Deutsche
Asset Management

Passive Insights

March 2016

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ETFs: Catalyst or Mirage for Market Liquidity? (Executive Summary)

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Content

"Without data, you're just another person with an opinion"
W. Edwards Deming (1900 -1993)

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Executive Summary

Liquidity is probably the most critical element of efficient financial markets. Liquid markets enable participants to quickly execute large transactions in a cost efficient manner and with a limited market impact.

Over the last two years "market liquidity", and potential lack thereof, has become a key topic of discussion in the investment community, especially in relation to bond markets, but also in other areas such as emerging market equities.

This is concurrent with the emergence of fixed income ETFs as a liquidity tool, itself raising several questions: Why has there been a structural decline in market liquidity? How best do we define liquidity in a contemporary market sense? Is there a disconnect between the liquidity of some ETFs and the underlying markets they provide exposure to, and if this is the case, is this a concern or is it beneficial to the market as a whole?

The liquidity debate is central to virtually all market participants

Liquidity sits at the core of financial markets, and its evolution is scrutinized by many stakeholders such as asset owners, investment managers, brokers, policy-makers, central banks, etc.

ETFs: Catalyst or Mirage for Market Liquidity?

"Events such as the October 2014 Treasury bond flash rally in the United States, or the April 2015 Bund tantrum in Europe, have reminded us that market liquidity is fickle and that market dislocations can occur even for some of the most liquid assets."
International Monetary Fund, October 2015.

"In conclusion, the price-based liquidity measures —bid-ask spreads and price impact— are very low by historical standards, indicating ample liquidity in corporate bond markets."
Tobias Adrian, Federal Reserve Bank of New York, October 2015

There are many different dimensions to market liquidity, and each asset class has its own dynamics. This may explain the stark contrast in the opinions which have been voiced on this topic. While some analysis proved reassuring[1], other analysis came to quite alarming conclusions[2].

With this report we aim to provide the reader with a tangible and pragmatic approach to:

- Monitor market liquidity over time and across asset classes,
- Analyse how ETFs have helped maintain and eventually increase the available level of liquidity,
- Address some of the concerns raised by market participants with regards to the liquidity provided by ETFs.

To the best of our knowledge this is the first report of its kind providing a comprehensive three-dimensional study of the so-called "liquidity conundrum".

Concerns around market liquidity have been further fuelled by the "hunt for yield"

Several significant changes have taken place in markets to prompt these discussions:

- Liquidity worries on specific fixed income segments[3]. The reduction of the inventories available to broker-dealers, considered as vital for the bond market ecosystem, has been put forward as one of the main drivers of the fall in bond market liquidity.
- An increasing number of investors have sought out higher yielding instruments to compensate for historically low interest rates. Such growing enthusiasm for a not-so-liquid segment has triggered concerns among market participants and regulators.
- Significant ETF AUM growth, specifically in fixed income and high yield fixed income. In such a challenging environment for income oriented investors, ETFs have become a means to access higher yielding asset classes and a building block in the construction of income oriented portfolios[4].

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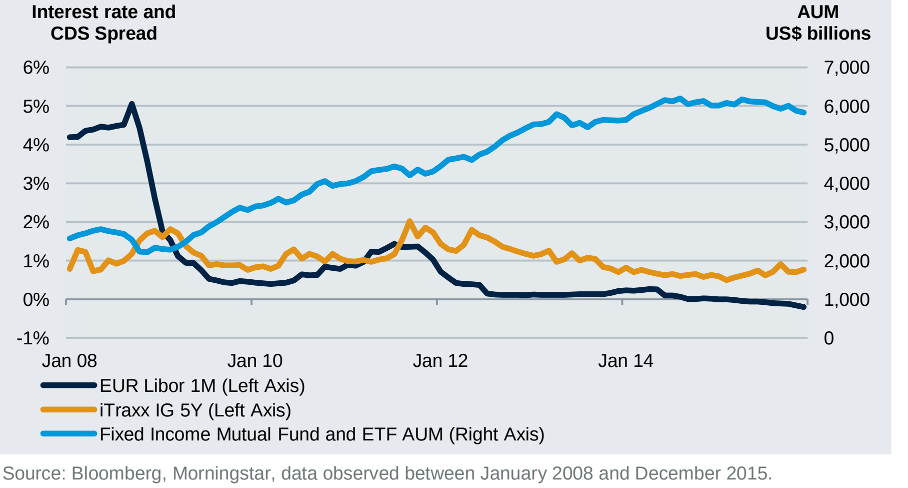

Source: Bloomberg, Morningstar, data observed between January 2008 and December 2015.

1 See (Adrian, Fleming, Shachar, & Vogt, 2015).
2 See (IMF, 2015a).
3 Refer to the in-depth bibliography in page 66.
4 See (Denoiseux & Debru, 2015b).

ETFs: Catalyst or Mirage for Market Liquidity?

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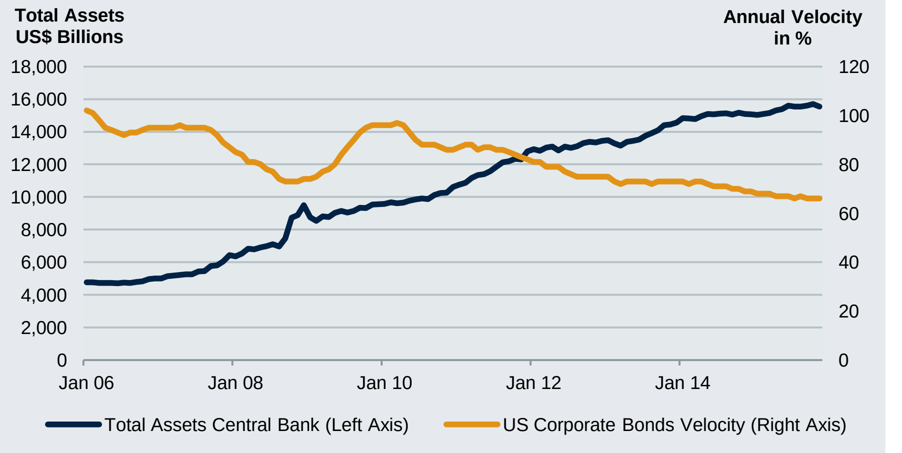


Source: Bloomberg, MarketAxess, SIFMA TRACE, Deutsche AM calculations, data observed between January 2006 and November 2015[5].

These changes have led several commentators to raise concerns with regard to eventual market imbalances that could be attributed to ETFs, and more generally mutual fund investors[5]. These concerns merit consideration but, as we will show, the evidence suggests that investors in ETFs and open-ended mutual funds markets are much more diverse compared to how they are usually analysed by market observers.

There are four main dimensions to quantifying liquidity: depth, immediacy breadth, tightness.

Defining, measuring and assessing market liquidity

Liquidity is very loosely defined. What does "liquidity" actually mean? Is it really only about transaction costs?

There are four main dimensions to quantifying liquidity: depth, immediacy breadth, tightness. The following sections aim to give a perspective on each of them, with regards to both equity and fixed income markets.

There has been a strong recovery in equity transaction volumes. Developed markets bid-offer spreads have remained stable and emerging markets bid-offer spreads have slightly decreased.

Equity Markets: a healthy but diverse picture

– Since 2012 we have seen quite a strong recovery in transaction volumes, dominated by the surge of volumes in Asia. Overall volume levels are at or close to historical highs.
– The overall velocity[6] across markets is close to all-time highs mainly driven by Asia activity, while the US and European exchanges exhibit a fairly significant decrease.
– Over the last three years, the bid-offer spreads ("bid-offers") have remained stable on developed market equities, and have slightly decreased on emerging market equities.

Overall volumes traded on both US high yield and US investment grade look quite healthy and do follow a pretty consistent positive trend.

[5] Only the European Central Bank, the US Federal Reserve, the Bank of Japan and the People's Bank of China are considered here.

[6] In equity markets, the term *velocity* commonly refers to the total volume traded on a security or group of securities over a particular period divided by its total market capitalisation. Such calculation provides an estimate of the number of times a security is changing hands during such a period.

ETFs: Catalyst or Mirage for Market Liquidity?

The annual turnover of the whole US fixed income universe suffered from a very sharp 34% drop, from 101% to an all-time low of 66%.

There has been a very sharp increase in the number of fixed income securities available for trading, representing in aggregate a 47% increase in number of bonds.

Equity ETFs secondary market has represented up to 40% of the global equity market volume.

Fixed Income Markets: a mixed liquidity picture

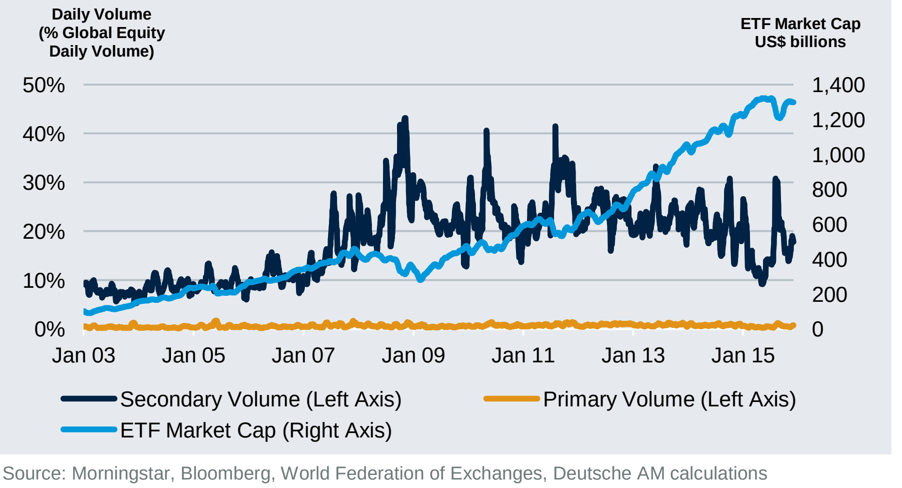
- Overall volumes traded on both US high yield ("HY") and investment grade ("high grade", "IG", or "HG") look quite healthy and do follow a pretty consistent positive trend.
- We have observed a fairly resilient overall number of transactions, combined with a reduction of the relative share of large transactions. As an example, transactions above 5mUS$ in US IG represented 53% of the monthly volume in January 2008 and dropped to only 37.5% in December 2015.
- The annual turnover of the whole US fixed income universe suffered from a very sharp 34% drop, from 101% to an all-time low of 66%.
- As a result of the very healthy primary markets issuance flow (itself fuelled by very low interest rates and credit margins), there has been a very sharp increase in the number of fixed income securities available for trading, representing in aggregate a 47% increase in bonds, which essentially explains the increasing fragmentation of the markets.
- The number of active bonds issued by companies belonging to the S&P 500 Index has almost tripled over the last 10 years. On average, each company belonging to the S&P 500 has 10 bonds currently outstanding.
- The picture for the European fixed income market is more negatively skewed and does not show many positive signs. Over the recent period both overall volume, number of transactions and transaction sizes have decreased.

ETFs: a credible tool to address the liquidity conundrum

ETFs play an increasingly central role in addressing some of the liquidity issues in the markets. A crucial point is the fact that their liquidity is provided through two different media:

- The primary market via the subscription- redemption process similarly to traditional mutual funds.
- The secondary market, either via the exchange or the over-the-counter (OTC market).

Primary and Secondary volume of equity ETFs



Source: Morningstar, Bloomberg, World Federation of Exchanges, Deutsche AM calculations

ETFs: Catalyst or Mirage for Market Liquidity?

"75% of US institutions would opt for an S&P 500 ETF over an S&P 500 future as a means of obtaining the most cost-effective beta exposure for a fully funded (...) position"
Greenwich Associates

50% of pension funds and 62% of asset managers describe their use of ETFs as "mainly strategic".

Fixed Income ETFs represents only 1.2% of the investable fixed income market.

ETFs' AUM growth has been phenomenal, and they now represent a significant incremental source of liquidity that complements existing venues like the cash and derivatives markets. From an asset exposure perspective, equity ETFs have recently overtaken other ways of trading equities like futures.

These ETFs have enabled investors to execute transactions on this asset class at much better bid-offer terms than with the underlying asset.

A key stability factor: ETFs' use among investors has grown and diversified

It is probably fair to say that the ETF investor base is already significant and growing. Relying on the results of (Greenwich Associates, 2015b) surveying 120 European institutions, we observe that:

- Of the 120 institutions being surveyed, 83 were using ETFs.
- While already 71% of the surveyed multi-asset funds report using ETFs, over half are planning to launch 'ETF-only' products in the foreseeable future.

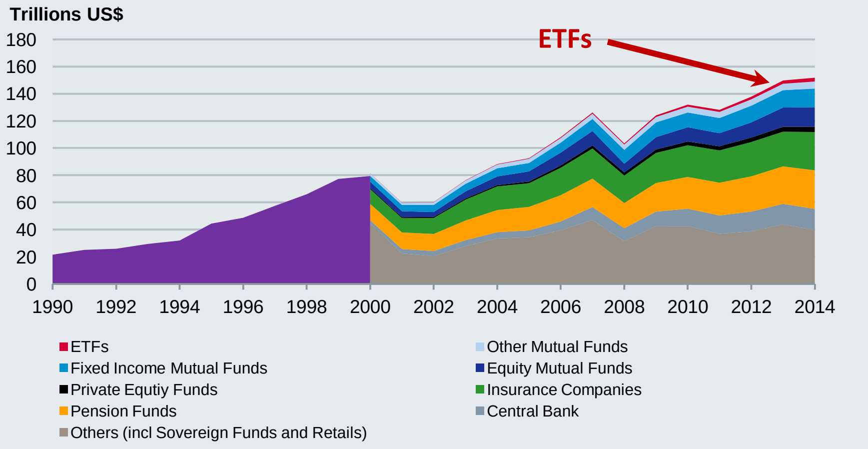
With the expanding granularity they provide, and the compression of both their management fees and bid-offers[7], ETFs are gaining popularity in very diverse sleeves of institutions' portfolios. This comes in quite stark contrast to some common beliefs that their use is restricted to tactical investments.

ETFs: a fast growing but still tiny share of financial markets

Despite their very rapid growth in AUM, ETFs represent only

- 1.2% of the investable fixed income market,
- 5% of the investable equity market.

Ownership of Global Securities by institutional and retail investors



Source: OCDE, Bloomberg, Thomson Reuters Datastream, Bank for International Settlements, Deutsche AM's calculations.

The diversified ETF client base has contributed to a healthy secondary market in periods of crisis

During the recent episodes of stress (e.g. December 2008 on risky asset classes, December 2015 particularly on high yield bonds), the market stayed remarkably two-sided, allowing investors to get in and out of risky asset classes using ETFs.

[7] See page 37 and (Denoiseux & Debru, 2015a).

Inspired by (Collins, 2015), we wanted to investigate further and bring additional transparency on actual flows from and into mutual funds and ETFs. As expected, while we did observe significant outflows during stressed periods, to a large extent these outflows have been at least partially offset by inflows, resulting in fairly moderate net flows.

The ETF investor base is increasingly diversified and differentiated. This is contrary to the popular belief that ETF investors behave on average pretty much like a single retail investor.

In our opinion the fairly smooth pattern these flows demonstrate comes as a result of the increasingly diversified and differentiated ETF investor base. This is contrary to the popular belief that ETF investors behave on average pretty much like a single retail investor[8] who would typically sell his risky assets in periods of elevated stress.

While not commonly recognized by the investment community, we think this phenomenon is key to properly assessing the impact of funds and ETFs on market liquidity.

THIS IS AN EXECUTIVE SUMMARY OF THE REPORT.

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Conclusions

While ETFs do not increase the liquidity of underlying markets, they do have several important features in relation to potential liquidity constraints in markets:

a) They usually focus on the most liquid segments of a particular asset class. Furthermore, as part of the index replication process, the portfolio manager may optimise the portfolio construction to further improve its liquidity while keeping the main risk factors of the portfolio in line with the underlying index.

b) The simplicity and cost efficiency offered by ETFs has attracted a diversified investor base.

c) In the case of mature and large ETFs, their secondary market establishes a new liquidity venue where the available liquidity is substantial and additive, and this has proven beneficial to market participants in periods of elevated market stress.

As the ETF market expands, matures and functions through a range of market cycles and one-off unexpected events, real-life scenarios have been worked through, including the December 2015 US high yield credit crunch.

Our aim in this report is to analyse in detail the functioning of the ETF market throughout such periods of stress and to test the ability of individual ETFs or a number of ETFs to continue to function in stress scenarios, and any other potentially malignant side-effects resulting from the emergence of the ETF market.

The evidence so far is that on the whole ETFs tracking less liquid market segments such as high yield bond markets help to enhance market liquidity, with a substantial amount of trading done on a two-way basis in the secondary market alone.

Although this does not increase liquidity of the underlying market, the additional liquidity available is beneficial to market participants, and therefore the market as a whole.

[8] One of the common criticisms formed by (Baker, 2015), (IMF, 2015b), (IMF, 2015a) on the eventual risk posed by vehicles like ETFs is their supposedly higher pro-cyclicality. This would come from their supposedly large retail investor base, with retail investors themselves deemed to be likely to sell their assets in market crises events, as opposed to supposedly more resilient investors like insurance companies, pension funds or hedge funds. We invite the reader to look from page 55 onwards and at (Strategic Insight, 2015) which shows that this assertion does not seem to hold well.

Risk Factors – db X-trackers UCITS ETFs

- Investors should note that the db X-trackers UCITS ETFs are not capital protected or guaranteed and investors in each db X-trackers UCITS ETF should be prepared and able to sustain losses of the capital invested up to a total loss.
- The value of an investment in a db X-trackers UCITS ETF may go down as well as up and past performance is not a guide to the future.
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- Currency hedged share classes of db X-trackers UCITS ETFs will use derivatives to try to reduce the effect of currency fluctuations between the currencies of the shares the db X-trackers UCITS ETF is invested in and the currency of the Share Class (hedging). This may not be effective and may prevent the db X-trackers UCITS ETF from benefiting from an increase in value of (or expose the db X-trackers UCITS ETF to a decrease in value of) a particular currency.
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- db X-trackers UCITS ETFs may be unable to replicate precisely the performance of an index.
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- db X-trackers UCITS ETFs shares may be denominated in a currency different to that of the traded currency on the stock exchange in which case exchange rate fluctuations may have a negative effect on the returns of the fund.
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