

# Numis

**NSCI**

For FCA purposes this is a Marketing Communication

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## Numis Smaller Companies Index

2019 Annual Review



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## Foreword

### by the Head of Research, Numis

It is with great pleasure that for the seventh year Numis publishes the Annual Review of the Numis Smaller Companies Index. Over the last 32 years, the index has been produced by Professor Elroy Dimson and Professor Paul Marsh of London Business School, with Scott Evans taking over Elroy Dimson's role from 2016. Over the years, through their production of the Index and their associated research on smaller companies, the Numis index team have had a major impact on the practicalities of investing in smaller and mid-sized companies in the UK.

During their careers at London Business School, and through their widely cited book, *Triumph of the Optimists*, and other publications, Elroy and Paul have made a profound contribution to investment research. As part of the original design team for the FTSE 100 Index, as well as their creation of the NSCI, they have also had a central role in the design of stock market indices in this country and around the world. Scott Evans brings to the team a deep knowledge of UK small-caps gained from over 20 years of working at a senior level in investment banking, together with his extensive experience as an academic and researcher.

The Numis Smaller Companies Index is a central part of the extensive range of research services that Numis provides to investors as well as to corporate clients. With a back history that now covers 64 years since 1955, the NSCI provides a remarkable opportunity to set contemporary issues in a truly long-term context. It enables investors to take a strategic view on today's markets that is based on evidence that is comprehensive and authoritative, and underpinned by research of the highest quality.

A little over a year ago we were delighted to launch the Numis Alternative Markets Index. This includes all companies listed on qualifying UK alternative markets. Currently, only AIM qualifies, so the index comprises all AIM listed stocks. However, the index back-history starts in 1980 and includes stocks traded on the now discontinued USM and Third Market.

The Numis index series provides the definitive benchmarks for monitoring the performance of smaller- and mid-sized companies in the United Kingdom. We congratulate the authors on completion of this detailed and comprehensive study of UK smaller and mid-sized companies over the last 64 years. It contains many insights that will help you as an investor. Please do not hesitate to contact Numis if you would like to follow up on the ideas presented in this volume.

**Will Wallis**

Head of Research, Numis Securities

## Highlights of 2018

by Scott Evans and Paul Marsh

### New highs achieved in Q2

2018 was a roller coaster for UK equities. Having started the year at all-time highs, UK stocks declined sharply in late January in line with global markets. By the end of the first quarter, the NSCI and FTSE All-Share were down by 5.4% and 6.9%, respectively. After a period of renewed economic optimism, equity prices regained their momentum in the second quarter. The NSCI, NSC 1000 and FTSE All-Share all hit new highs and the Numis Mid Cap returned to positive territory. As the chart below shows, the Numis Alternative Markets index, which comprises all AIM stocks, was the standout performer, leading the way at the half-year stage after strong relative performance in Q1, and a solid Q2.

### Economics and politics

In the third quarter, markets began to stumble, driven by politics and economics. Increasing concerns over the real economic effects that a trade war could bring on an already slowing Chinese economy began to weigh on financial markets. Meanwhile, the Fed continued its tightening programme. Closer to home, Brexit came back into focus.

### Markets and small-caps hit hard in Q4

In the final quarter, stock prices tumbled worldwide. The FTSE All-Share ended the year down 9.5%. While the NSCI underperformed it by just 1.5%, this flattered small-cap performance. The NSCI has a high weighting in investment companies, which performed relatively well in 2018, but which anyway invest mainly in large-caps. Stripping out investment companies to obtain a purer measure of small-cap performance, the NSCI XIC underperformed the FTSE All-Share by 5.9%. The Numis Alternatives index, after two good years prior to 2018, and being the leader at the start of Q4, was the hardest hit. One bad quarter made it the worst performer of all of the Numis indices, down 17.5%.

### Nowhere to hide

At a sector level there was nowhere to hide. Of the eleven broad FTSE All-Share industry indices, all but healthcare gave negative returns. For the NSCI, the only industries bucking the negative trend were technology (+4%) and the low-weighted utilities sector (+29%).

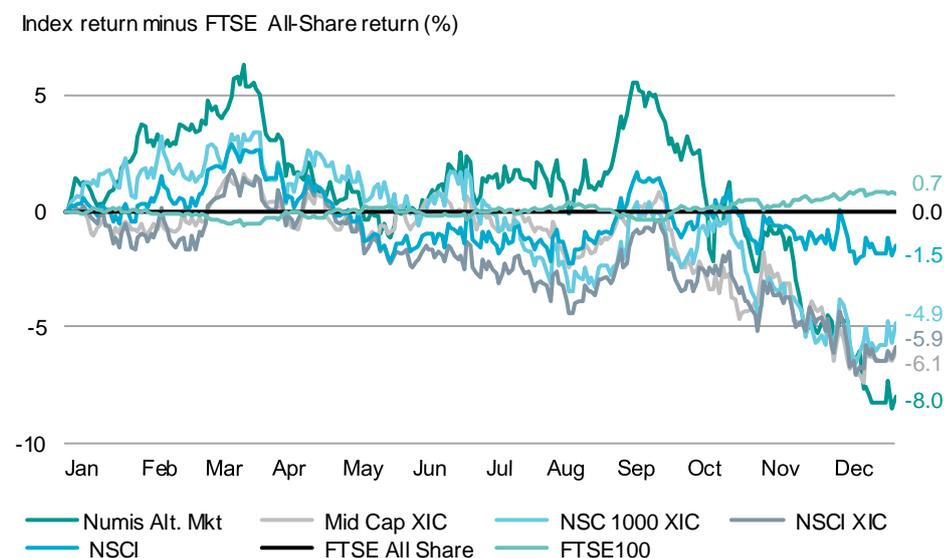
### Valuation ratios

One positive impact of share price weakness was on valuation ratios. Continued growth in earnings and dividends meant that over the year the NSCI XIC PE fell from 14.32 to 10.91 at the start of 2019, whereas the dividend yield increased from 2.76% to 3.57%.

### Small-caps ahead in the long-run

Despite the negative short-term performance, over the longer-term small-caps remain ahead. The annualised return of the of the NSCI over its 64-year history stands at 14.7% which is 3.3% greater than the annualised return for the FTSE All-Share.

**Figure 1: Relative performance of Numis and FTSE indices during 2018**



Source: FTSE Russell, Scott Evans and Paul Marsh, Numis

UK small-cap performance in an international perspective

Comparing 15 countries

The UK was not alone in suffering disappointing equity market and small-cap performance in 2018. To place the UK experience in context, we examine the world's largest equity markets, defined as those with more than a 1% weighting in the FTSE World index at start-2018. This gave 15 countries accounting for 92% of total world market capitalisation. We measure returns using the MSCI small- and large-cap indices, except for the UK, where we use the NSCI XIC for small-caps and the FTSE All-Share to proxy large-caps.

Negative in most countries

The line plot in the left-hand chart below shows small-cap performance in 2018. Small-cap returns were negative in every market we examined, which is no surprise, given that last year was a poor year for equities as a whole almost everywhere. The light blue bars in the chart show the small-cap premium, measured as the difference between large- and small-cap returns. They show that small-caps underperformed their larger counterparts in every country except South Korea. India, France, Hong Kong and Switzerland all suffered substantial negative premiums of around 20% or more. Putting UK small-caps in context, their underperformance was in line with the world as a whole (see the shaded labels).

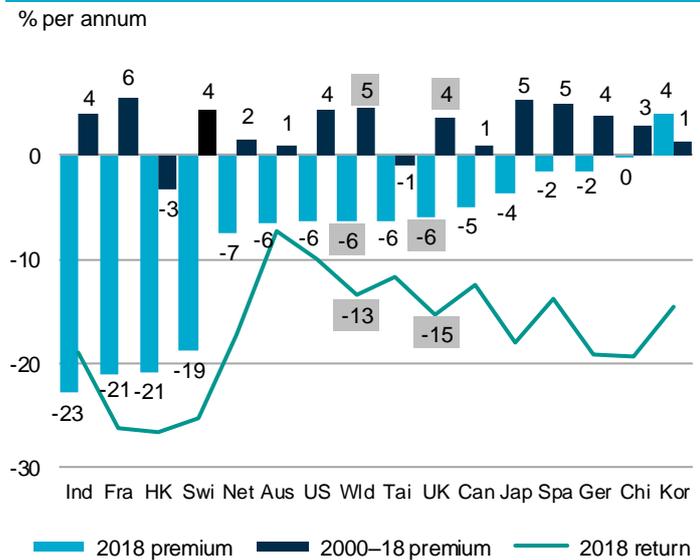
UK did relatively well

Comparison with the USA is particularly relevant. First, the UK and USA are two of the world's largest markets for smaller companies. Second, we have shown in previous analysis (see Annual Review 2017 page 3) that UK and US small-cap returns and size premia have become increasingly – although by no means perfectly – correlated over time. The right-hand chart below, however, which plots the evolution of the small- and micro-cap premia shows just how much the UK/US experience differed in 2018. For the USA, we use the Russell 2000 for small-caps, the Russell Microcap and the Russell 200 for US large-caps. US small- and micro-caps significantly outperformed US large-caps in the first half of the year. This was followed by a sharp decline in H2 resulting in negative premia of -8.2% and -10.3% for small- and micro-caps respectively. In contrast, the UK experience for both small and micro-caps was more restrained, but without the strong first half performance.

Positive long-term premia

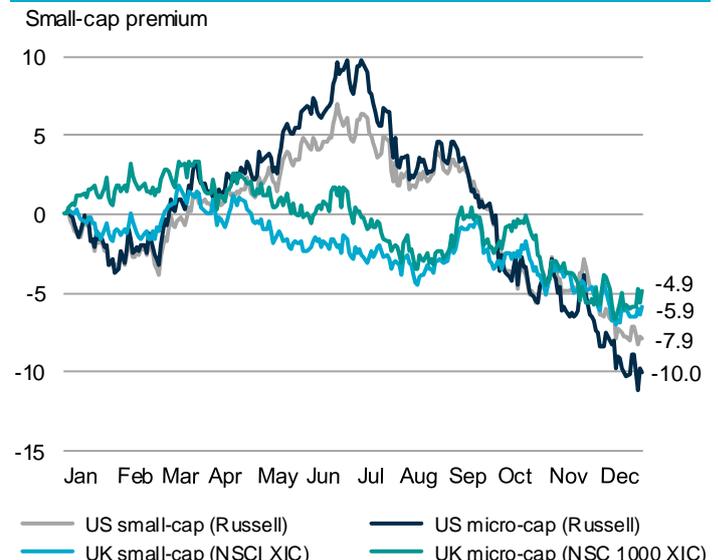
Looking at the longer-term, the dark blue bars in the left-hand chart below show the 19-year size premia since start-2000 for the 15 countries, together with the corresponding size premium on the world index. The good news for small-cap investors is that in all countries except Hong Kong and Taiwan, the premia were positive even after adding in the returns for 2018, which was a particularly poor year for small-caps.

Figure 2. Global small-cap performance in 2018 and 2000–18



Source: MSCI, FTSE Russell, Scott Evans and Paul Marsh, Numis

Figure 3. US and UK small- and micro-cap premia in 2018



Source: FTSE Russell, Scott Evans and Paul Marsh, Numis

## IPOs are the lifeblood of the market

### Decline in the number of IPOs

IPOs are the lifeblood of the equity market. Each year as companies leave, for whatever reason, the hopper needs to be refilled. In the decade before the financial crisis, the number of IPOs entering the NSC plus AIM index averaged 231 per year. In the 11 years since, this fell to 88 per year. This led to a one-third fall in the number of listed UK stocks. This pattern is common to all developed markets. The number of stocks listed on public exchanges in the USA has fallen by more than half from its peak of around 7,600 in 1997.

### Reasons why supply is low

There are many reasons why the supply of IPOs has fallen. Running a listed company has become more onerous due to regulation, disclosure requirements, public scrutiny and shareholder demands. Furthermore, many companies can now raise finance without listing on public markets. This has led to more companies electing to stay private (or for longer), and for more public companies going private or being acquired by private equity firms. The rate at which private equity firms return their holdings to the public markets has also slowed.

### Demand may be partly to blame

Demand for IPOs may also be to blame. Analysis in previous editions of this Annual Review has concluded that vendors should not regard UK IPO prices as unattractively low and there is no evidence that they have sold-out too cheaply. But we have also shown that longer-term post offering returns were disappointing, which may have impacted IPO demand.

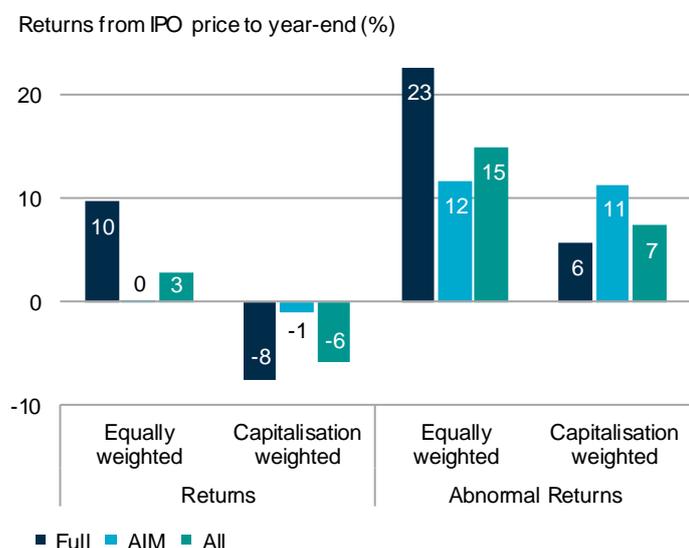
### Positive abnormal returns in 2018

If post-offering returns are an issue, what might the experience of 2018 mean for the next cohort of IPOs? Figure 4 shows returns for all IPOs (except investment companies) on the main market or AIM during 2018. Five were too large for inclusion in the NSCI index, but did qualify for the Numis Mid Cap. Post offering returns have been reasonably good when taking into account the weakness of markets. Looking at the returns above the relevant market index (abnormal returns), equally weighted returns were 22.7% and 11.7% for full list and AIM IPOs, respectively, while capitalisation weighted returns were lower, but still positive.

### Median return is zero

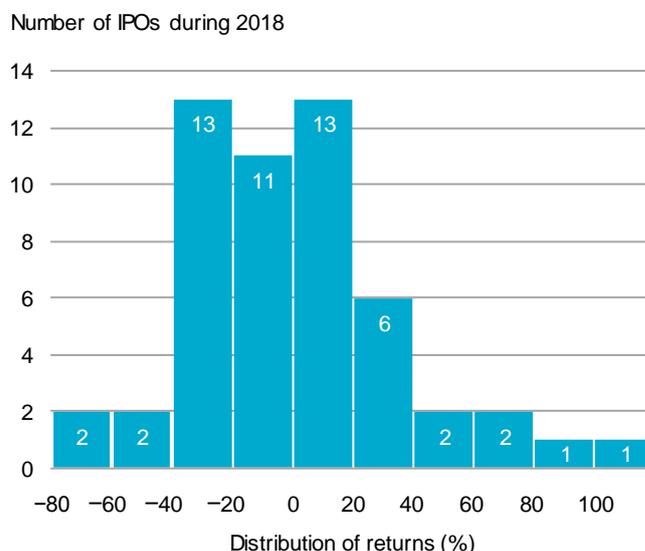
To receive the average positive abnormal return, investors would have needed to invest in all the IPOs. For those wishing to invest only in some, Figure 5 plots the distribution of returns in the post-offering period. The median value is zero, which means that 50% of issues generated a positive (or zero) return, while 50% generated a negative return. The distribution also reveals there to be a higher number of issues between 0 and -40% return than between 0 and +40% return. The compensation came from the small number of companies in the higher return brackets (i.e. above +40%), but you would need to have been lucky or skilful to pick these.

Figure 4. Post-offering returns on UK IPOs in 2018



Source: Scott Evans and Paul Marsh, Numis

Figure 5. Distribution of post-offering returns in 2018



Source: Scott Evans and Paul Marsh, Numis

## Style investing: an update

### Factor investing is in vogue

Factor or style investing has become popular and its adoption is accelerating. Factors are security-related characteristics that give rise to common patterns of return. The attraction for investors is that academic researchers have shown a number of factors to be associated with historical premia. Factor investing is thus an attempt to harvest these factor premia. Company size was one of the earliest factors identified, and small-cap investors hope to enjoy a small-cap premium. But factor effects are important even if there is no premium. Thus, the size effect (as opposed to the size premium) is the tendency of small-caps to behave differently from large-caps, and knowledge of this helps inform performance evaluation and attribution.

### Five positive factors

For many years, Numis has distributed monthly updates on the performance of factors within the NSCI XIC. Four factors are monitored regularly, namely, value (high versus low book-to-market), size (small versus large stocks in the NSCI XIC), income (high vs low dividend yield) and momentum (WML or Winners Minus Losers). Periodically, we look at a fifth factor, low versus high risk, where we define risk as beta, variance or specific risk.

### Momentum is ahead

Figure 6 below provides an update on the long-run premia on these five factors within the NSCI XIC over the period 1955-2018. The income and low risk factors need a one- and five-year start-up period, and hence begin in 1956 and 1960, respectively. Figure 6 shows that momentum (WML) has enjoyed by far the largest annualised premium at 17%. This is followed by value (3.9%), income (3.8%), low risk (3.6%) and size (0.9%). Momentum, however, involves high dealing costs, and can occasionally suffer a truly devastating year.

### Factors in 2018

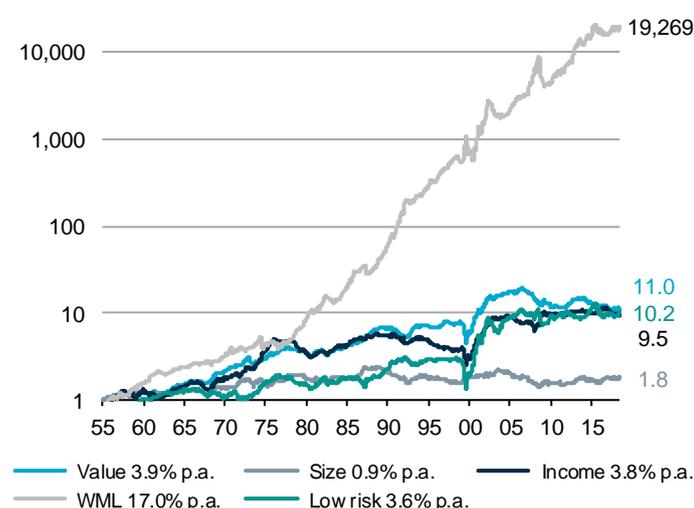
While these factors generated long run premia, outcomes vary greatly over shorter periods. Figure 7 confirms this by showing factor premia over 2018. Momentum, (the long-term winning style) was highly erratic, fluctuating with the vicissitudes of the market. Similarly, low risk, which we take here to be the return from low beta versus high beta stocks, gyrated with the market, ending positive due to the end-year market decline. 2018 was not a good year for value or income both of which provided negative premia, whereas the size premium (within the NSCI XIC) was positive throughout the year.

### Important for long-term investing

In summary, factors do influence performance and are an important element of long run investing. In the short-term, they can be highly volatile and yield negative premia, sometimes for extended periods as has been the case with value over the last decade.

**Figure 6. Long-run factor premiums within the NSCI XIC**

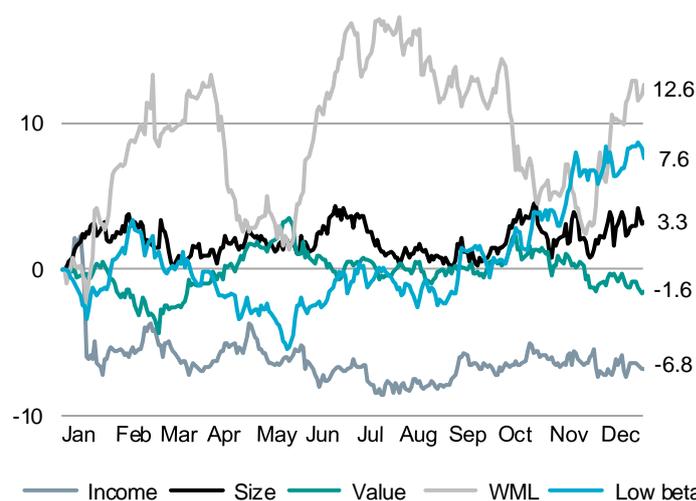
Cumulative returns from style premia within NSCI XIC, 1955–2018



Source: Scott Evans and Paul Marsh, Numis

**Figure 7. NSCI XIC factor premiums in 2018**

Cumulative return from factor (%)



Source: Scott Evans and Paul Marsh, Numis

### Alternative style investing

#### AIM factors researched for the first time

This year, we have extended our factor analysis to cover the constituents of the Numis Alternative Markets index and hence AIM listed companies. We are researching this for the first time, and our interest stems from the fact that AIM has quite different attributes to the NSCI in terms of sector weights, company size, and income (see Section 3 of this Review). AIM attracts growth companies, which tend to be associated with higher risk and lower income, so we might expect rather different factor returns compared to the NSCI.

#### Same methodology as for NSCI but different cut-offs

In defining factors, we use the same methodology as for NSCI XIC. The cut-off points for inclusion in each of the style portfolios will thus differ from those used for the NSCI, since they are defined relative to the population of each index. For example, to compute the income factor, we rank stocks within the index by yield, and divide them into high yielders (the 30% of dividend payers with the highest yield), low yielders (the 30% with the lowest yield), as well as an intermediate category and a non-payers group. Given that AIM has a lower dividend yield than the NSCI XIC, it is thus possible that a company considered high income within the Numis Alternatives index (AIM) could fall into the intermediate or even low income category if we used the cut-offs determined for the NSCI XIC.

#### Momentum was the outstanding factor

With this in mind, the two figures below show the long run annualised factor premiums for companies listed on AIM over the period from 1996–2018. This is a necessarily a shorter timespan than for the NSCI XIC (see Figure 6 above), as it is limited to the period over which AIM has existed. Despite the shorter period, the similarities are striking. All five factors enjoyed positive premia and the outstanding winner is again momentum. However, momentum strategies always generate high dealing costs, and for AIM, the smaller average company size and lower level of liquidity in the smaller stocks means that, after dealing costs, the achievable WML premium would be much lower than that shown. Nonetheless, AIM has clearly been a strong momentum market.

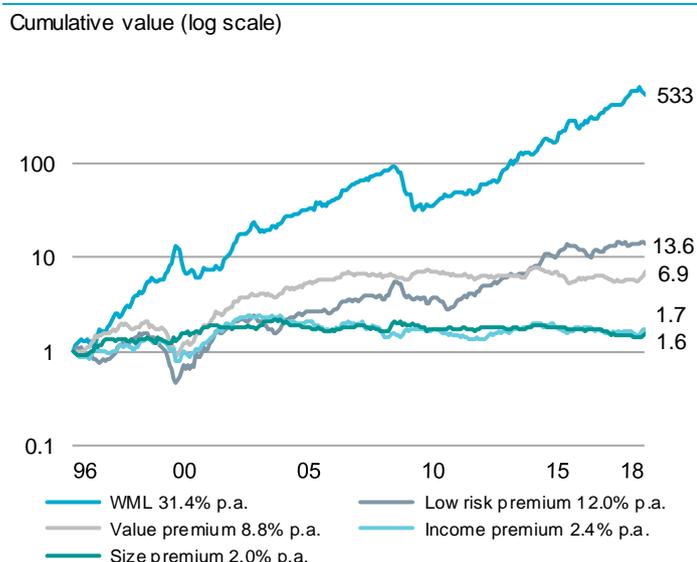
#### Value and low risk also enjoyed large premia

The magnitudes of both the low risk and value premium for AIM stocks are also striking. Given that AIM is a growth market known for somewhat higher risk stocks, this is especially noteworthy. It also carries a degree of irony. Within a market known for its growth stocks, the best performers have been the lower risk, value companies.

#### Factors matter for AIM investors

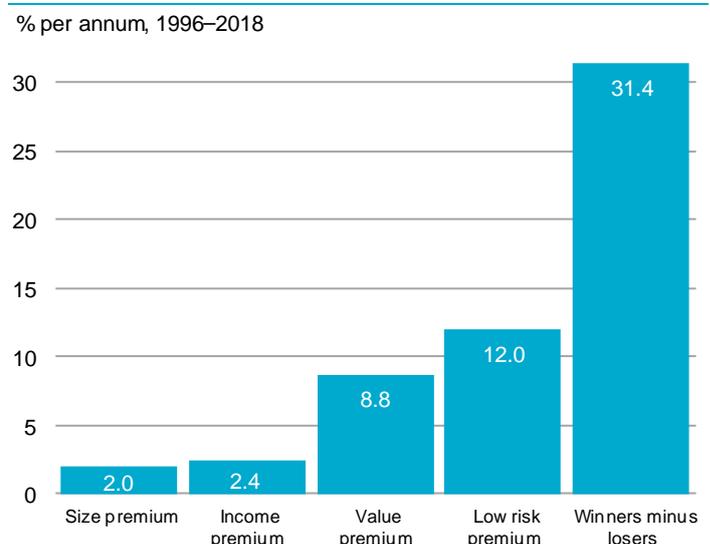
In summary, the long-run investment styles that have worked within the NSCI XIC have also worked within AIM. All five factors enjoyed positive long-run premia and all are at least as important when investing on AIM as they are for main market stocks.

Figure 8. Long-run factor premia for AIM



Source: Scott Evans and Paul Marsh, Numis

Figure 9. Annualised factor premia for AIM



Source: Scott Evans and Paul Marsh, Numis

## International companies and their influence on AIM

### AIM is agnostic to domicile

A characteristic of AIM that sets it apart from most junior exchanges has been its success in encouraging foreign companies to list on the market. Since inception, AIM has been agnostic to the domicile of its constituents and has welcomed companies from all over the world. Consequently, neither the Numis nor FTSE indices that include AIM stocks apply a domicile test for their inclusion, unlike their treatment of fully listed stocks.

### But should investors be agnostic to domicile?

In recent years, several well-publicised failures and delistings, including a number of Chinese AIM stocks, have caused investors to raise governance concerns, tighten their screening procedures and place pressure on the exchange to ensure NOMADs do likewise. Others have questioned why, say, US companies choose to list on AIM when they have many domestic alternatives, implying this might signal a quality issue.

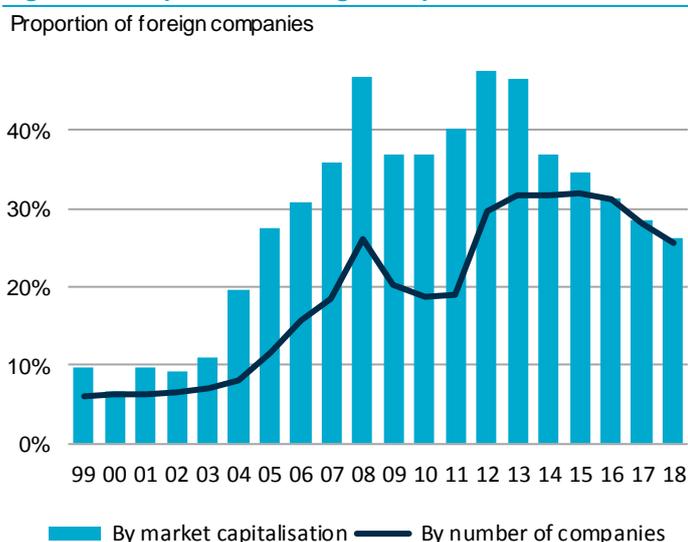
### At its peak 48% of AIM was foreign

We look first at the prevalence of foreign AIM listings, then at their performance. We use London Stock Exchange data on a company's country of operation and/or incorporation to categorise whether it is foreign. Figure 10 plots the proportion of foreign companies listed on AIM, both by number of companies and market capitalisation at the start of each year since 1999. Until 2003, the proportion was small. In the IPO boom years of 2004 to 2007, the proportion grew rapidly, and by January 2008, foreign AIM stocks accounted for 47% of AIM's capitalisation. After the financial crisis, the proportion fell until a revival in 2012 led to an all-time high of 48%. Since then, the proportion has fallen, and by January 2018, had reached a 15-year low of 26%.

### UK companies have outperformed

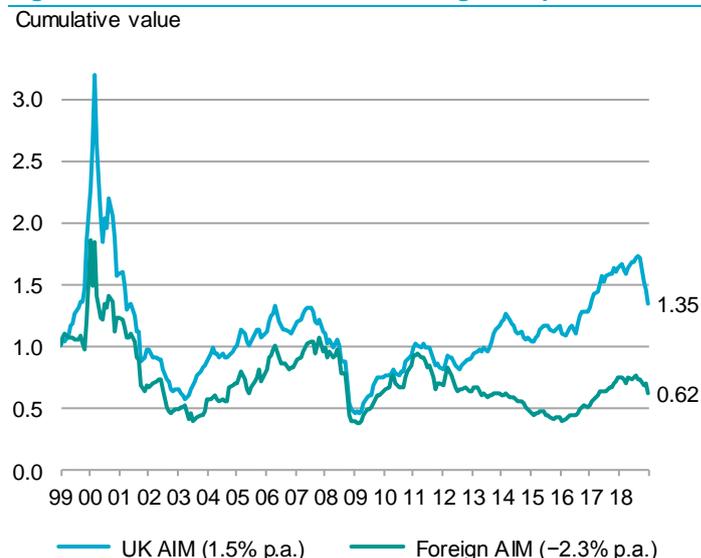
Figure 11 compares the performance since start-1999 from investing in a portfolio of all foreign AIM stocks with that of a portfolio of all UK AIM stocks. We rebalance the portfolios at the start of each year; returns are capitalisation weighted, with all dividends reinvested. Excluding the years up to 2003, when there were relatively few foreign stocks, the figure shows that returns for both groups were relatively similar until mid-2012, with several crossover points when returns were identical. UK companies then greatly outperformed, until the Brexit vote. Since then, foreign AIM stocks have performed best for both currency and Brexit-related reasons. Over the full period from 1999-2018, foreign AIM stocks underperformed their UK counterparts by 3.9% per annum. The terminal wealth from the foreign AIM portfolio was less than half that from the UK AIMS. It is also worth noting that the recent years in which AIM's relative performance has improved have coincided with a period when the influence of non-UK companies on AIM has been steadily falling.

**Figure 10. Proportion of foreign companies listed on AIM**



Source: London Stock Exchange, Scott Evans and Paul Marsh, Numis

**Figure 11. Performance of UK and foreign companies on AIM**



Source: Scott Evans and Paul Marsh, Numis

## AIM: has the junior market matured?

### Maturity of AIM

AIM is often viewed as a relatively immature market due to its history of being comprised of a high proportion of young companies, many of which have limited financial histories, have reported limited or no profits and/or paid small or no dividends. This combined with its role as a venue for IPOs has meant the average length of time since listing (i.e. years of seasoning) has tended to be short relative to the main market.

### Seasoning has lengthened

The level of maturity, however, has varied considerably over time and as the charts below show, is quite different today compared with 20, or even 10 years ago. Looking at years of seasoning, the left-hand chart shows the average number of years listed on the exchange since IPO. We have plotted both the equally weighted and capitalisation weighted series. Focussing on the latter, the chart shows that since launch, the average number of years of seasoning rose to reach almost 9 years by March 2003. After the 2004-2007 IPO boom, this fell to a low of just over four years by start-2008. At this point, 14% of AIM's value comprised companies listed within the previous year and 76% of the value was made up of companies listed in the previous five years. The more subdued period for IPOs since the financial crisis has now seen seasoning rise to 13 years.

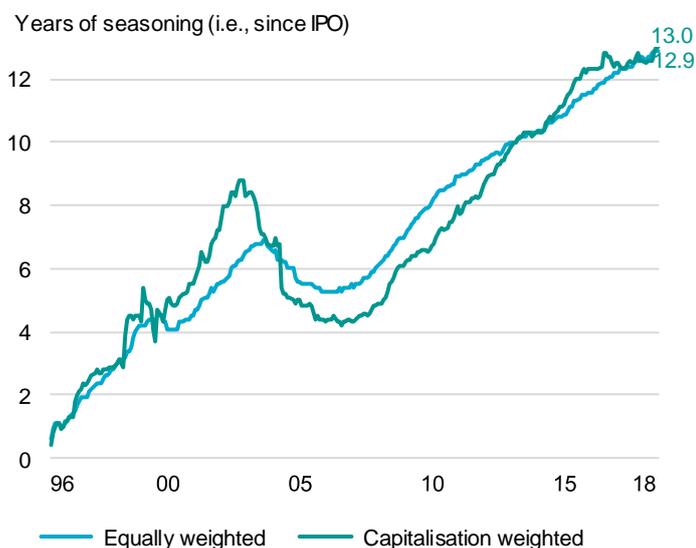
### Profitable and dividend paying

In terms of profitability and dividends, the right-hand chart shows that by 2000, the proportion of AIM by value that was profitable had fallen to a low of just 25%. After the collapse of the technology boom and the demise of many "concept" companies, the proportion with positive earnings rose steadily to a peak of 64% by the start of 2009. The trend was reversed following the financial crisis but then rose steadily to reach an all-time high of 78% by start-2018. Dividends were a little slower to catch up with profits, and until 2014, the proportion of AIM value represented by dividend payers remained below 40%. Since then, it has increased in-line with profitability to reach 63% by end-2018.

### Maturity has increased

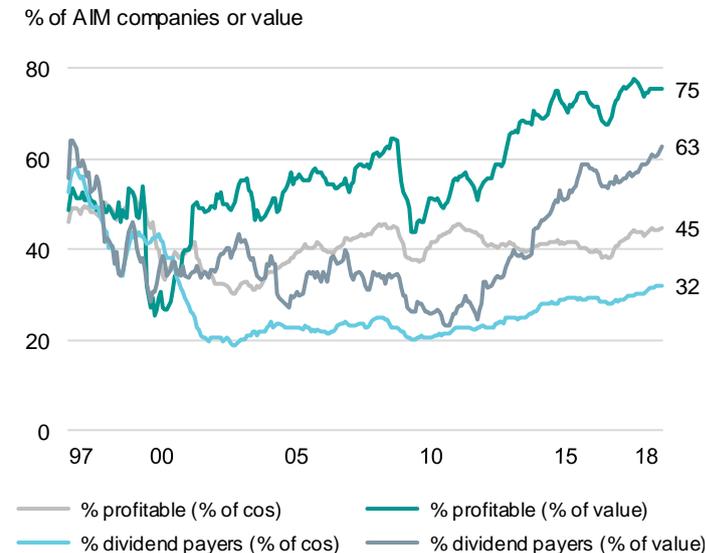
To answer our original question of whether AIM has matured, the data shows that as it entered its 13<sup>th</sup> year, AIM was a very immature teenager. The average time since IPO was just over four years, only 34% of companies paid dividends and only just over half generated positive earnings. Following its 23<sup>rd</sup> birthday, 63% of AIM (by value) is dividend paying; 75% is profitable, and the average years of seasoning is now three times higher than at 13 years. Despite being a junior exchange, it is now looking more mature. This bodes well, since we have shown in previous Annual Reviews that seasoning, higher yield and profitability are all associated with higher returns over the long run.

Figure 12. Average number of years listed since IPO



Source: Scott Evans and Paul Marsh, Numis

Figure 13. Proportion of profitable and dividend paying cos



Source: Scott Evans and Paul Marsh, Numis

## MiFID II one year on: research coverage

### Significant regulatory change

2018 was a year of significant regulatory change for financial institutions brought about by the implementation of the revamped Markets in Financial Instruments Directive (MiFID II). One of the key changes that attracted most attention was the requirement for fund managers to fully unbundle trading commissions from payments paid to brokers for research. This has led to serious concerns over the negative impact it could inflict on research coverage of smaller companies.

### Research coverage over time

In the 2018 Annual Review we looked at the issue by analysing the longer-term trends in analyst coverage of UK listed companies. Our analysis was based on coverage as defined by Bloomberg on all companies included in the NSCI and/or a FTSE index. We found that between 2002 and 2017 average analyst coverage on smaller companies had increased from two to six per company. We also found the proportion of total research dedicated to small- and mid-caps had steadily increased relative to research coverage of large caps.

### Total coverage has fallen

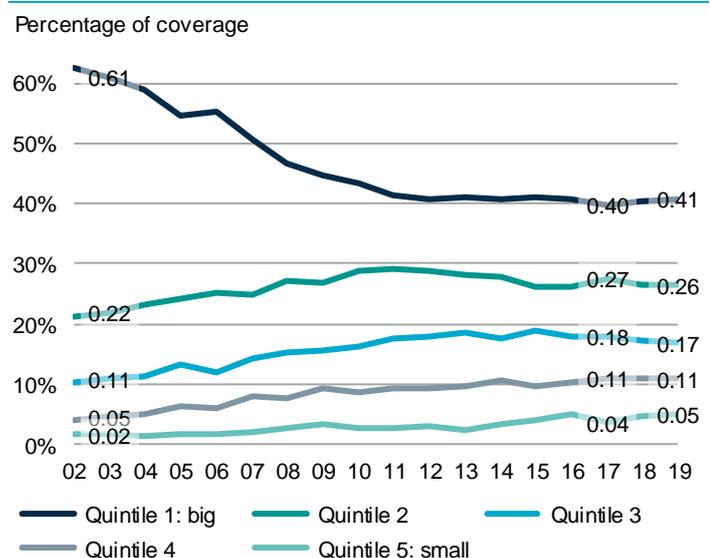
For 2019 we have extended our analysis to include data covering the post MiFID II period. For the market as a whole we have found that since its introduction, total research coverage (as measured by total number of analyst recommendations) has declined by around eight percent. However, this decline was evenly spread across size bands, albeit marginally greater for mid-caps. In Figure 14 below, we show the longer-term trends of research coverage per-quintile (based on market capitalisation). The figure shows that apart from some very modest falls in research coverage for quintiles 2 and 3 (mid-caps), there has been little change post MiFID II and if anything, coverage of the very smallest companies has marginally increased.

### Small-cap coverage stable

We also compared research coverage of the NSCI XIC and the top 100 companies (by market capitalisation) that remained listed throughout 2018. By excluding companies that were acquired or otherwise de-listed, we can make a like-for-like comparison between the start and end of the year. Figure 15 below shows that average analyst coverage per company has fallen from around six to five for the NSCI and from 22 to 18 for the top 100. Optically a larger fall for the top 100, but proportionately the same for both groups.

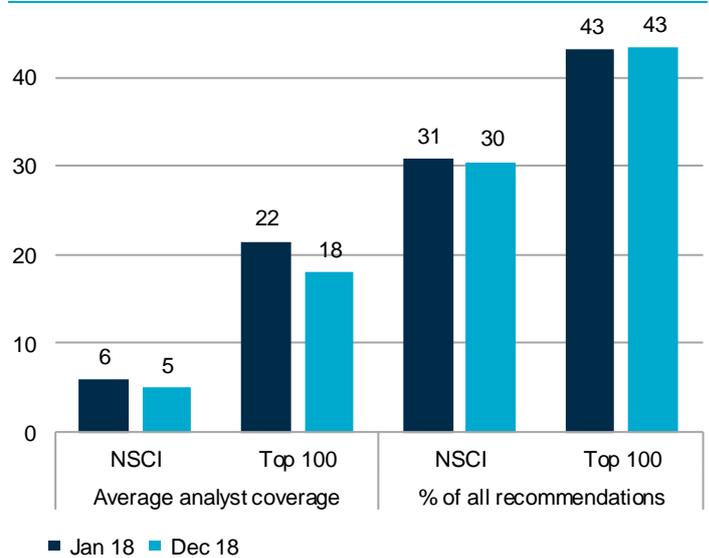
While we have found total research coverage has fallen since MiFID II was introduced, we have not found this to be any higher for smaller companies. However, we are only one year into the new regime and much could change from here onwards.

Figure 14. Proportion of analyst research coverage by quintile



Source: Bloomberg, Scott Evans and Paul Marsh, Numis

Figure 15. Pre and post MiFID II research coverage



Source: Bloomberg, Scott Evans and Paul Marsh, Numis

## MiFID II one year on: liquidity

### Concerns over liquidity

Part of the debate on the potential unintended consequences of MiFID II has been the impact it could have on the liquidity of small-cap stocks. Related to research coverage, the liquidity issue focusses on the wider point of the detrimental effect a more onerous regulatory environment could have on the commitment of sell-side firms to trade, and the willingness of buy-side firms to invest in the smaller end of the market.

### Measuring volume and velocity for various size bands

Our volume data comes from the London Share Price Database (LSPD), which covers the entire UK equity market. It relates to trading on the London Stock Exchange, and excludes volume on other venues. We compare trends in market volume split by company size bands. These include the companies comprising the top 80% by capitalisation of the main market (roughly, the FTSE 100), the Numis Mid Cap (bottom 20% less the bottom 5%), NSCI (bottom 10%) and companies in the bottom 5%. We look at both volume, volume share and at velocity, measured as a company's trading volume over the past year divided by its free-float market capitalisation. This indicates the number of times the company's free float has turned over in the past year, and provides a measure of liquidity that aids comparisons across companies of different sizes.

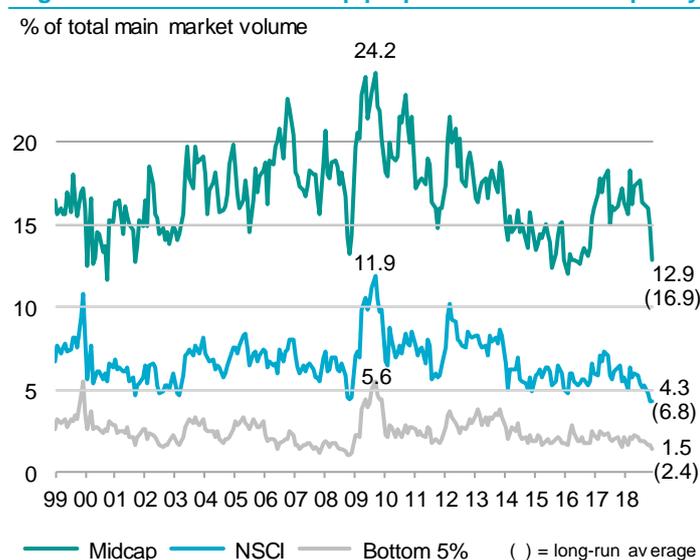
### Long-run downward trend

Figure 16 focuses on mid-caps, small-caps and minnows. It shows their share of total UK volume over the past 20 years. The end-2018 values, together with the long run averages (shown in parenthesis), are displayed on the right of the chart. Since peaking in 2009, small- and mid-caps have accounted for an increasingly smaller share of total UK market volume. While all three size groups ended 2018 at levels below their long-run averages, it would be hard to separate the long-run downward trend from any impact from MiFID II.

### No evidence of reduced velocity

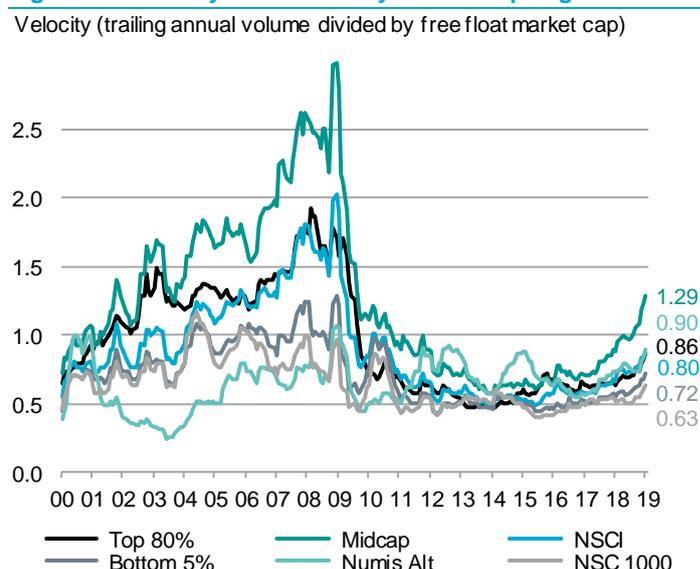
The right-hand chart shows trading velocity for size groups ranging from the top 80% down to the minnows within the NSC1000. The chart shows that, since 2016, velocity has increased for all the size groups, especially for mid-caps, which ended the year with a value of 1.29x, compared to the largest companies with a value of 0.86x. The velocities for the smallest companies represented by the bottom 5% and NSC 1000 remain low at 0.72x and 0.63x, respectively. However, they have nonetheless steadily increased (not decreased) pre and post the implementation of MiFID II. There are, of course, numerous other factors affecting volume and liquidity, not least market turbulence. Velocity will always appear higher in the immediate aftermath of a market fall. However, based on this data, it is hard to find much evidence that MiFID has so far had an impact on liquidity.

**Figure 16. Small- and mid-cap proportion of market liquidity**



Source: Scott Evans and Paul Marsh, Numis

**Figure 17. Velocity of turnover by market cap segments**



Source: Scott Evans and Paul Marsh, Numis

## Seeking comfort from the long run record

### Long-run comparison

## Equities beat fixed income. Within equities, the smaller the better

## The focus should be on real returns

## Not as safe as houses

## Investing for the long run

After a poor year for equities, and an even worse year for small-caps, it is both useful and comforting to recall the old adage that stocks are for the long run and to remind ourselves of the long run record for both equities versus fixed income and large- versus small-caps.

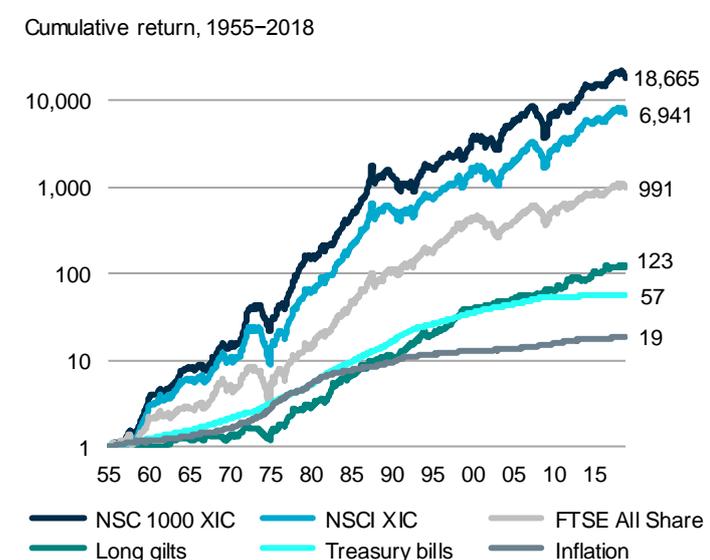
We now have a 64-year return history for the NSCI since 1955. Figure 18 below plots this history, along with the related Numis minnows index (NSC 1000), the large-cap oriented FTSE All-Share, long-dated (20-year) UK government bonds (gilts), and UK Treasury bills (cash). The Numis indices exclude investment companies in order to provide a purer measure of small-cap and minnows performance. The chart also shows UK inflation, measured by the consumer price index (CPI). All indices are total returns indices, including reinvested dividends (or coupons). The long bond and Treasury bill returns come from the Dimson-Marsh-Staunton (DMS) global investment returns database.

Figure 18 shows that, over the long run, Treasury bills beat inflation, and long bonds beat bills. However, equities, in turn, greatly outperformed both bills and bonds. Within equities, it has been a case of the smaller the better, with the NSC 1000 XIC minnows performing the best, and the large-cap oriented FTSE All-Share performing the worst. The labels to the right of the chart show how much £1 invested at the start of 1955 would be worth today, with dividends and coupons reinvested. The differences in terminal wealth are quite staggering. The corresponding annualised returns are inflation 4.7%; bills 6.5%; bonds 7.8%; FTSE All-Share 11.4%; NSCI XIC 14.7%; and NCS 1000 XIC 16.3%.

Figure 18 shows that the CPI rose 19-fold over this period, so we should really focus on annualised real (inflation adjusted) returns, rather than nominal returns. Figure 19 below summarises the real returns, and adds in two further asset classes, mid-cap stocks and UK house prices. The broad pattern obviously stays the same. Equities beat fixed income, and within equities, the smaller the better. Obliging, the Numis Mid Cap index gave a real return between large and small-caps.

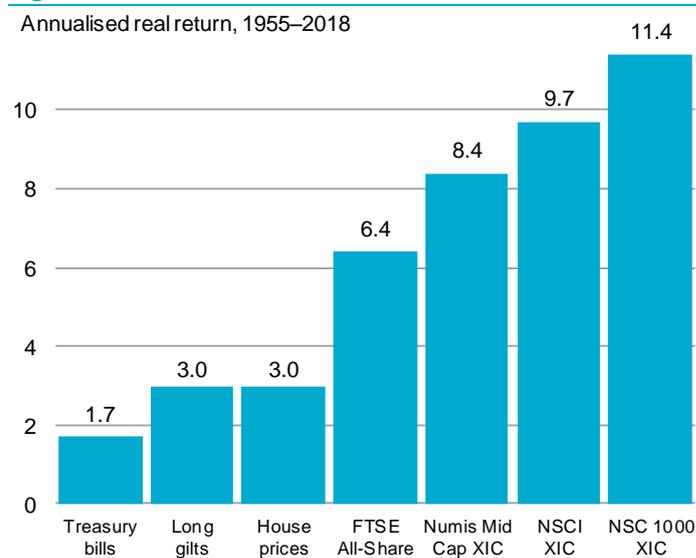
Maybe a little surprising is the relatively low real return from house prices. It seems that when the Victorians coined the phrase “as safe as houses” they were not thinking financially. However, Figure 19 omits rental income (or the imputed rent saved by an owner-occupier). If rent was included, we estimate that the return on housing would be between that on gilts and the FTSE All-Share.

**Figure 18. Cumulative returns for equities and bonds**



Source: Dimson-Marsh-Staunton(DMS) database, Scott Evans and Paul Marsh, Numis

**Figure 19. Annualised real returns for UK assets**



Source: Dimson-Marsh-Staunton(DMS) database, Scott Evans and Paul Marsh, Numis

## 1. Index overview

by Scott Evans and Paul Marsh

### A difficult year for the NSCI

Sell in May and go away would have been excellent advice to follow in 2018 – as long as you did not come back on St Leger Day! Having reached a new life-time high on 22 May 2018, the NSCI succumbed to increasing concerns over global economics and domestic politics resulting in a peak-to-trough fall of 14.3% and an annual return of –11.0%. After removing the contribution of investment companies (holdings of which tend to be dominated by larger companies), the NSCI XIC return was lower at –15.3%. This compares to a return of –8.7% on the large-cap FTSE 100 and –9.5% for the FTSE All-Share index. Not a good year for equities, but an even worse year for smaller companies.

### Mid Caps underperform

The Numis Mid Cap index XIC also had a difficult 2018. In line with the other small- and mid-cap indices it had risen to an all-time high in the first half of the year, but increasing concerns over domestic and global growth, led to a negative annual return of –15.6%.

### More resilient smaller smalls

The NSC 1000 XIC, which includes the smallest of the NSCI companies performed slightly better than the NSCI XIC which in part reflects the greater resilience from the very smallest stocks. The index nonetheless recorded a negative total return of –14.3%.

### Numis Alternative Markets index worst performer

Having been the star performer of 2017, the Numis Alternative Markets index was the most affected by the renewed volatility in financial markets, leading to a negative annual return of –17.5%. This made it the worst performing of the Numis indices, despite having been the best performing index up until the end of the third quarter.

### Cut-off for inclusion is £1,334 billion

After a weak year for small- and mid-cap performance, the NSCI enters 2019 with a combined market capitalisation of £231 billion, £41 billion less than the start of the previous year. The cut-off for inclusion has decreased to £1,334 billion and the total number of companies has risen slightly over the year to 707. Of the new entrants; 31 were IPOs during the year, four transferred from AIM to the main market and 15 were previously too big for inclusion prior to rebalancing. 651 companies of the 707 that make up the NSCI at the start of 2019 were in the index last year.

### Lower PE and higher yield

The fall in share prices over the year had a significant effect on valuation ratios. Prior to rebalancing at the end of 2018, the trailing yield and PE ratios for the NSCI XIC were 3.36% and 11.26, down from 2.76% and 14.32 at the start of the year. Rebalancing had a further impact, and the NSCI XIC starts 2019 on a yield of 3.57% and a PE of 10.91.

**Table 1. The Numis indices during 2018**

	Start-2018	End-2018	2018 High	2018 Low	All-time High
<b>Total return index</b>					
NSCI	20039.99	17839.75	20443.42 (22 May 18)	17513.11 (27 Dec 18)	20443.42 (22 May 18)
NSCI XIC	22794.71	19296.02	23239.36 (22 May 18)	18820.99 (27 Dec 18)	23239.36 (22 May 18)
NSC 1000 XIC	21351.66	18291.28	22319.39 (21 May 18)	17900.65 (27 Dec 18)	22319.39 (21 May 18)
Numis Mid Cap XIC	23349.66	19712.22	24271.68 (14 Jun 18)	19195.31 (27 Dec 18)	24271.68 (14 Jun 18)
Numis Alt. Markets	2327.36	1921.10	2432.67 (3 Sep 18)	1890.63 (27 Dec 18)	5403.42 (10 Mar 00)
FTSE All-Share	7265.66	6577.39	7572.51 (22 May 18)	6436.02 (27 Dec 18)	7572.51 (22 May 18)
<b>Capital gains index</b>					
NSCI	7527.27	6491.48	7606.45 (16 Jan 18)	6372.23 (27 Dec 18)	7606.45 (16 Jan 18)
NSCI XIC	8492.54	6974.29	8558.13 (22 May 18)	6802.50 (27 Dec 18)	8558.13 (22 May 18)
NSC 1000 XIC	10292.03	8547.36	10620.30 (21 May 18)	8363.02 (27 Dec 18)	10620.30 (21 May 18)
Numis Mid Cap XIC	8293.01	6794.00	8496.11 (14 Jun 18)	6615.41 (27 Dec 18)	8496.11 (14 Jun 18)
Numis Alt. Markets	1297.00	1051.39	1340.81 (14 Jun 18)	1034.66 (27 Dec 18)	3898.22 (10 Mar 00)
FTSE All-Share	4221.82	3675.06	4324.41 (22 May 18)	3596.07 (27 Dec 18)	4324.41 (22 May 18)

Source: FTSE Russell, Scott Evans and Paul Marsh, Numis

## NSCI size cut-off is £1,334 million

The extensive family of Numis indices is designed to monitor the performance of the smaller companies sector. The main version of the NSCI covers the bottom tenth by value of the UK equity market. The NSC plus AIM brings Alternative Investment Market securities into the index if they are below the NSCI's market-capitalisation limit. The NSCI XIC is the version of the NSCI index that omits investment instruments. In order to cover one-tenth of the value of the UK equity market at the start of 2019, the market capitalisation cut-off for the NSCI was set at £1,334 million. The largest company in the index as at the rebalancing date (close of business on 28 December 2018) was Renewables Infrastructure Group, an investment trust first listed in July 2013.

This cut-off is the upper limit on market-cap for the 2019 NSCI indices. The rebalanced NSCI now contains 707 companies and 746 underlying securities. The rebalanced NSCI XIC now has 359 constituent companies and the same number of underlying securities.

## NSC 1000 cut-off is £465 million

The NSC 1000 targets "minnows" covering the bottom 2% by value of the UK equity market (where, in this case, the value excludes investment companies). When we first launched the index, the 2% cut-off rule gave rise to exactly 1000 constituents, including investment companies, hence the index name. For some years, the number of constituents was rounded to precisely 1000 companies. However, from 1998, we reverted to the strict 2% rule. As we enter 2019, this rebalancing rule gives an NSC 1000 cut-off of £465 million; the rebalanced NSC 1000 now has 527 companies and 563 underlying securities.

## NSCI worth 2.7x the FTSE SmallCap

The NSCI covers a pre-specified 10% of the value of the UK equity market. In contrast, the FTSE SmallCap comprises FTSE All-Share constituents that rank below the largest 350 index constituents. This gives rise to a different profile for the two indices. Since inception, the FTSE SmallCap has shrunk from covering around 10% of the UK equity market to just 3.7% today. If it were rebalanced at the same date as the NSCI, the largest FTSE SmallCap constituent would have been worth £595 million (this being the 351st ranked FTSE-eligible company), which is above the cut-off for the NSC 1000 (£465 million) but far smaller than the NSCI cut-off (£1,334 million).

In the following section we look in more detail at the performance of all the Numis indices over 2018. This is followed by a detailed analysis of the characteristics of the indices as we enter 2019. Section 4 then updates the long-term performance record.

**Figure 20. The NSCI during 2018**



Source: FTSE Russell, Scott Evans and Paul Marsh, Numis

## 2. Index performance during 2018

### NSCI underperformance

Figure 20 compares the capital value of the NSCI index to the FTSE All-Share over 2018. The indices entered the year at a level of 7,527 (with the FTSE All-Share rebased to the NSCI's opening value). It was a volatile year. Both indices started the year positively, but declined sharply towards the end of January in line with a worldwide decline in stock prices. Renewed confidence in the second quarter led to a strong rebound pushing both the NSCI and FTSE-All Share to all-time highs. The euphoria was short lived and following a period of sideways drift, a second worldwide fall in stock prices led to a very poor fourth quarter. From end-September until the trough on 27 December, both indices fell by 13%.

Figure 20 shows that the NSCI and FTSE All-Share capital gains indices tracked each other closely, with the NSCI underperforming by 0.8%. However, this gives a misleading impression of small-cap performance. First, the NSCI has a lower dividend yield, and in total return terms, underperformed by 1.5%. Second, the NSCI has a high weighting in investment companies, which performed relatively well in 2018. Stripping these out, as they mostly invest in large-caps, the NSCI XIC underperformed the All-Share by 5.9%.

### Ex investment companies

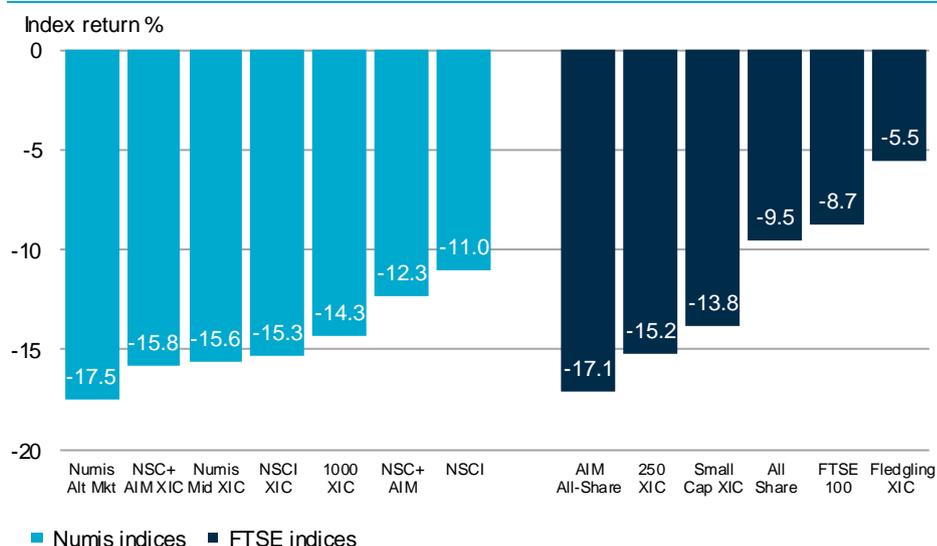
The chart below shows the differential in performance between small, mid and large-caps in 2018 based on total returns, including reinvested dividends. On the left, we show the Numis indices. The NSCI fell by -11.0% over the year. After stripping out investment companies, the total return of the NSCI XIC was -15.3%. This was closely matched by the Numis Mid Cap index XIC and the NSC plus AIM XIC at -15.6% and -15.8% respectively.

### Comparison with FTSE indices

On the right of the chart, we report the returns of the FTSE indices. The larger companies of the FTSE 100 put in the best relative performance with a total return of -8.7%. As the FTSE 100 makes up nearly 80% of the FTSE All-Share, the latter's performance was not greatly impacted by the inclusion of small- and mid-cap companies.

The FTSE 250 XIC performed very much in line with the Numis Mid Cap XIC index with a total return of -15.2%. Similarly, the FTSE AIM All-Share index performed in line with the Numis Alternative Markets index, with a return of -17.1%. The star performer of the FTSE family was the FTSE Fledgling Index XIC with a return of -5.5%. The Fledgling index was also the best performer the previous year, although given its low number of constituents it can be influenced by the performance of just a handful of companies.

Figure 21. Total returns on Numis and FTSE indices during 2018



Source: FTSE Russell, Scott Evans and Paul Marsh, Numis