

The Rise of Passive Funds and its Implications

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Recently, passively managed funds have rapidly increased their share in the domestic and global markets. In particular, ETFs have recently achieved notable growth thanks to their low costs and convenient trading. Low costs of passive funds are made possible only because they carry out investments according to a set of predefined rules. However, an increase in passive funds implies a rise in mechanical investing, which could bring about adverse effects, e.g., undermined efficiency in price discovery, and stronger synchronization among assets held by passive funds.

Although the assets under management of domestic equity funds have recently entered a downward trend in Korea, passively managed funds have been on the rise. Notably, the increase in ETFs, among other passive funds, seems especially evident. The rise of ETFs and other passive funds is not a domestic phenomenon. According to Morningstar, US passive funds grew their share rapidly from less than 10% in the early 2000s to 36% at the end of 2016.

Such changes in fund investment has significance for the industry and is worth studying given its potential impact on returns of fund assets. This article explores the recent rise of passive funds in equity funds, and reviews the impact of such changes on stock returns.

Declining active funds and rising passive funds

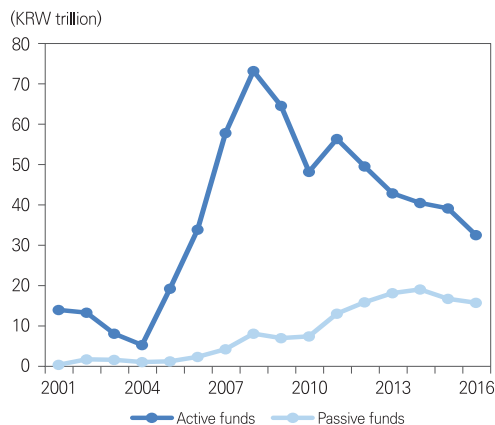
Korea's equity fund AUM persistently fell from KRW 81 trillion at the end of 2008 to KRW 48 trillion at the end of 2016. As Figure 1 and Figure 2 show, the major culprit behind the decline was the decrease in active fund AUM. The size of active funds reached its peak in 2008 before falling

* All opinions expressed in this paper represent the author's personal views and thus should not be interpreted as Korea Capital Market Institute's official position.

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continuously, whereas passive funds kept growing except for slight setbacks in 2015 and 2016. Dividing passive funds into ETFs and non-ETF index funds shows a steep rise in ETFs for a recent period, and an abrupt fall in non-ETF index funds for the recent two years.

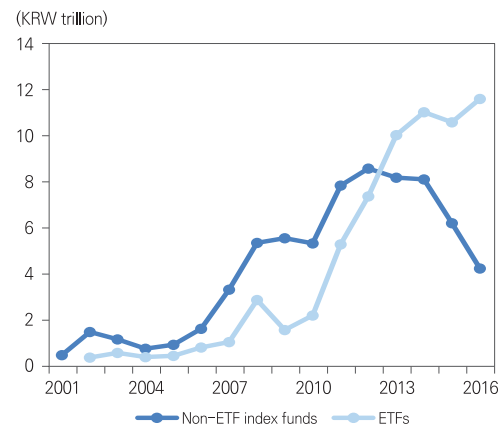
Figure 1. Equity Funds (AUM)



Note: Active funds are defined as overall funds excluding passive funds. Passive funds include index funds and ETFs.

Source: ZeroIn

Figure 2. Passive Equity Funds (AUM)



Note: Passive funds are divided into ETFs, and non-ETF index funds.

Source: ZeroIn

Passive funds' primary management strategy is to duplicate the returns of an index. Most Korean equity passive funds track the benchmark index. As of the end of April 2017, ETFs that directly track KOSPI200 accounted for 34% of domestic equity ETF AUM, whereas leveraged and inverse ETFs linked to KOSPI200 represented 32%. In other words, about 66% of domestic equity ETFs are directly or indirectly linked to the KOSPI200 index.

The demise of active funds and the rise of passive funds in equity funds is a global phenomenon. For example, in the US, active funds have experienced a persistent net outflow, whereas a persistent inflow has been observed in passive funds. This phenomenon is especially evident in US domestic equity funds.¹⁾ As of the end of December 2016, US domestic-equity type active funds recorded a monthly net outflow for 33 consecutive months. The net outflow amounted to \$169.0 billion in 2015, and \$263.8 billion in 2016. By contrast, US domestic-equity type passive funds recorded a net inflow of \$102.6 billion in 2015, and \$236.7 billion in 2016. As a result, the share of passive funds in US domestic equity funds shot up from 40.1% in 2015 to 45.7% in 2016 in terms of year-end NAV.

1) Morningstar, January 11, 2017, Morningstar Direct Asset Flows Commentary: United States.

Such an increase in passive funds appears to have primarily stemmed from those funds' lower costs compared to active funds. According to the ICI, the average total expense ratio of active funds stood at 84bp, a 7-fold higher than 11bp of passive funds.²⁾ Especially, ETFs show a lower total expense ratio among passive funds. For example, the Vanguard 500 Index Fund's total expense ratio is 0.17%, whereas the ratio for the Vanguard S&P 500 ETF tracking the same index and managed by the same asset manager is 0.05%, which is 70% lower than the index fund. Similar differences in expenses are seen in a comparison between a popular Korean ETF and publicly offered index funds managed by the same asset management company, where the ETF is found to charge 70% less than the index funds do.³⁾ In addition to this, convenient trading helped ETFs drive the growth of ETFs in the market for passive funds.

The difficulty for active funds to create excess returns that are enough to offset their relatively high costs is often cited as the reason behind the demise of those funds. In their study on fund manager performance, Fama and French (2010) analyze that although some fund managers generate returns in excess of the benchmark index, it is difficult to maintain the returns that exceed high costs.

Equity passive funds' impact on stock returns and the implications

Passive funds offer low management costs because they mechanically allocate assets depending on a series of predefined rules without giving fund managers any discretion in investment decisions. Their low-cost investment diversification is certainly beneficial, but at the same time could be problematic if they grow in size and have an increasing impact on the market.⁴⁾ Especially, passive funds are highly correlated to a market's benchmark index, which could exacerbate market anomalies related to the benchmark index.

One of the well-known, index-related anomalies is a phenomenon where stocks newly included in the index show large excess return at the inclusion event with a substantial part of the price increase remaining afterwards.⁵⁾ Studies report that this phenomenon occurs when there is any change in the standard of index construction, even if such change barely has

2) ICI, 2016, Investment Fact Book; Kwon, M.K., 2016, Smart beta ETF: Performance and characteristics.

3) Kwon (2015) compares the costs of ETFs and publicly offered funds that offer a low investment limit and easy access for retail investors (Kwon, M.K., 2015, Korean and global ETF markets: Current state and challenges).

4) Wurgler (2010).

5) Shleifer (1986), Benish & Whaley (1996), Lynch & Mendenhall (1997).

economic significance. This is because the demand from passive funds tracking the index as well as the funds benchmarking the index could impose upward pressure on the price of the newly included stock. Hence, the recent rise of passive funds could amplify such anomalies.

Also found in addition to the price increase is a stronger synchronization in returns of the newly included stock to other stocks on the index.⁶⁾ Each investor has a set of stocks that he frequently trades. Any demand shock on the investor could impact the stocks included in the set, and thus their prices move in sync. If a stock is newly included in the benchmark index, it is included in the set of many investors, and thus its price moves in sync with other stocks included in the set. A stronger synchronization could make a stock's price drift apart from the fundamentals, and undermine the effect of investment diversification.

However, it is possible that the impact of increasing passive funds on stock prices can be contained at less concerning levels.⁷⁾ Because passive funds are managed according to the predefined rules, it is possible for market participants to anticipate the phenomenon about which passive funds could bring. If investors try to take advantage of the phenomenon by actively trading, the impact of passive funds on the market can be reduced. For example, as there are more investors seeking to profit from anomalies caused by the phenomenon, this will abate the level of anomalies. Indeed, studies report that an anomaly is likely to lessen as it becomes more widely recognized among investors.

An index widely tracked by passive funds tends to consist of highly liquid large cap stocks that attract attention of many institutional investors. Because it is relatively easy to apply an anomaly-offsetting strategy to large-cap stocks, the adverse effect of passive funds could be hardly noticeable at normal times. However, the adverse effect could be significantly large when market participation by active investors is hampered, especially during the times of market unrest. Furthermore, the reduction in professional investors amid the evident decrease in active funds could exacerbate the adverse effect of mechanical investing, which could serve as new opportunities for active funds.

6) Barberis, Shleifer & Wurgler (2005), Bartram, Griffin, Ng & Lim (2015).

7) Chang, Hong & Liskovich (2015).

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