

The index rebalancing act

As index investments have become increasingly popular, trading around the dates when indices rebalance has become crowded, causing risk from unpredictable price volatility

Index funds are often thought to be the lowest cost, simplest means of gaining market exposure. But their success in attracting assets risks cutting into investors' returns, if not dealt with proactively.

Legal & General Investment Management (LGIM) has offered these solutions for over 30 years, growing to become the fifth largest index manager in the world.[1] During this time, we have observed various risks and inefficiencies that, for the benefit of our investors, we have been able to mitigate pragmatically and even take advantage of. For example, as the amount of money tracking popular market cap-weighted indices has increased over the years, growing numbers of investors have become susceptible to the risks associated with stock prices around rebalance events, our research suggests.

These inefficiencies are only likely to grow as we expect the price volatility of stocks in popular core equity indices to increase as more investors embrace core equity index solutions. As a result, we take a more proactive approach to tackling the risks that come with the crowds.

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[1] Pensions & Investments, The largest index managers survey 2018.

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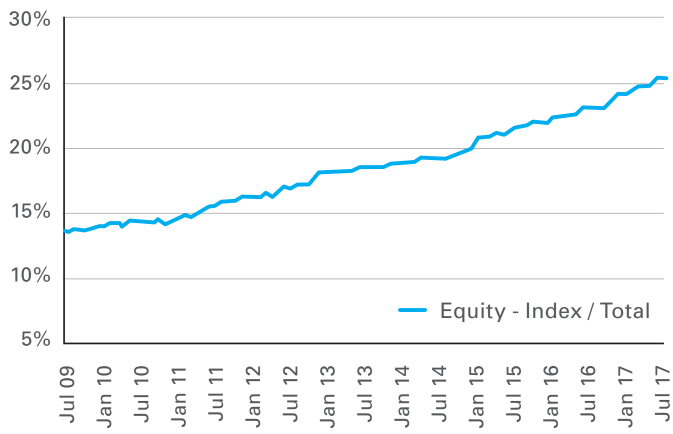
More assets, more risks?

It is no secret that the popularity of index investing has exploded in recent years. Investors have embraced the many advantages of index funds, such as comparatively lower headline costs and broad market exposure. The proliferation of index assets into the market landscape, especially those tracking popular market-cap equity benchmarks, has continued to grow over the past decade.

In the US, some 38% of all equity assets are in index-tracking funds, according to research from Bank of America Merrill Lynch and Moody's, which estimate that the US equity fund market could reach a 50:50 active/index split by as early as 2020. In absolute terms, PwC estimates that as at 2016, there were $14 trillion of index-tracking assets under management – a figure the group believes will more than double by 2025.*

*Source: PWC, Asset & Wealth Management Revolution: Embracing Exponential Change, 2017

Figure 1: Assets in equity index-tracking funds as a % of total AUM of all equity funds



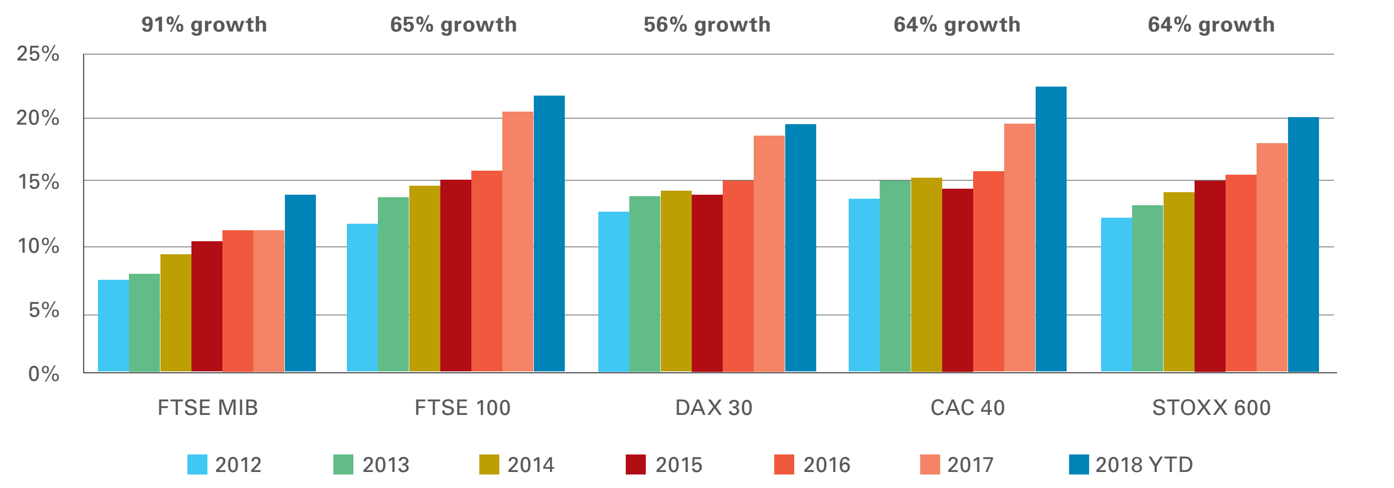
Source: Bank of America Merrill Lynch and Moody's

The price of popularity

Index fund managers' objectives during this time have been primarily focused on tracking indices as closely as possible. However, as index investments become ever more popular, the crowds of index investors trading at or around rebalance dates have increased share price volatility, which might have previously gone unnoticed.

When an index provider chooses to add or remove a stock from their index, this is a decision both in line with the rules that govern the particular index and made public well in advance of the change. Index fund managers who wish to keep the tracking difference between the fund and the index to a minimum will often trade these changes on the last day before the changes are implemented, so as to be as closely aligned to their benchmarks as possible. However, as the logic of supply and demand dictates, the more demand to trade the same stocks – of which there is a fixed supply – around a certain date, the higher the likelihood of the price of those stocks being temporarily elevated or at least experiencing short-term volatility.

Figure 2: Proportion of activity executed in the closing auction



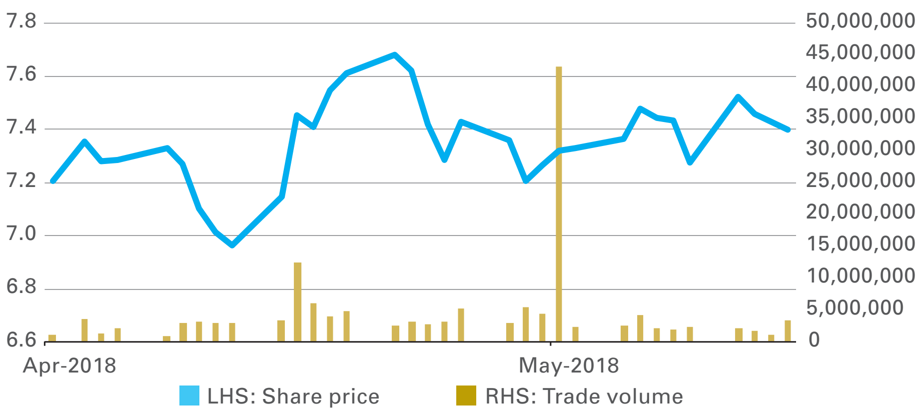
Source: J.P Morgan Tick+

Overall turnover for index funds tends to be relatively low over most periods with the notable exception of these rebalance dates. In May 2018, a major equity index's review included around 50 additions and deletions, resulting in a more than 13-fold increase in trading volume in a single day compared to the previous month. Our estimates suggest that, depending on the index, the third Friday of each quarter, or the last day of May and November, see significant trading volume of index constituents as a result of major index rebalances.

We examined the potential performance difference of trading the stocks involved in a major global equity index rebalance on the announcement date, instead of waiting until immediately before the effective rebalance date, which is typically a few weeks later. Over the course of 14 rebalances, from February 2015 to May 2018, this strategy on average would have earned 6.5 basis points of performance annually, our research suggests. Alternatively presented, by trading on the day of an index rebalance, investors potentially lost up to 6.5 basis points, which may have been mitigated by avoiding the crowded trading on rebalance dates.

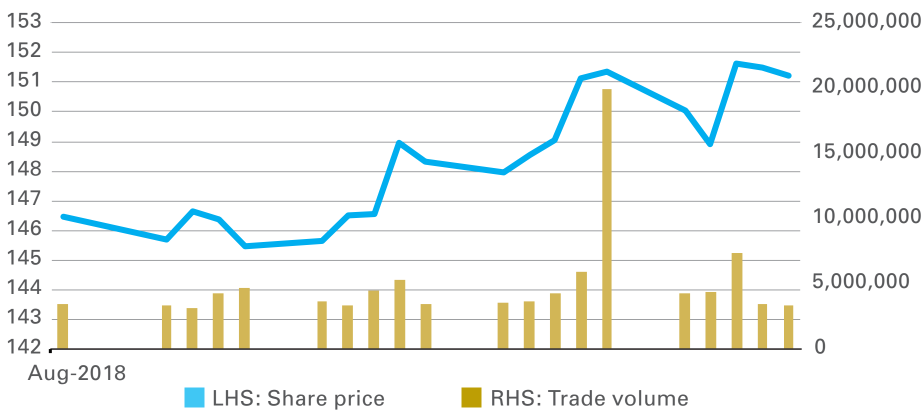
Research from Berkeley helps explain why this may be the case: many stocks they looked at traded well above their average price levels both following the announcement that they would be added to core market indices and the rebalance day, often giving back some of those gains in the days following.[2] For the individual companies being traded, these events can see extreme spikes in trading volumes compared to days prior and following the rebalance, a consequence which naturally has an effect on price volatility.

Figure 3: MSCI May 2018: Pirelli - Deletion



Source: Bloomberg

Figure 4: S&P September 2018: IBM - Weight Increase



Source: Bloomberg

[2] Quinn and Wang, *The Impact of Adds and Deletes on the Returns of Stock Indexes*, Berkeley

Quiet dates

Tracking indices which rebalance away from the crowds, or simply less frequently than other market benchmarks, can also help curb the associated risk of unpredictable price volatility. As seen in the rebalancing calendar, detailed in the appendix, an index which is adjusted at a different point than quarter end can avoid the throng of major index providers. Investors can still gain broad market exposure through index-tracking equity funds that rebalance during these 'quieter' periods compared to the popular core benchmarks.

In our core equity exchange traded funds (ETFs), for example, we track the performance of indices independently managed and calculated by Solactive, a global market leader in the indexing industry, with over 10 years' experience and $200 billion invested in its index-linked products, as at January 2018. These indices are designed to rebalance at times prior to when many of the major index providers announce changes to their indices. Nevertheless, based on our historical analysis, they have been 99.9% correlated with comparable benchmarks from a major global index provider.

Experienced index management

There is, of course, more to managing the inefficiencies associated with index investing than changing the rebalance date alone. Index fund management has acquired the unfortunate nickname of being 'passive' when in fact it should be anything but.

At LGIM, our pragmatic approach to index replication allows us to potentially boost investors' returns through mitigating predictable drags on performance. For instance, our experienced index fund management team can attempt to anticipate likely index changes or employ optimal trading strategies when corporate events occur.

Demanding more than just low fees

As investors become more aware of the inefficiencies of 'default' indexing when it comes to rebalance events, the more they are likely to demand of their index fund managers. With the popularity of index tracking investments unlikely to abate in the near term, we believe it is up to managers to help manage the risks we have outlined in this piece, through solutions such as tracking indices with alternative rebalance dates.

In addition, a more pragmatic means of index replication to mitigate other index inefficiencies can potentially reduce costs for investors or even boost returns. In our recently launched range of core market equity ETFs, we seek to do both for the benefit of our clients – showing that the growing number of index investors can and should expect more from their index fund managers.

Appendix

Figure 5: The rebalance calendar

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT	Topix / TSE REIT
OMX	Hang Seng	FTSE GEIS SAIR	OMX	Hang Seng	FTSE GEIS SAIR	OMX	Hang Seng	FTSE GEIS SAIR	OMX	Hang Seng	FTSE GEIS SAIR
S&P Dividend	MSCI QIR	FTSE Domestic	S&P Dividend	MSCI SAIR	FTSE Domestic	S&P Dividend	MSCI QIR	FTSE Domestic	S&P Dividend	MSCI SAIR	FTSE Domestic
		FTSE EPRA			FTSE EPRA		JPX/ Nikkei	FTSE EPRA			FTSE EPRA
		DAX/ IBEX			DAX/ IBEX			DAX/ IBEX			DAX/ IBEX
		Euronext			Euronext			Euronext			Euronext
		STOXX			STOXX			STOXX			STOXX
		S&P			S&P			S&P			S&P
		NASDAQ			NASDAQ			NASDAQ			NASDAQ
		Russell			Russell			Russell			Russell
		CRSP			CRSP			CRSP			CRSP
		S&P ASX / TSX			S&P ASX / TSX			S&P ASX / TSX			S&P ASX / TSX
		Nikkei			Nikkei			Nikkei			Nikkei
		Kospi			Kospi			Kospi			Kospi
		ETF Specialist			ETF Specialist			ETF Specialist			ETF Specialist

Source: LGIM

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