquidity exists: making use of the Central Bank's marginal lending facility and deposit facility interest rates, which are fixed at a level decided by the central bank itself. The marginal lending facility rate (in yellow) is the rate at which the CB lends money overnight to banks, while deposit facility rate (in orange) is the rate that the CB pays to the banks short term deposits (money surpluses) given to it.



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At the middle point (the white line) of the corridor, as is called informally, of the spread between the two CB rates, is where usually, in normal market conditions, the 3-month Euribor has its interest rate, as banks compete against the CB setting lower rates in order to lend. Those conditions were destined to break down during the financial crisis.

Indeed, we can observe, starting from July 2007, slightly earlier than August 7th, an increase in the spread between the Eonia (in purple) and 3- monthly Euribor (in red): Uncertainty was starting to spread around sub-prime mortgages and related CDO's. As banks started fearing insolvency from the counterparty (credit risk) and inability to be able to amend to short term liabilities (liquidity risk) there was a shock in the ratio of money supply and demand in the interbank lending market and, with the latter exceeding the former, the Euribor 3-monthly rate increased well above the middle point of the corridor.

In December 2017, the Fed announced its program for TAF (Term Auction Facility), which consisted in allowing to offer more asset classes as collateral for central bank marginal lending facility: This proved to be a great boost in overall liquidity for all markets, which lead to temporary lower spreads. Only a few months later, however, the Lehman Brothers bankruptcy lead to a renewed increase in credit and liquidity risk, which lead to the return of an even greater spread. The distortion caused by those risks even lead, briefly, to an increase of the Euribor rate above that on marginal lending facility.

Starting in March 2009 the spread started to diminish considerably as the great financial shock lost steam: equity markets touched the bottom; positive economic data was released, and several unconventional expansionary monetary policies were enacted. The spread returned again during the sovereign debt crisis before finally essentially disappearing. The disappearance was due to the strong reaction of the EU to prevent the crisis from developing as well as to the unconventional monetary policies that the ECB enacted: in particular, starting 2014, after already being set at 0, deposit rates became negative (-0.4%) making it unprofitable to hoard money. However, this time the money market equilibrium finds itself shocked in the reverse: excessive liquidity supply pushed the interest rates much closer to the deposit facility rate.

Intuitive Investment Strategy

An interest rate swap paying Eonia and receiving Euribor + Spread (most probably, negative spread as Euribor is indeed of longer-term and a current positively slope yield curve) would prove profitable if we expect a future possible financial shock. Profits are realised if the spread increases substantially.

The key risk of taking such a position however, is the underlying sovereign risk. Indeed, the rapid normalization of monetary policy currently in course, where central banks taper off it large balance sheets of assets unusually long in maturity, will increase short term market rates while stabilizing spreads. This thus reduces volatility for the Euribor and Eonia spread, ensuring that profits, if any, would be low or even negative. Also, of special note is that such a swap involving both the Euribor and Eonia would be a very complex derivative, and likely offered only as a specialized instrument. The average retail investor would likely not possess the capability to profit from such a trade, giving the relative lack of available instruments.

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