

Box 8

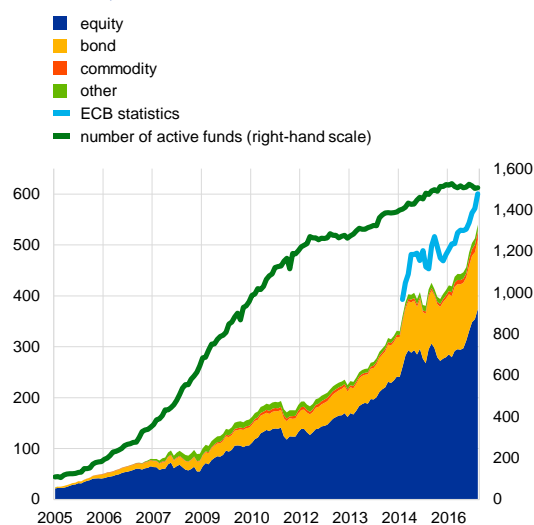
Exchange-traded funds in the euro area – recent trends and vulnerabilities

Chart A

Total assets of euro area ETFs have risen sharply...

Breakdown by asset class

(Jan. 2005 – Feb. 2017; monthly data; left-hand scale: € billions; right-hand scale: number)



Sources: Thomson Reuters Lipper, ECB investment fund statistics and ECB calculations.

Notes: The coloured areas represent total net assets of ETFs domiciled in the euro area according to data from Thomson Reuters Lipper. The blue line represents total assets according to the ECB investment fund statistics. Data are available from December 2014 onwards for the latter.

Concerns about exchange-traded funds (ETFs) amplifying potential stress in financial markets have resurfaced recently in view of the rapid growth of the industry.

Over the past decade, the market for exchange-traded funds has grown to more than €3 trillion of assets under management globally, of which almost €550 billion is accounted for by ETFs domiciled in the euro area. The growth of the sector has been accompanied by a more general increase in the role of passive investment strategies. This box reviews the main features of the ETF market in the euro area and discusses some potential financial stability risks associated with an expanded role for this asset class in the euro area financial landscape.⁷¹

The ETF segment is still small compared with the market for open-ended mutual funds in the euro area, representing about 5% of total assets, but market concentration is high. In the equity sub-segment, the role of ETFs is somewhat higher, as they accounted for

approximately 10% of all equities held by euro area investment funds at the end of 2016, while, in the bonds sub-segment, the corresponding figure is only 4%. Equity and bond ETFs are by far the

⁷¹ For an overview of the ETF operational structure, including funded and unfunded replication strategies, see Ramaswamy, S., "Market structures and systemic risks of exchange-traded funds", BIS Working Paper No 343, April 2011.

largest types of ETF in the euro area, and together represent about 95% of ETF total assets (see **Chart A**).

While the number of euro area-domiciled ETFs has risen sharply over the past decade, more than 70% of all euro area ETF assets are managed by just three asset management companies. Overall, the ten largest asset management companies account for more than 90% of ETF total net assets in the euro area.

ETF products mainly track the more liquid market segments, including major European and global stock market indices. The three stock market indices most frequently tracked by euro area ETFs include the S&P 500, EURO STOXX and MSCI World. Holdings of euro area-domiciled equity ETFs are mostly focused on developed markets, with more than two-thirds of equity assets allocated to Europe, the United States and Japan and only 10% allocated to emerging markets. Euro area-domiciled bond ETFs mainly hold liquid assets, such as investment-grade corporate bonds (25%), as well as euro area and US government bonds (18% and 5%, respectively). Less liquid high-yield corporate bonds account for 10% of euro area bond ETFs' total net assets.

While the euro area ETF market is expanding rapidly, in terms of size and relative importance within the broader asset management sector, it lags far behind its US counterpart. Total net assets of US-domiciled ETFs are four times larger than those of euro area-domiciled ETFs. In the United States, ETFs represent 15% of total investment fund assets, compared with only about 5% in the euro area. United States and euro area ETFs also differ in terms of replication strategies; synthetic strategies represent approximately one-fifth of the market in the euro area, but only a negligible proportion in the United States (see **Chart B**). For the more illiquid markets, such as emerging market debt or equities, the majority of euro area ETFs use synthetic replication strategies. Synthetic replication strategies, while offering lower costs, can expose investors to counterparty risk, including from unbundling of collateralised transactions.

Another discernible difference between the United States and the euro area relates to domestic retail use of ETFs, which is lower in the euro area than in the United States. In the euro area, holdings by institutional investors, such as investment funds, insurance corporations, pension funds and deposit-taking corporations, account for three-quarters of the ETF shares held domestically (see **Chart C**). According to the ECB's Securities Holdings Statistics (SHS), almost half of the ETF shares held domestically are held by other investment funds, of which some may use ETF shares for liquidity transformation purposes, e.g. to gain access to less liquid markets or to be able to trade more frequently at a lower cost. Almost 40% of the shares issued by ETFs domiciled in the euro area are in fact held by non-euro area investors, for which a decomposition by sector is not available in the statistics, while euro area households hold approximately 13% of all euro area ETF shares. Investor composition can be relevant from a financial stability perspective, in particular if risks are borne by investors who are unaware of the risks associated with investing in ETF products or are unable to bear potential losses in times of stress.

While the offer of intraday liquidity is an attractive feature of the ETF market from an investor perspective, liquidity transformation may entail some risk to financial stability. Only authorised market participants (APs) are allowed to create and redeem shares. Most APs accept redemption in kind, i.e. in the form of the underlying assets corresponding to the volume of ETF shares redeemed, rather than in cash. This can mitigate the liquidity risk posed by ETFs, since fund managers usually do not have to sell assets in response to redemption requests. On the other hand, liquidity risks are shifted to market-makers who have to warehouse the risk. Market-makers,

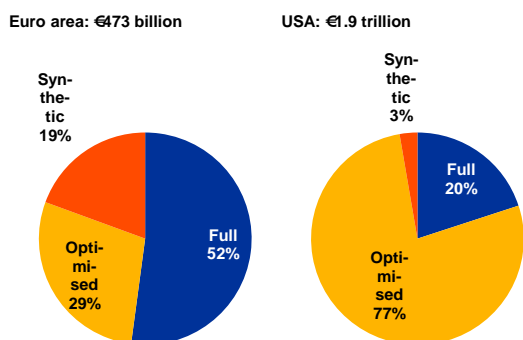
which are sometimes also APs, effectively act as arbitrageurs, ensuring that the stock exchange value of the ETF's shares on the secondary market does not vary significantly from its net asset value (NAV). Liquidity is thus determined, on one hand, by supply and demand in ETF secondary markets and, on the other, by the willingness and ability of market-makers to provide liquidity by creating or redeeming shares through APs in the primary market. Ultimately, liquidity risks are, therefore, borne by the end-investors, who may have to accept a widening of the NAV spread if the underlying market becomes illiquid.

Chart B

...while differences in size and product mix prevail between the United States and the euro area

Index replication strategies of euro area and US ETFs

(Dec. 2016)



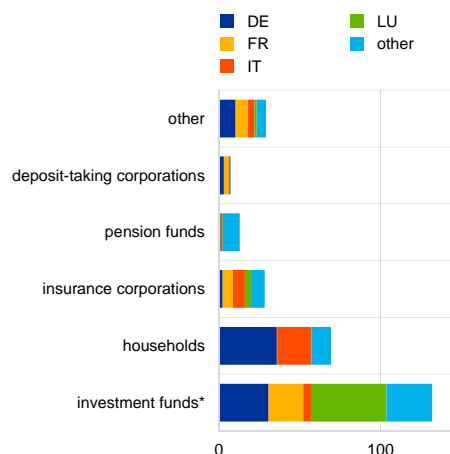
Sources: Thomson Reuters Lipper and ECB calculations.
 Notes: Physical ETFs hold 90% or more of their assets in the constituents of the underlying index, whereas ETFs using an optimised replication strategy hold a representative sample of the index with less than 90% of their assets invested in the index. Synthetic ETFs use derivatives to replicate the index return.

Chart C

Investment funds and households are the largest euro area investors in euro area ETFs

Breakdown by sector and country

(Dec. 2016, € billions)



Sources: ECB SHS data and ECB calculations.
 Notes: ECB SHS data only cover holdings of euro area investors, representing nearly 60% of shares issued by euro area-domiciled ETFs.
 * The investment fund sector excludes money market funds.

Further risks to financial stability may arise from the role of ETFs in price discovery in particular in market segments where ETFs have become a major factor in asset trading. A

key transmission channel for stress to spread to the wider financial system can be the abrupt selling of ETF shares into markets where the share of ETF trading in price discovery is high, including the main stock indices in advanced economies. In the past, price signals feeding back from ETFs to the underlying markets have contributed to stress in major stock indices.⁷² Stress can also be amplified by the abrupt selling of ETFs in markets where the underlying liquidity is structurally low and ETF shares referencing an index are traded at a much higher frequency than the underlying securities, such as high-yield corporate or emerging market debt.

⁷² For example, a joint Commodity Futures Trading Commission and Securities and Exchange Commission report on the causes of the 6 May 2010 “flash crash” highlighted, among other factors, the amplifying role played by the rapid decline in liquidity in the E-Mini S&P 500 futures contracts (E-Mini) and the S&P 500 SPDR exchange-traded fund (SPY), the two most active stock index instruments traded in electronic futures and equity markets. The report is available at: <http://www.sec.gov/news/studies/2010/marketevents-report.pdf>.

Overall, in spite of its rapid growth, the euro area ETF sector still remains relatively small, and the incremental financial stability risks stemming from ETFs in addition to existing risks in the fund sector may, therefore, also be limited. Nevertheless, if the ETF market continues to grow at the current pace, risks to financial stability may arise from its increasing role in price discovery and from the sector's engagement in liquidity transformation.
