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Diminished Liquidity in the Corporate Bond Market: Implications for Fixed Income Investors

Summary

In the wake of the 2007-08 Financial Crisis, investors increased their holdings of fixed income mutual funds and exchange-traded funds (ETFs). From 2007 to 2013, investments in these funds doubled to \$3.5-trillion, while investments in equity mutual funds fell by \$378-billion over the same period.

Much of the investment in fixed income mutual funds and ETFs flowed to investment grade and high-yield corporate bond funds. From 2008 through 2013, over half of all new fixed income mutual fund and ETF investments were in funds holding investment grade or high-yield corporate bonds.

The growth in corporate bond ETFs parallels the recent growth of corporate bond issuance, which has been in excess of \$1.2-trillion in each of the past 3-years. But the growth in the corporate bond market has been accompanied by a sharp drop in primary dealer holdings in the sector. Regulatory changes and structural changes to the corporate bond market are likely to further hamper the ability of the primary dealers to serve as liquidity providers.

The diminished liquidity in the corporate bond market is troubling given the rapid growth and popularity of fixed income mutual funds and ETFs, and the concentration of holdings in comparatively few funds. Should a large number of fund investors wish to sell over a short period, fund managers may have to liquidate sizeable positions in what has become an increasingly illiquid market.

As we saw in the 2007-08 financial crisis, a sharp drop in market liquidity typically leads to a widening in bid-ask spreads and fewer block-size trades. For large fund managers, such an environment would likely negatively impact investment performance.

Managing liquidity risk is an integral part of the investment process. We suggest investors assess the liquidity risk of their investments, and consider that risk in the context of their financial needs.

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Important disclosures on the last page of this document.

Introduction

In the wake of the 2007-08 financial crisis, investment in fixed income mutual funds and exchange traded funds (ETFs) grew significantly. Over the 6-years from 2007 to 2013, fixed income mutual funds and ETFs doubled in size to \$3.5 trillion. The growth in fixed income funds has been driven by a number of factors, including increased focus on portfolio diversification in the wake of the stock market crash, the aging of baby-boomers, and a steady decline in interest rates. While fixed income funds have seen dramatic growth, secondary market liquidity in a number of sectors has shown a marked decline. The corporate bond market in particular has seen a significant transformation in recent years, as dealers are less willing to hold large inventories to facilitate client trading. As corporate bond mutual funds and ETFs have experienced rapid growth, diminished liquidity in the corporate bond market is a cause for concern.

In this report we highlight the recent changes in liquidity in the corporate bond market and the implications for mutual fund and ETF investors. We identify important factors that are characteristic of a liquid market, and examine these factors in the context of the corporate bond market. We also consider the recent growth of corporate bond mutual funds and ETFs, and the concentration of assets across funds and managers.

Evolving regulations and capital requirements make holding sizeable corporate bond inventories less attractive for dealers. Furthermore, while corporate bond trading as a percentage of outstanding bonds has remained relatively stable, many of the trades are very small; typically \$100,000 or less. Should corporate bond funds experience a large number of redemptions over a short time-frame, investment performance may suffer as a market with diminished liquidity seeks to establish market clearing levels.

As liquidity is rarely a concern until it is not available, investors should proactively consider the potential liquidity of their investments. In some cases, selling less liquid high-yielding assets for lower-yielding but more liquid alternatives may be appropriate.

Fixed Income Mutual Funds & ETFs: Shifting Investor Preferences

In the wake of the 2007-08 Financial Crisis, investments in fixed income mutual funds and ETFs grew significantly. From 2008 through 2013, investors withdrew \$378 billion from equity mutual funds while adding \$968 billion to fixed income mutual funds (Figure 1). Data from the Investment Company Institute (ICI) show the combined balance of fixed income mutual funds and ETFs grew from \$1.6 trillion at the end of 2008 to \$3.5 trillion as of 2013; a 116% increase over 5-years (Figure 2).

While the 57% decline in the S&P 500 from October 2007 to March 2009 was the catalyst for investor's increasing their exposure to fixed income funds, other factors such as the aging of the baby boom generation and the secular decline in

long-term interest rates led to continued flows into fixed income funds well after the equity market began to recover.

Figure 1 Net New Cash Flow: Equity & Bond Funds (\$Millions)

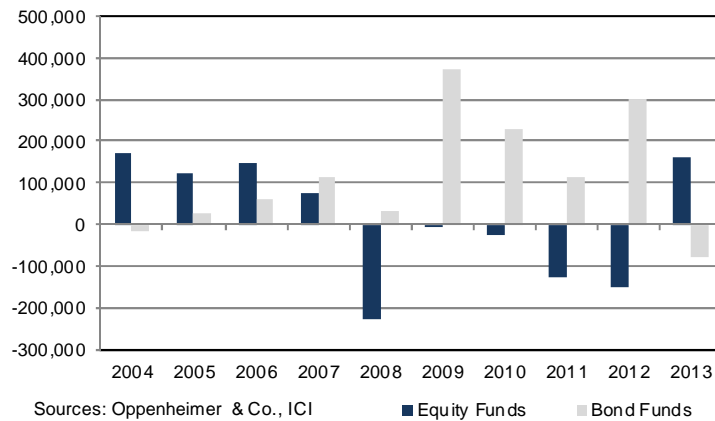
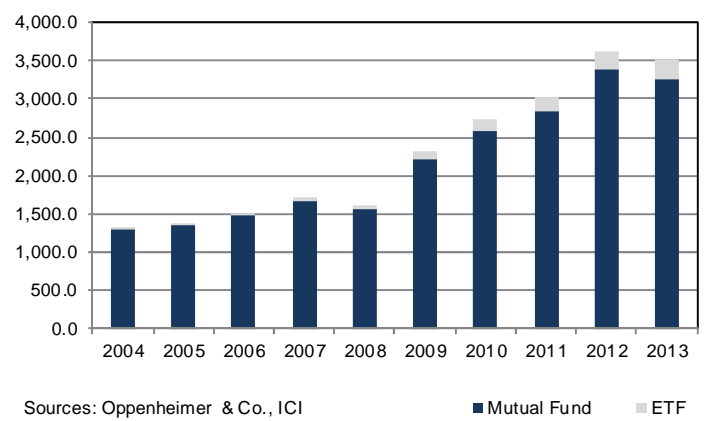
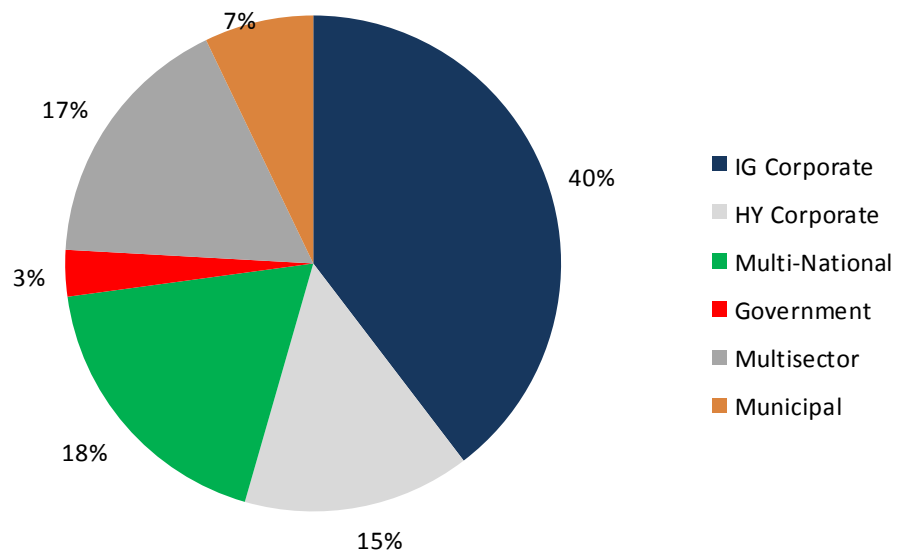


Figure 2 Balance of Fixed Income Mutual Funds & ETFs (\$Billions)



As investors increased their allocation to fixed income funds, investment grade and high yield corporate bonds funds were among those seeing the greatest influx of cash. Figure 3 below illustrates the percentage of net new cash flow into fixed income mutual funds by fund type from 2008 through 2013. Funds that traditionally offer higher yields such as corporate bond and multi-national funds captured a substantial percentage of new investments, while lower yielding government and municipal funds saw only a modest growth in assets.

Figure 3 Percentage of Net New Cash Flow: Fixed Income Mutual Funds by Objective (2008-2013)



Fixed income mutual fund investments have flowed primarily to the largest mutual fund and ETF managers. Table 1 below highlights the share of mutual fund assets, both equity and fixed income, at the top 5, 10, and 25 largest fund firms. Since 2005, the share of funds managed by the largest firms has increased.

As the largest mutual fund firms dominate the investment landscape, so too have we seen rapid growth in a small number of large fixed income mutual funds. Since early-2007, the 4 largest investment grade ETFs and the 2 largest high yield ETFs have seen a more than 10-fold increase in assets. Figure 4 below illustrates the combined balance of the investment grade funds BND, AGG, LQD, and CSJ and the high yield funds HYG, and JNK. Together the combined assets of these funds are \$108 billion and represent over 25% of the outstanding balance of all investment grade and high yield funds.

The rapid growth in fixed income mutual funds and ETFs, and the associated concentration of a large percentage of investments at a small number of firms and funds raises a number of concerns.

Characteristics of Liquid Markets

Investors often refer to markets as being liquid or illiquid. Interestingly though, there is no universal definition as to what characterizes a market or security as being liquid. That being the case, it is generally agreed that there are a number of factors that would characterize a liquid market. In a 2002 International Monetary Fund Working Paper¹, Sarr and Lybek identified five components that are indicative of a liquid market:

1. Tightness: Low transaction costs, including tight bid-offer spreads
2. Immediacy: The ability to execute orders quickly, with efficient trading and settlement
3. Depth: Existence of numerous buy/sell orders near the current market price
4. Breadth: Orders that are both numerous and large in volume
5. Resiliency: The speed at which a market returns to equilibrium

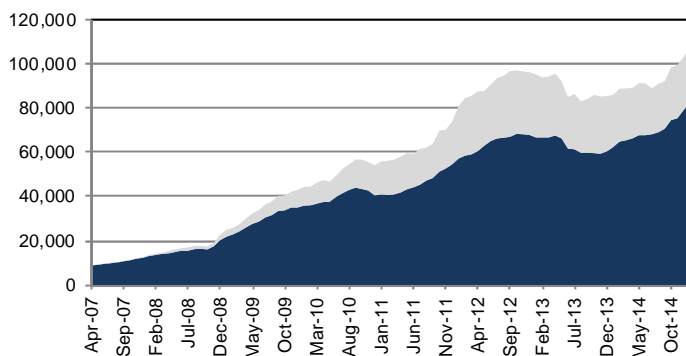
¹ Measuring Liquidity in Financial Markets, IMF Working Paper, Abdourahmane Sarr and Tonny Lybek, December 2002

Table 1 Share of Mutual Fund Assets by Fund Firms

	2000	2005	2010	2011	2012	2013
Largest 5	32	37	40	40	40	40
Largest 10	44	48	53	53	53	53
Largest 25	68	70	74	73	73	72

Sources: Oppenheimer & Co., ICI

Figure 4 Large Bond Fund Growth (\$Millions)



Sources: Oppenheimer & Co., Bloomberg

■ Top 4 IG ■ Top 2 HY

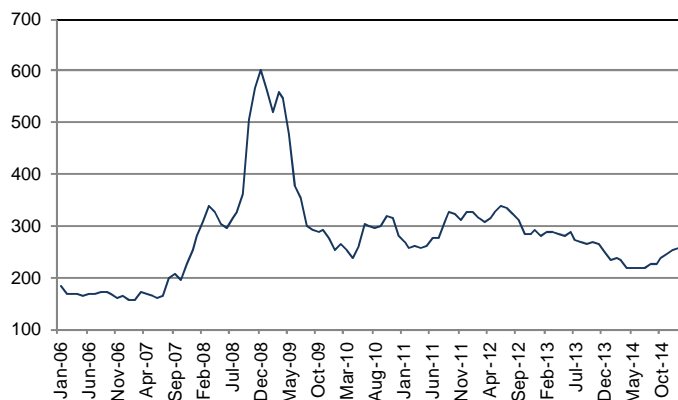
On the surface, based on the criteria above the corporate bond market would in many ways be considered very liquid.

Like other asset classes during the financial crisis, yield spreads to Treasuries widened sharply; at one point reaching levels more than 3-times their pre-crisis levels (Figure 5). Yield spreads recovered quickly though, reflecting a resilient market, and are now only modestly higher than pre-crisis levels.

Similarly, bid-offer spreads in the corporate bond market are comparatively low. Over the past six years, bid-offer spreads in the market have recovered from the widening seen during the financial crisis; with round-lot trades taking place in the context of 5-basis point bid-offer markets (Figure 6).

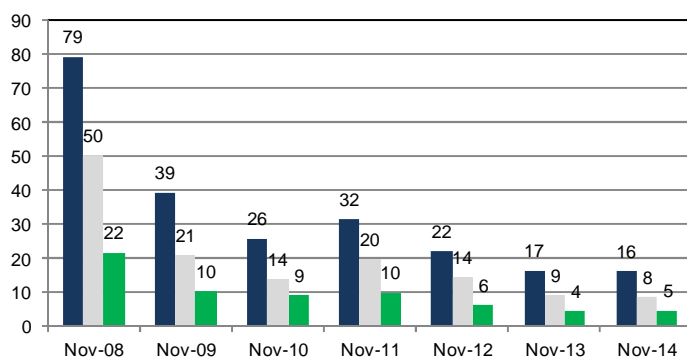
But as we dig a little deeper, there are reasons for concern regarding the liquidity of the corporate bond market. While both yield spreads and bid-ask spreads are fairly tight, questions arise as to the depth and breadth of the corporate bond market. The potential lack of depth in the market is especially concerning given the rapid growth of corporate bond mutual funds and ETFs across a fairly small number of investment managers.

Figure 5 Moody's 10-year Baa Yield Spread To Treasury (bps.)



Sources: Oppenheimer & Co., Bloomberg

Figure 6 Market Axxess Bid-Ask Spread Index by Trade Size



Sources: Oppenheimer & Co., Market Axxess

■ Micro ■ Odd ■ Round

Corporate Bonds: Just How Deep is That Market?

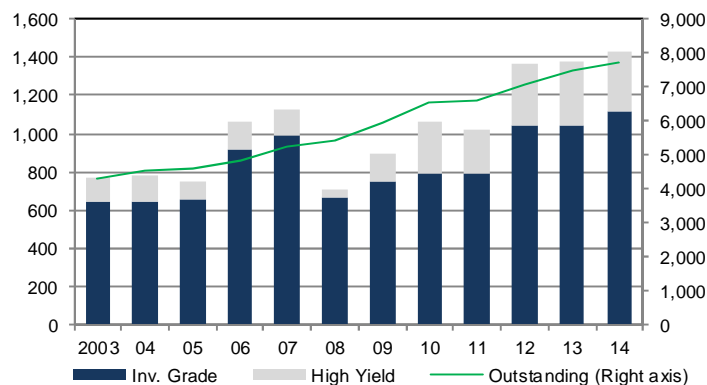
As we noted earlier, fixed income mutual funds have experienced substantial growth in recent years, with much of the investment flowing to investment grade and high yield corporate bond funds. Accompanying this growth has been record levels of corporate bond issuance. In each of the past 3-years, investment grade corporate bond issuance has topped \$1-trillion. Through the 3rd quarter of 2014, the total amount of investment grade and high-yield bonds outstanding has reached \$7.7-trillion: a 70% increase over the past 10-years (Figure 7). Against this backdrop of steady growth in corporate bond issuance though, we have seen a dramatic decline in the amount of corporate bonds held by the primary dealer community. Figure 8 depicts the amount of investment grade corporate bonds with maturities greater than 13-months (in \$millions) held by primary dealers.

Despite steady growth in the outstanding supply of corporate bonds, the primary dealer community has steadily reduced its exposure to the sector. Since late 2007, investment grade corporate bond inventories at primary dealers have fallen 76% (through March 2013) while the amount of corporate bonds outstanding has increased over 40% over the same period.

There are a number of factors that have contributed to the decline in primary dealer corporate inventories, but changes in the regulatory environment stand out as being those that are likely to have the most long-lasting effect.

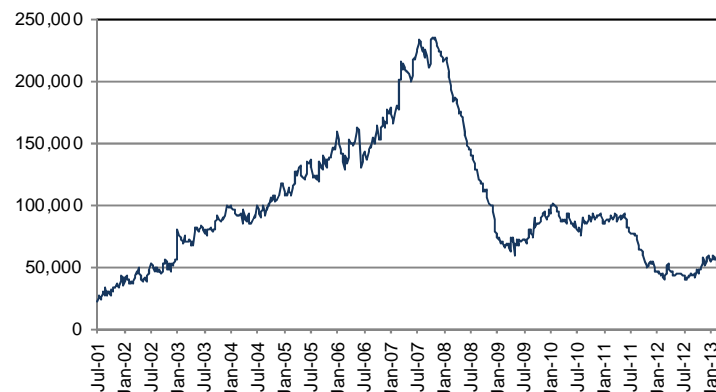
In the wake of the financial crisis, regulators proposed a number of measures to reduce risk within the financial system. A number of regulatory changes that have been enacted entail large banks holding increased capital, and a greater amount of high-quality liquid securities. Under current regulations banks face more stringent capital requirements on corporate bonds than alternatives such as U.S. Treasuries. The need to hold higher capital against corporate bond positions reduces the potential ROE in the sector, and is likely to limit primary dealer holdings of corporate bonds in the future.

Figure 7 Corporate Bond Annual Issuance and Amount Outstanding (\$Billions)



Sources: Oppenheimer & Co., SIFMA (Outstanding through Q3-2014)

Figure 8 Primary Dealer Corporate Bond Holdings (\$Millions)



Sources: Oppenheimer & Co., Federal Reserve. Investment grade >13 months.

Growing Risks to Corporate Bond Liquidity: How Wide is that Exit Door?

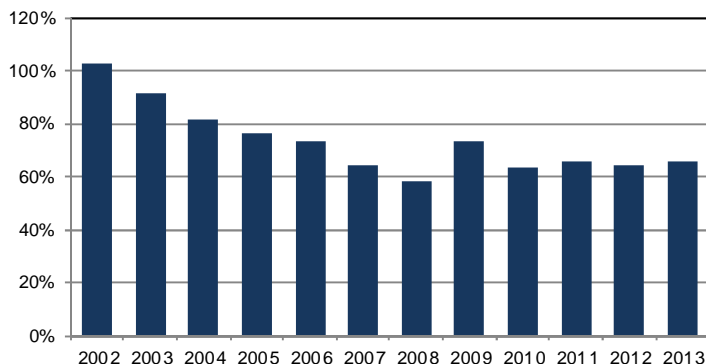
As heightened regulations reduce the attractiveness of corporate bond trading at primary dealers, liquidity risk in the corporate bond market has become a growing concern. In the current market environment where bid-offer spreads are comparatively tight, concerns over liquidity may seem misplaced. But as we have shown, bid-offer spreads can gap sharply wider in a crisis environment. With the primary dealer community providing less liquidity to the corporate bond market, the potential for significant market dislocations grows should a large number of investors seek to sell bonds. This risk is of particular concern given the highly concentrated positions at large mutual fund and ETF managers.

Figure 9 illustrates annual investment grade and high-yield corporate bond turnover rates. While turnover is well below the levels seen in 2000 through 2006, it has remained relatively stable near 65% of the outstanding balance of bonds on an annual basis.

The relatively low turnover in the corporate bond market would be less of a concern were it not for the fact that a substantial percentage of trades are for very small par amounts. Figure 10 depicts the average number of daily trades per year (as a percentage of the total) by par amount. The percentage of trades consisting of par amounts of less than \$100,000 has held consistently near 70% of the total number of trades. In contrast, trades in par amounts of \$1-million or more have fallen from 14% of trade volume in 2006 to only 12% as of 2013.

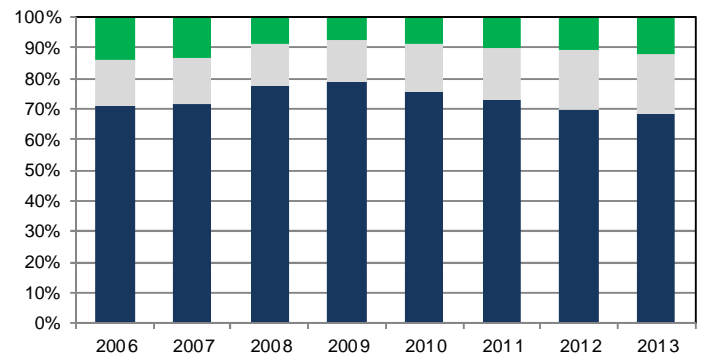
The fact that a substantial majority of trades in the investment grade corporate bond market are for par amounts of less than \$100,000 gives the illusion of “phantom liquidity”. On the surface trading volumes appear stable. But given the diminished role of the primary dealer community in the corporate bond market, and the preponderance of small par amount trades, the ability of large investors to transact block sizes is likely to be severely diminished.

Figure 9 Annual Corporate Bond Turnover Rate



Sources: Oppenheimer & Co., SIFMA

Figure 10 Average Percentage of Secondary Investment Grade Trades by Par Amount



Sources: Oppenheimer & Co., TRACE ■ < \$100K ■ \$100K to \$999K ■ \$1MM+

Table 2 Corporate Bond Holdings and Average Position Size: Major Corporate Bond ETFs

	Investment Grade				High Yield	
	AGG	BND	CSJ	LQD	HYG	JNK
Corporate Bond Par (\$Millions)	5,994	38,399	8,456	19,243	16,662	11,333
Number of Issues Held	2,532	4,416	801	1,335	1,005	788
Average Position Size (\$Millions)	2.18	7.93	10.56	14.41	16.58	14.38

Sources: Oppenheimer & Co., Bloomberg. Positions reflect most recent data as of 2/23/15. BND includes BND and VTBIX.

The infrequency of block-size corporate bond trades is especially concerning given the large average position size held by a number of the largest investment grade and high-yield ETFs. Across a number of the largest corporate bond ETFs, average position sizes are typically in excess of \$5-million and in many cases over \$10-million (Table 2).

The liquidity imbalance of large corporate bond positions at a few fund managers relative to the diminished ability and willingness of the primary dealer community to position corporate bonds creates a potential risk should corporate bond mutual funds and ETFs need to liquidate sizable positions in a short period of time. As most trading in the corporate bond market consists of relatively small size trades, secondary market prices may have to adjust significantly lower to find a market clearing level for block sizes should funds need immediate liquidity.

Liquidity: A Part of the Investment Decision Process

Investors should consider the liquidity of their investments and assess that liquidity in light of their needs. It is often the case that less liquid investments offer higher potential returns to compensate for their lack of liquidity, and such investments may play a role in a diversified portfolio. But as we have seen in the case of the corporate bond market, changing market dynamics have impacted the degree of liquidity in that market. Should higher interest rates or other market event lead to sizeable and sustained selling in corporate bond ETFs we may see cracks exposed in the liquidity of the corporate bond market. Investors with high liquidity needs or preferences may wish to consider funds invested in highly liquid assets such as Treasury Notes and Bonds as an alternative to corporate bond ETFs.

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