Box 2
The impacts of substantial growth of Taiwan's exchange-traded funds on financial markets

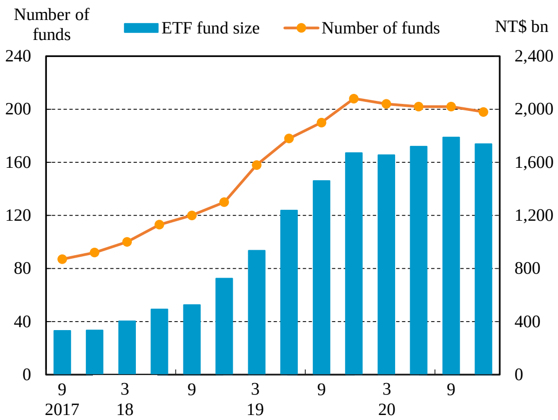
Exchange-traded funds (ETFs) that possess the characteristics of low transaction costs, risk diversification, high transparency of investment portfolios, and passive management have widely won the favor of international and domestic investors in the past ten or more years. Global ETF assets have grown considerably, while the fund sizes, number of investors, and transaction volumes of domestic ETFs have also multiplied. However, potential risks lurking in the ETF market to investors and the financial system still warrant close attention.

1. ETF market development in Taiwan

1.1 ETF fund size and trading volume greatly expanded

The first ETF listed on the Taiwan Stock Exchange Corporation (TWSE) was the Yuanta/P-shares Taiwan Top 50 ETF issued in June 2003. With a relaxation of pertinent regulations by the FSC, the domestic ETF market progressively unfolded. Industrial funds, umbrella funds, and funds with linkages to overseas targets were issued successively. In addition, various types of ETF products, for example leveraged, reversed, and futures ETFs, have been allowed to be issued by investment trust companies since 2014. Coupled with the advantages of low transaction costs and investment diversification, the products have been increasingly appreciated by investors. Therefore, the fund size of ETFs rose hugely, registering NT$1.74 trillion at the end of 2020, which was 12 times compared with that of NT$131.9 billion at the end of 2011. The number of funds increased sharply from 87 at the end of September 2017 to 198 at the end of 2020 (Chart B2.1). ETF beneficiaries also largely rose to 1.52 million, an increase of 3.8 times compared to that at the end of 2017. ETF products have become quite well accepted investments in Taiwan.

Chart B2.1 ETF fund size and number of funds in Taiwan



Source: SITCA.

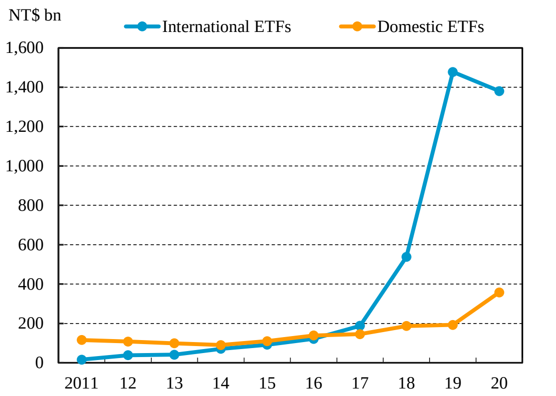
The trading value of domestically listed ETFs was NT$2.84 trillion in 2020, a huge increase of 7.9 times compared to that in 2011. The transaction amount of ETFs to that of the whole stock markets reached 5.8% in 2020, sharply rising from the 1.3% in 2011. The turnover rate of ETFs reached 163.36% in 2020, much higher than that of 123.34% in TWSE stock trading. This showed that transactions in the ETF market have been booming.

1.2 ETF investments linked to overseas targets have been all the rage

In order to pursue better returns, cross-border investments in ETFs linked to overseas targets have become mainstream. The fund size of those ETFs reached NT$1.38 trillion at the end of 2020, largely increasing 85 times compared to that at the end of 2011, much higher than that of NT$357.4 billion for the ETFs investing in domestic targets (Chart B2.2).

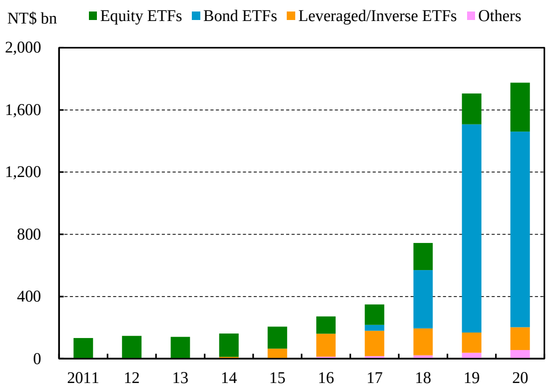
1.3 Bond ETF assets rose quickly because of the huge investments of life insurance companies

Chart B2.2 International ETFs and domestic ETFs in Taiwan



Source: SITCA.

Chart B2.3 Types of ETFs in Taiwan



Source: FSC.

In recent years, the fund size of bond ETFs increased massively, reaching NT$1.34 trillion at the end of 2019, growing by 36 times compared to that at the end of 2017, largely surpassing the size of equity ETFs (Chart B2.3). The major reason was that the amounts life insurance companies invested in TWSE- and OTC-listed securities were excluded from the amounts subject to the overseas investment ceiling.[1] Hence, life insurance companies made huge investments in NTD-dominated offshore bond ETFs. However, as the FSC successively took measures to control the risks of life insurance companies investing in offshore ETF funds starting from October 2019,[2] their investments in bond ETFs shrank gradually in 2020. Nevertheless, equity ETFs have still grown rapidly while the indices of stock markets continually reached historical highs.

2. ETFs may pose potential risks to investors and the financial system

2.1 Potential risks to investors

The Bank for International Settlements (BIS) (2020)[3] points out that the market value of ETFs has been more informative than the NAV (net asset value). When the market volatility rises sharply, the discount or premium to the NAV of ETFs may change rapidly. Investors will take higher price volatility risks if they buy shares in the secondary market at a bigger discount or premium to the NAV. In addition, though ETFs have traced specific stock price indices, changes of indices may not be entirely replicated owing to numerous reasons and caused mis-tracing risks. Also, with the increasing complexity of ETFs, it has drawn wide attention that investors may not fully understand the potential risks of ETF products, especially complex and special ETFs.

Moreover, investing in equity ETFs is similar to investing a basket of equities. When equity ETFs overly increase their share in the whole equity market, it will cause trading behavior such as transaction volumes and prices among the stocks within the basket to be more convergent. As a consequence, the risk diversification effect of holding multiple stocks may be compromised, with the price correlation increasing via co-movements up and down. Furthermore, when ETFs are approved by regulatory authorities to delist from an exchange, investors who buy shares at a premium will bear liquidation risks.

2.2 Potential risks to financial systems

2.2.1 Equity ETFs increased their impacts on stock markets, augmenting the correlation of asset prices

The turnover rates of equity ETFs are higher than those of general common stocks, and the proportion of transaction amount of ETFs to the trading volumes of stock markets is high. Especially during market turmoil, ETFs will have greater trading value and thus increase their influence on financial markets. ESRB (2019)[4] also points out that ETFs lead to greater asset price co-movement, which might result in losses for many investors and further trigger bankruptcy and fire sale of assets. This would undermine the stability of financial markets and heighten systemic risks.

2.2.2 The large investment in ETFs in the short term may induce contagion risks

ESRB (2019) also indicates that investors might take large and same direction short-term ETF positions on account of the high liquidity and trading boom. Once investors unwind the huge positions, it may lead to an upheaval in the ETF market and transmit to the indices themselves owing to arbitrage trading, resulting in remarkable elevation of the volatility of the indices and the correlation of individual securities in the indices. Furthermore, certain types of ETFs have merely a few counterparties. When the counterparties are unable to fulfill their obligations under surging financial stress, ETFs may be subject to counterparty risks which also raise systemic risk concerns.

3. Conclusions

ETFs were classified as passive investment products originally. However, the product complexity and potential risks rose when the types of ETFs issued in Taiwan diversified. While some local investors buy ETFs as short-term investments, there is a need to enhance the financial literacy of investors and pay attention to ETF product types and information transparency so as to reduce consumer financial disputes. Moreover, the size of the global ETF market has expanded substantially in recent years. It is crucial for regulatory authorities to monitor systemic risks potentially raised by ETFs and take responsive measures early to preserve financial stability.

Notes: 1. Investments of life insurance companies in bond ETFs were merely NT$0.37 trillion at the end of 2018. The amount reached NT$1.3 trillion at the end of 2019, increasing by 2.5 times.

2. The FSC required life insurance companies investing in NTD-dominated offshore bond ETFs to control FX risks in October 2019, adding an additional FX risk capital charge on those ETFs with a risk weight of 6.61% when calculating their risked-based capital (RBC) ratios. Credit ratings of underlying bonds held by bond ETFs invested by life insurance companies should not be below BBB- based on the regulations implemented in December 2019.

3. BIS (2020), "The Recent Distress in Corporate Bond Markets: Cues from ETFs," *BIS Bulletin*, April.

4. ESRB (2019), "Can ETFs Contribute to Systemic Risk?" *Reports of the Advisory Scientific Committee*, June.