

Numis

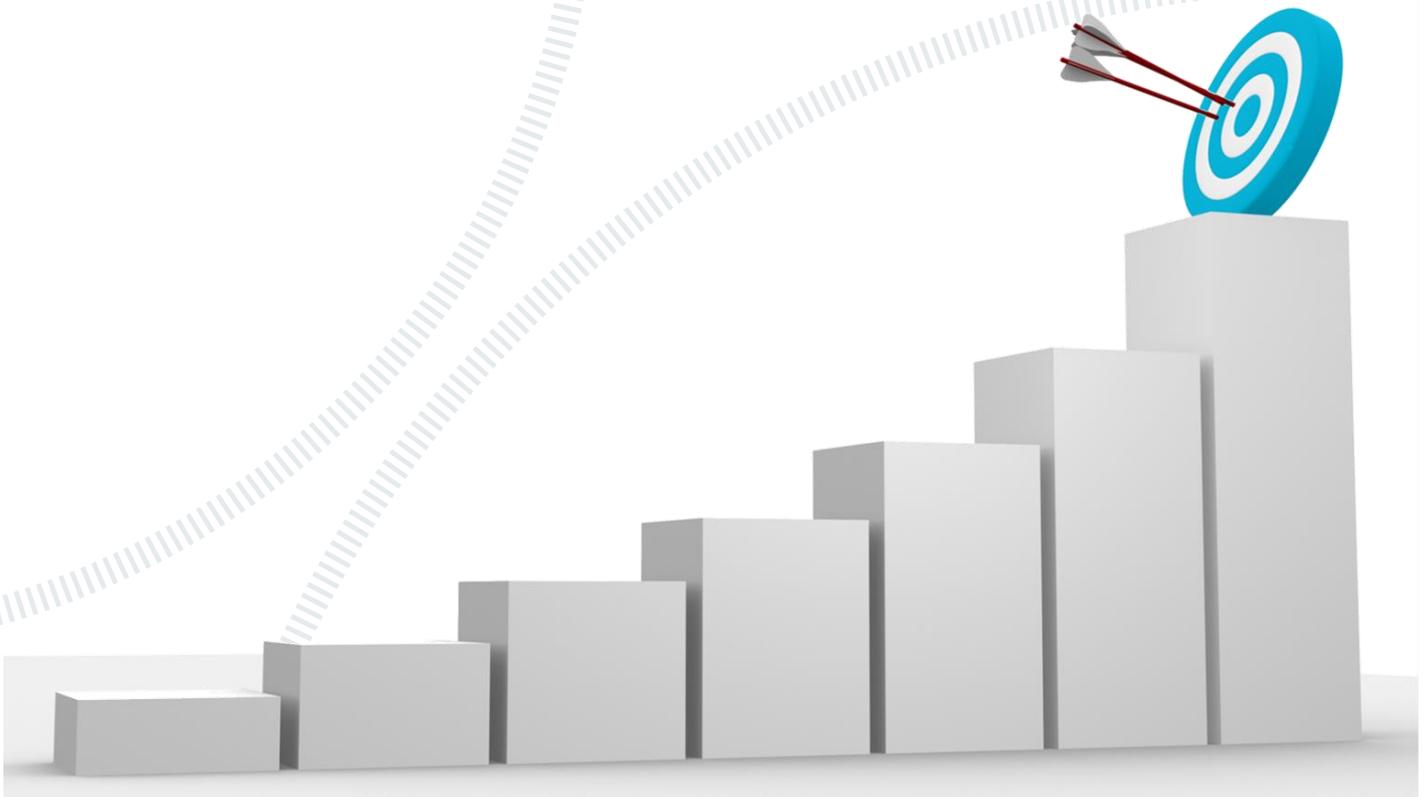
NSCI

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Numis Smaller Companies Index

2018 Annual Review



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Quick Guide to the Numis Smaller Companies Index

The NSCI is produced by Scott Evans and Paul Marsh of London Business School

The definitive benchmark

The Numis indices were launched at the start of 1987. They have been published continuously for 31 years and have a back-history to 1955. Since their launch, they have provided the definitive benchmark for monitoring the performance of smaller UK companies. NSCI data and related research is distributed by Numis.

The Numis index family

The main version of the NSCI covers the bottom tenth by value of the main UK equity market. It has been calculated on a consistent basis for 63 years, 1955–2017. The NSC plus AIM index adds in AIM stocks that meet the NSCI size limit. The NSCI ex-investment companies (XIC) screens out investment instruments. In addition, the NSC 1000 index targets the bottom 2% of the UK market, on an XIC basis. The Numis Mid Cap covers the bottom 20% by value of the main UK equity market, excluding the bottom 5%. The Numis Alternative Markets Index includes all companies listed on qualifying UK alternative markets. Currently, only AIM qualifies.

Performance in 2017

Over 2017, the NSCI gave a total return of 18.8%, versus 13.1% for the FTSE All-Share, an outperformance of 5.7%. The equivalent figures for other key Numis indices were NSCI XIC, 19.5% (6.4% outperformance), NSC 1000, 19.2% (6.1% outperformance) and Numis Alternative markets index, 27.4% (14.3% outperformance). During 1955–2017, the NSCI gave an annualised return of 15.2%, which is 3.4% above the FTSE All-Share; the NSCI XIC returned an annualised 15.4%, and the NSC 1000 gave an annualised return of 16.7%, 4.9% above the FTSE All-Share.

Index composition for 2018

At the start of 2018, the NSCI has 703 constituent companies, of which 350 are non-investment companies. The NSC plus AIM index has 1,655 constituent companies, the NSC 1000 index has 531, and the Numis Alternative Markets index has 958. At the turn-of-the-year rebalancing, the largest NSCI constituent (Polar Capital Technology) had a value of £1527 million, while the largest NSC 1000 company (Nostrum Oil & Gas) was worth £611 million. The average market-cap of NSCI companies is £387 million; for the NSC 1000 it is £191 million.

Sector weightings

The NSCI has a significant weighting in industrials and investment instruments, which together comprise just over a half (53.9%) of the NSCI index and almost two-thirds (63.1%) of the NSC 1000. In relative term, the Numis indices are heavy in industrials, technology, and investment instruments. They are light in oil and gas, consumer goods, health care, telecommunications, and utilities. At the sector level, the NSCI and NSC 1000 have no constituents at all in forestry and paper, tobacco, or mobile telecoms.

Volatility and diversification

Individual index constituents have volatile share prices. However, a diversified portfolio of NSCI constituents has historically had similar variability to the FTSE All-Share. The volatility of the NSCI has fallen recently. It is now at a record low of 8.7% and is below that of the FTSE All-Share. Smaller company returns are imperfectly correlated with larger company returns, and risk is reduced by diversifying across both segments of the market.

Ratings and investment style

At the start of 2018, the dividend yield on the NSCI was 2.80% (ex-investment companies, 2.76%) and the P/E multiple, ex-loss makers, was 16.48 (ex-investment companies, 14.32). The dividend yield on the NSC 1000 was 2.94% (ex-investment companies, 2.61%) and the P/E ratio was 17.25 (ex-investment companies, 13.17).

New topics in this year's Review

This year's Review introduces the newly launched Numis Alternative Markets index; provides an analysis of the trends in research coverage of smaller companies and the relationship between analyst recommendations and investor returns; and reviews when small-caps have done well (and badly) historically in terms of different market, economic, monetary and political conditions.

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Foreword

by the Head of Research, Numis

It is with great pleasure that for the sixth year Numis publishes the Annual Review of the Numis Smaller Companies Index. Over the last 31 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 63 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.

During 2017 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 63 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 2017

by Scott Evans and Paul Marsh

Markets at record highs

2017 was an excellent year for equities. Nearly all major equity markets ended the year on record highs. It was also a year of strong performance for UK small- and mid-cap companies with all but one of the Numis indices ending the year at an all-time high. This occurred despite continued concerns over Brexit, numerous downgrades to forecasts of UK economic growth, and political turmoil following the unexpected general election and its result in June.

Smaller companies outperformed

While the UK market performed well with a 13.1% return from the FTSE All-Share, the large companies in the FTSE 100 underperformed the FTSE All-Share by 1.1%, while the smaller companies in the NSCI outpaced the broader market, outperforming by 5.7% (see Figure 1 below). Excluding investment companies (XIC), the NSCI XIC outperformance was 6.4%.

Mid-caps rebounded

Last year saw a rebound in the performance of mid-cap companies. Having been the underperformers of 2016, the Numis Mid Cap index XIC companies ended the year up 20.3%, outperforming the FTSE All-Share by 7.2%. At the other end of the size spectrum, the minnows of the NSC 1000 XIC were only a fraction behind the mid-caps returning 19.8%.

The new Numis Alternative Markets index was the star

2017 also saw the launch of the Numis Alternative Markets index. This new index includes all companies listed on qualifying UK alternative markets. Currently, only AIM qualifies, but the index back-history goes back to 1980 and also includes stocks traded on the now discontinued USM and Third Market. As Figure 1 shows, it was the best performing index of the entire Numis family of indices, outperforming the FTSE All-Share by 14.3%.

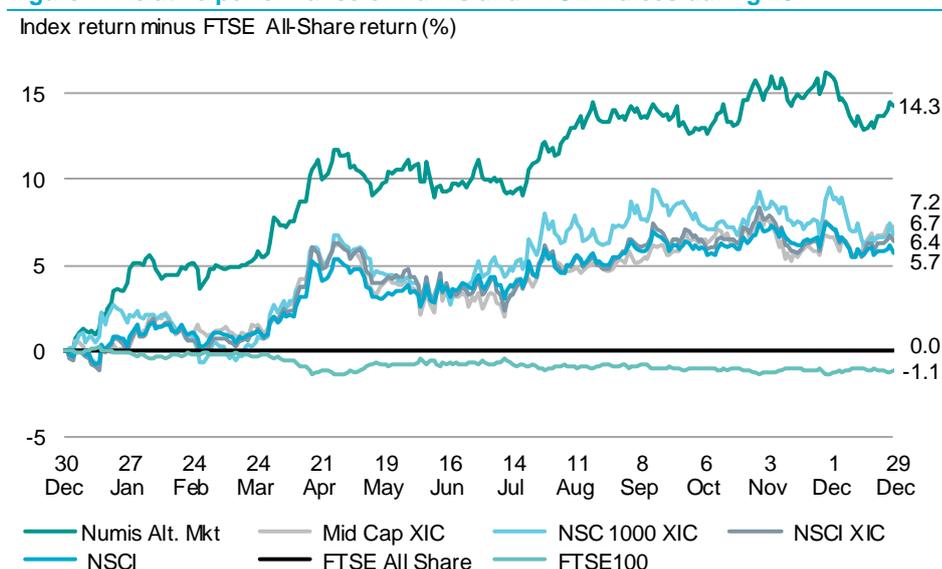
Ratings increased, volatility fell

In 2017, earnings multiples (PEs) rose, while volatility fell. By end-2017, the FTSE All-Share XIC's trailing PE (excluding loss-makers) rose to 21.7, while the NSCI XIC PE grew to 15.4. However, the annual rebalancing led to the replacement of some highly rated stocks with lower rated companies. The NSCI XIC therefore starts 2018 on a PE of 14.3, a 34% discount to the FTSE All-Share XIC. Meanwhile, NSCI volatility fell to its lowest level on record. The five-year historical volatility on the NSCI is now lower than on the FTSE All-Share.

Annualised return of 15.2%

In summary, an excellent year for the NSCI and the long-term outperformance relative to large-caps remains intact. Over the 63-year history of the index, the annualised return on the NSCI is 15.2%, which is 3.4% greater than the annualised return on the FTSE All-Share.

Figure 1: Relative performance of Numis and FTSE indices during 2017



Source: Scott Evans and Paul Marsh, Numis

International performance of small-caps

Record highs around the world

Spurred on by strong global growth, US tax cuts and continuing accommodative central bank policy, almost all international equity markets ended 2017 in positive territory. Like the UK, many hit record highs and enjoyed double-digit returns. Given this rise in global indices, we know that large caps did well in 2017, so what about the world's smaller companies? To answer this, Figure 2 ranks countries by 2017 size premia and compares this to total returns and size premia calculated over the longer period since 2000. We examine all countries with a weighting of 0.5% or more in the FTSE World Index at the start of 2017. This gave 22 countries, accounting for over 96% of world equity market capitalisation. We measure performance in local currency using the MSCI small- and large-cap indices, except for the UK, where we use the NSCI for small-caps and the FTSE All-Share to proxy large-caps.

Positive returns in all countries

The line plot in Figure 2 shows that total (absolute) small-cap returns in each of the markets were positive. While the variation in returns was large, ranging from 57% in India to just 6.1% in Canada, small-cap returns were nonetheless positive everywhere.

Large variation in size premia

There was, however, a large variation in size premia across markets. What at first looks like an east vs west result, with China (-28%) at the far left of the chart and Brazil (31%) at the far right, is in fact a mixture of returns with no discernible patterns other than emerging markets (China, South Africa, India and Brazil) being at the extremes of performance. Although the 2017 size premium was positive in almost two-thirds of the countries, the world premium was just 0.3%, so globally, small-caps just beat large-caps.

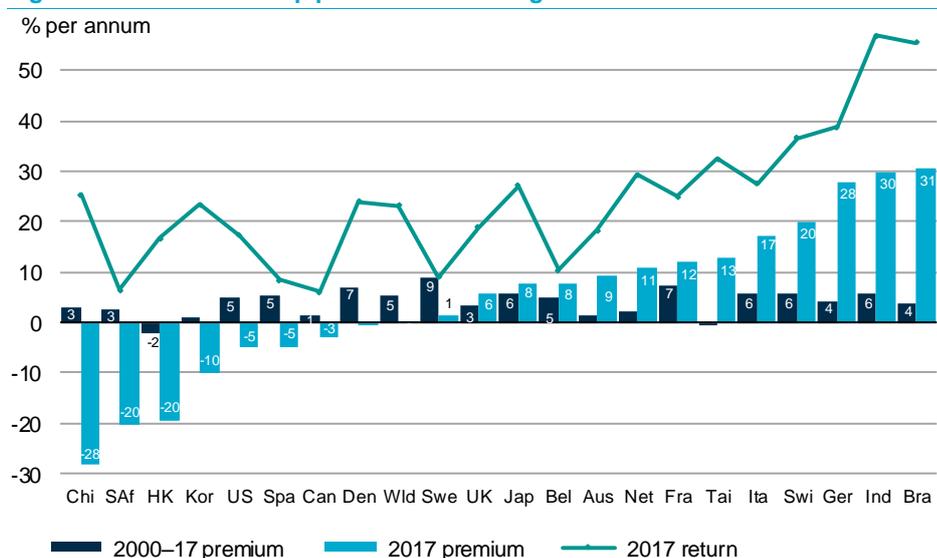
US and UK different again

The US accounts for over half of world market capitalisation, so the underperformance of US small-caps by 5% in 2017 helps explain the tiny world size premium. In last year's Annual Review, we noted the steady increase since 1960 in small-cap return correlations across countries. However, we also noted that the US and UK had diverged for two years. With a third year of size premia going in opposite directions, this could be further evidence of a de-coupling of the world's two largest markets for smaller companies.

The period since 2000 has been a golden age for small-caps globally

Finally, the black bars in Figure 2 show that, since 2000, the annualised small-cap premium has been positive in 20 out of 22 countries, the exceptions being Hong Kong and Taiwan. Over this period, world small-caps beat large-caps by an annualised 5.2%, while the corresponding figures for the USA and UK were 5.0% and 3.4%, respectively.

Figure 2: Global small-cap performance during 2017 and from 2000–2017



Source: Scott Evans and Paul Marsh, Numis

Factor investing in perspective

Five factors

Factor investing, or smart beta, is increasingly popular with factor-based funds hitting the USD1 trillion milestone in 2017. For several years, Numis has distributed monthly updates on the performance of style factors within the NSCI XIC. These factors are value (book-to-market), size (within small caps), income (dividend yield) and momentum (winners minus losers). We also periodically analyse a fifth factor, low volatility.

Long-term excess returns

Factor investing is popular because of the large body of research showing that factors have generated long-term premia (for a review, see Dimson, Marsh and Staunton (2017)). Using NSCI data from 1955–2017 (from 1979 for low-volatility), we find positive long-term premia for all five Numis factors. Momentum has done best, with an annualised premium of 17%, followed by low volatility (4.7%), value (3.9%), income (3.8%) and size (0.9%).

Factors do not deliver every year

Factors clearly do not generate premia in every period. In the table below, we show annual premia for the ten years since the financial crisis, both within the NSCI XIC (bottom panel) and the entire UK market (top panel, "All UK"). We rank returns within each year, showing the best performer at the top. The 2017 NSCI XIC column shows that in 2017, momentum performed best with an 8.8% premium, while value and income gave large negative premia. The figure shows that negative premia are common, and can be substantial.

NSCI factor returns do not always mirror the UK market

UK small-caps differ in many ways from the rest of the UK market (see the main body of this report). NSCI factor returns do not therefore always mirror those within All UK. The 2017 column for All UK illustrates this well. Within small-caps, low vol investing "worked", giving a premium of 6.8%, while in All UK, it "failed" with a premium of -9.6%. Similarly, value gave a negative premium of 7.8% within the NSCI, but a positive 3% within All UK.

Substantial variation and volatility in premia

The colour coding below emphasises the huge variation in year-to-year premia, in terms of the winning style, the rankings, and the magnitudes of the premia. For All UK, there is no obvious pattern even over a decade. For the NSCI XIC, there is greater consistency in terms of the winning style. However, although momentum won in eight years out of ten, investors would have experienced astonishingly low returns of -51.1% in 2009 and -23.7% in 2016.

Short vs the long-term in factor investing

The final column below ("All") shows that, even over a decade, annualised premia can be negative. Value is the outstanding example. For fund managers, this makes rigid adherence to a particular investment style challenging if they are judged on short-term performance.

Figure 3. Factor premiums in the UK market (top panel) and NSCI XIC (bottom panel) since the financial crisis

All UK	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	All
Highest	Low vol 127.0	Size 24.9	Size 12.4	Low vol 35.0	Size 17.0	Momentum 32.4	Momentum 42.8	Low vol 23.7	Value 20.2	Momentum 11.0	Momentum 11.4
	Momentum 78.8	Income 1.1	Value 3.2	Income 28.3	Value 14.8	Size 15.5	Size 12.1	Momentum 20.1	Income 15.3	Size 6.1	Size 5.8
	Income 15.7	Value -6.9	Momentum 0.7	Momentum 20.6	Momentum -1.7	Low vol 11.5	Income -1.3	Size 11.1	Size -4.9	Value 3.0	Low vol 5.0
	Value -11.8	Low vol -20.1	Income -13.7	Size -4.9	Income -8.1	Income 0.0	Low vol -6.2	Income -11.2	Momentum -18.3	Income -0.6	Income 1.9
Lowest	Size -17.5	Momentum -25.4	Low vol -22.9	Value -10.7	Low vol -15.7	Value 0.0	Value -10.0	Value -20.9	Low vol -21.2	Low vol -9.6	Value -2.9
NSCI XIC											
Highest	Momentum 90.8	Income 29.1	Momentum 21.5	Momentum 24.0	Momentum 21.0	Momentum 73.8	Momentum 9.1	Momentum 41.0	Income 17.7	Momentum 8.8	Momentum 14.2
	Low vol 15.2	Size 15.5	Low vol 11.1	Low vol 7.5	Value 11.9	Size 10.4	Low vol 2.4	Low vol 21.8	Size 4.8	Low vol 6.8	Income 2.8
	Income -2.4	Value -2.4	Income -0.4	Income 0.6	Income 7.6	Value 9.1	Income -1.5	Size -3.4	Value 2.8	Size 2.2	Size 0.6
	Size -16.4	Low vol -27.9	Size -2.8	Value 0.0	Size 3.7	Income 1.7	Size -1.9	Income -5.1	Momentum -23.7	Value -7.8	Low vol -1.2
Lowest	Value -18.8	Momentum -51.1	Value -9.7	Size -2.2	Low vol -1.6	Low vol -3.7	Value -4.5	Value -14.0	Low vol -29.1	Income -13.2	Value -3.8

Source: Scott Evans and Paul Marsh, Numis

The Numis Alternative Markets index

Launch of the index in 2017

2017 saw the launch of 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.

Background to alternative or junior markets

Alternative, or junior, markets were established because the main boards or exchanges tend to focus on larger companies and are not always best placed for smaller and newer companies to list their shares. The first UK alternative market was the Unlisted Securities Market (USM), which opened in 1980. It set out to encourage smaller company listings by offering lower costs, and less restrictions in terms of free-float and trading history. The USM was followed by the Third Market, which allowed companies to list but retain tax advantages. The 1987 crash, the early 1990s recession and a relaxation of the entry rules to the main market led to the demise of the USM. To fill the void left by the USM's closure, the Alternative Investment Market (AIM) was launched in June 1995. AIM has proved to be the most successful and longest running of any of the European alternative exchanges.

The evolution of the number of constituents and index value

The left-hand chart below shows the evolution of these markets since 1980 in terms of the number of constituents in, and the total value of, the Numis Alternative Markets index. It shows that the real period of growth was from the tech-boom until the Global Financial Crisis. By end-2007, the index had 1,694 constituents. While the last decade has seen a steady decline in constituents, the index value has now risen to an all-time high of £107bn.

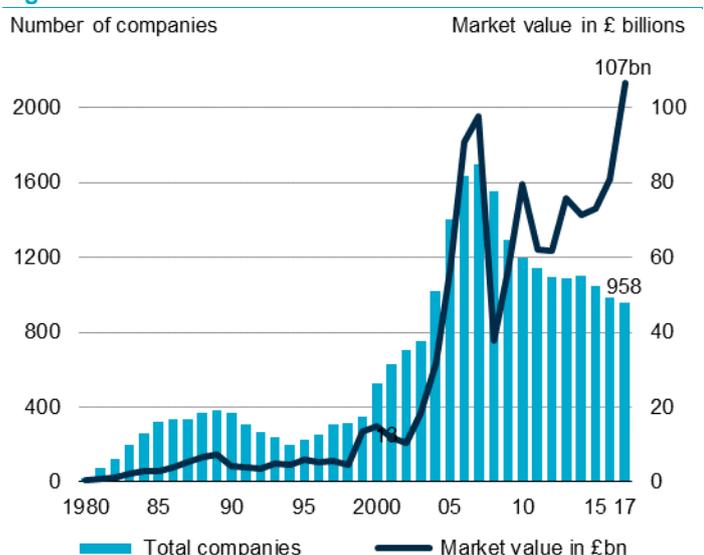
Close correlation with the FTSE AIM All-Share index

The Numis Alternative Markets index now contains all 958 companies, regardless of size, that have AIM listings. Unlike the FTSE AIM All-Share index, we do not exclude stocks on grounds of liquidity, nor do we use free-float weights, and we allow IPOs to enter the index only at the rebalancing date. Despite these differences in methodology, the right-hand chart below shows that the two indices have tracked each other very closely.

Very different sector profile

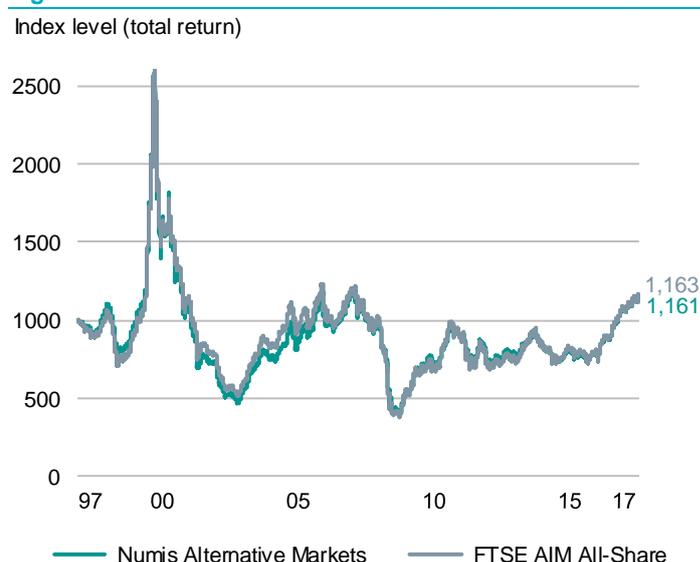
The Numis Alternative Markets index has a very different sector profile than both the UK market as a whole and the NSCI. While AIM is known for resources, its weighting in oil and gas and mining is now just 11.3%, well below the 19.4% for the FTSE All-Share. The index is most heavily weighted in consumer services (especially e-retailing) at 18.3%, followed by industrials (16.2%), technology (11.1%), consumer goods (10.1%), and financial services (9.4%). For a full breakdown, see Tables 12-14 below.

Figure 4. Numis Alternatives Markets index evolution



Source: Scott Evans and Paul Marsh, Numis

Figure 5. Numis Alternative Markets vs FTSE AIM All-Share



Source: Scott Evans and Paul Marsh, Numis

The performance of the Numis Alternative Markets index

Long-term underperformance

The left-hand chart below shows that the long-term performance of the Numis Alternative Markets index has been very poor, both relative to other Numis small-cap indices and to the market as a whole, measured by the FTSE All-Share. The underperformance is not limited to the AIM era. Since the launch of AIM, the Numis Alternative Markets index has under-performed fully listed small-caps by 8.6% per year. Over the preceding 16 years of the USM, the underperformance was even greater at 9.5% p.a.

Explaining lower returns

Over the years, we have tried to explain this underperformance. We have ruled out excessive bankruptcies, or the notion that the strongest performers move to a full list where they perform well (on average, they do not). However, alternative (or junior) markets like AIM, and the USM before it, have clearly been very exposed to recent IPOs, young and unseasoned companies, growth stocks, and fad businesses (e.g., dot-coms, internet gambling, small resource and commodity stocks, alternative energy). We have shown evidence that each of these groups has performed poorly, irrespective of whether the stocks were AIM-listed. It is also possible that investors were initially too enthusiastic about junior markets, but over time, revised their estimates of growth downwards, while raising their risk estimates and required returns, thus hurting stock prices.

A brighter future from a maturing market?

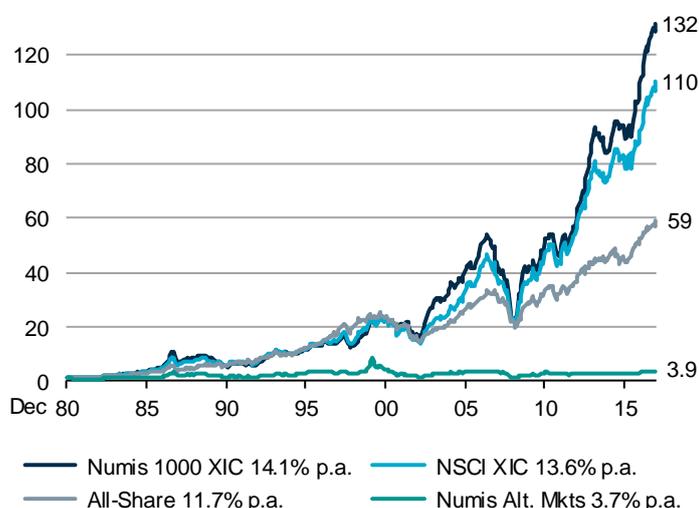
Looking ahead, this re-rating process has hopefully run its course. Investors, too, will have learned from their experience. Furthermore, the AIM market is now more mature, with a much lower exposure to recent IPOs (see page 51 below). Many AIM stocks now pay dividends, there are fewer fad stocks, and there are a large number of solid companies with good businesses listed on AIM. Maybe getting older does have its benefits after all!

Best performer in 2017

Indeed, as we have seen, the Numis Alternative Markets index was the best performing index in 2017 with a return of 27.4%. This means that the index has now bucked its long-run trend for the past two years. As the right-hand chart below shows, the two-year return has been 48% compared with 34% for the NSCI and 32% for the FTSE All-Share. Furthermore, the performance has been broad-based. In 2016, AIM outperformed in 21 out of 34 ICB sectors, while in 2017, it outperformed in eight of the ten ICB industries (for further details, see last year's Annual Review and page 23 below). The question now is whether this will be the start of a sustained reversal of the past trend?

Figure 6. Numis Alternative Markets: long-run performance

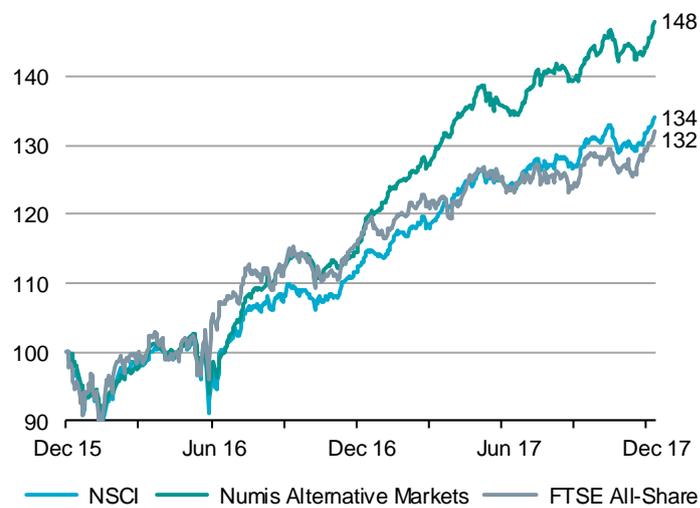
Cumulative return from £1 invested in Dec 1980 to Dec 2017



Source: Scott Evans and Paul Marsh, Numis

Figure 7. Numis Alternative Markets: short-run performance

Cumulative return from £100 invested in Dec 2015 to Dec 2017



Source: Scott Evans and Paul Marsh, Numis

Major changes to financial regulation

MiFID II and trends in research coverage

The Markets in Financial Instruments Directive (MiFID II) is one of the most significant regulatory changes facing the European financial services industry. The aspect of the legislation that has received the most attention is the change in the way that fund managers will be required to pay for broker research. The main concern is that the requirement to budget separately for research could have the unintended consequence of significantly reducing the level of company research. In turn this could have the effect of reducing liquidity, and increasing the volatility of returns of smaller companies.

Concerns over research coverage

The potential implications of MiFID II are complex and wide-ranging so we have focussed on just two aspects that are of interest to small-cap investors. First, we examine the evolution and current level of research coverage of small-caps. Second, we focus on the level of research coverage and its importance for investment returns. To do this we created a dataset of all fully listed companies that existed between 2002 and 2017. We added analyst coverage details from Bloomberg, recording the number and type of recommendation for each company. We focus on companies that were members of both the NSCI and a FTSE index. We exclude investment companies. We cover all members of the FTSE All-Share, FTSE-Fledgling and over 95% of the market value of the NSCI.

Mid-cap coverage has increased

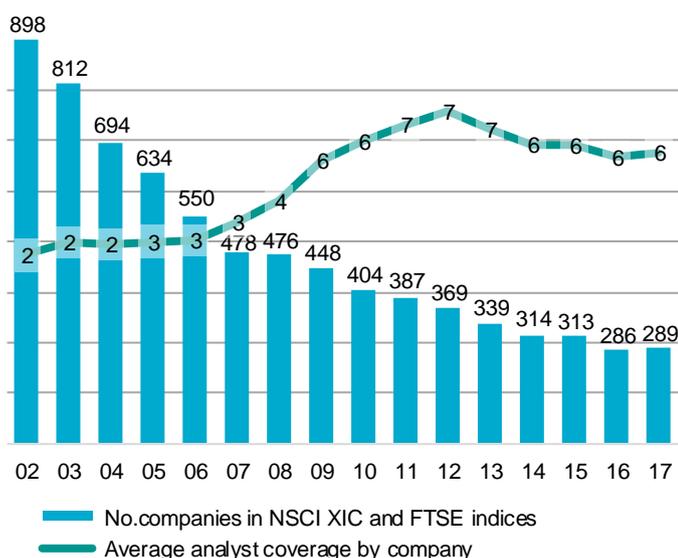
The figures below present two important findings. First, since 2002 the average number of analysts covering NSCI companies (with at least one recommendation per company) has steadily increased. However, this has occurred at a time when the NSCI universe of small-caps has fallen by almost two-thirds. Second, we compare the percentage of total research coverage by company size quintile (based on market capitalisation). The proportion of total research coverage dedicated to the largest companies has steadily declined. Meanwhile, the proportion of research dedicated to mid-caps (quintiles 2 and 3) has greatly increased. Finally, the proportion of research covering the smallest companies has remained very small with many companies having no or very low coverage.

Some conclusions

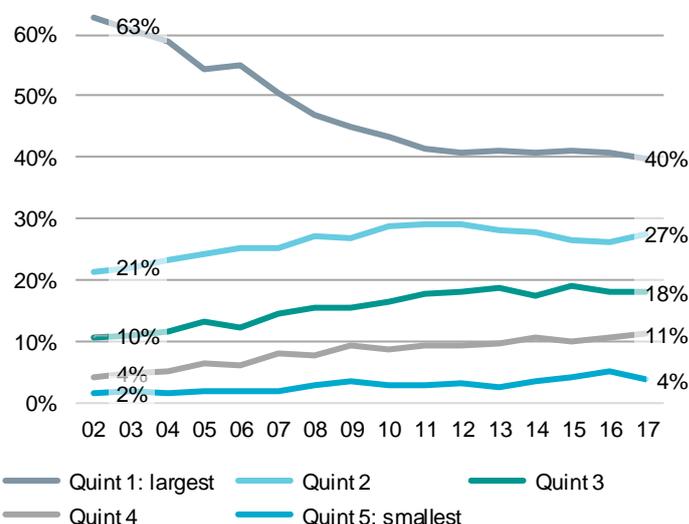
In relation to MiFID II this suggests the very smallest companies already have no or limited research (often just their broker) which seems unlikely to change. The largest companies have already experienced a significant decline in the proportion of research coverage, so further cuts may be limited. Mid-caps, however, look most at risk of cuts, if there are to be any, given the concentration of coverage that has taken place over the past 16 years.

Figure 8. Research coverage of smaller companies

Figure 9. Percentage of research coverage by size quintile



Source: Scott Evans and Paul Marsh, Numis



Source: Scott Evans and Paul Marsh, Numis

Research coverage and returns

Relative returns tend to increase with research coverage

Brokers' recommendations are valuable for small- and mid-caps

Brokers' research is far more than just recommendations

Research coverage and investment returns

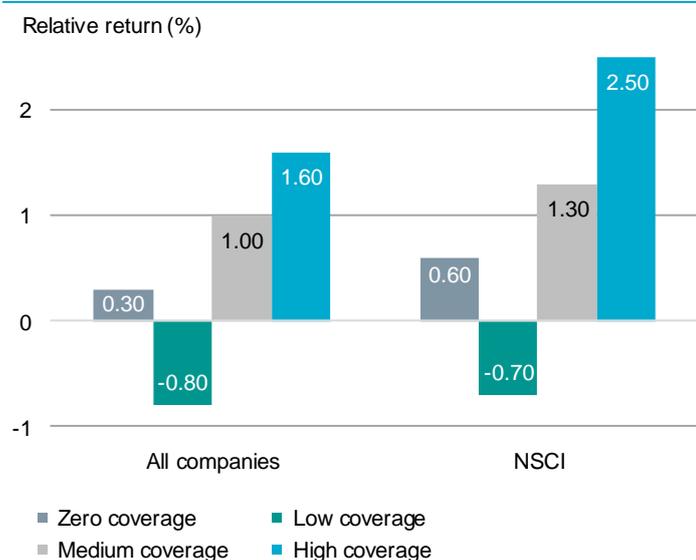
We also analysed the relationship between research coverage and returns. Our recommendations were all logged from Bloomberg in mid-January from 2002–17. In each case, we compute the total return from the recommendation date to the year-end. We look separately at NSCI, Numis Mid Cap and non-Numis stocks (mostly FTSE 100 companies). We then compute the relative return by deducting the return on the index to which it belongs. We categorise the level of research coverage for each company as being zero coverage, low coverage (1 to 2 analysts), medium coverage (3 to 6) or high coverage (7 and above).

First, we look at the claim that companies with low or no research coverage tend to have lower returns. Figure 10 shows that for companies with no research, relative returns were positive, albeit very small at 0.3% (0.6% for NSCI stocks). Companies with low coverage had mildly negative relative returns, whereas companies with medium or high research coverage had higher relative returns. Most recommendations were buys. Given that relative returns tended to be higher the greater the coverage, this suggests that brokers buys have some forecasting ability. The small outperformance by the companies with zero coverage may be because these companies were lowly rated due to “neglect”, giving them a higher expected, and hence on average higher actual, return (and higher cost of capital). However, the magnitude of the excess returns was small and not statistically significant.

Figure 11 shows the results of a more direct test of the usefulness of recommendations. We focus only on cases where there is a strong consensus buy (at least 75%). We explore how relative returns vary with the minimum number of recommendations, splitting the results by whether the company is in the NSCI or Numis Midcap indices or the residual, large-cap category. For NSCI constituents, we find that relative returns are positive, except when we include stocks with just one recommendation. For the Numis Mid Cap, relative returns are positive when we have at least five recommendations. In both cases, the relative returns are larger, the greater the coverage. However, Figure 11 shows that for large caps, the ability to enhance returns through recommendations seems limited.

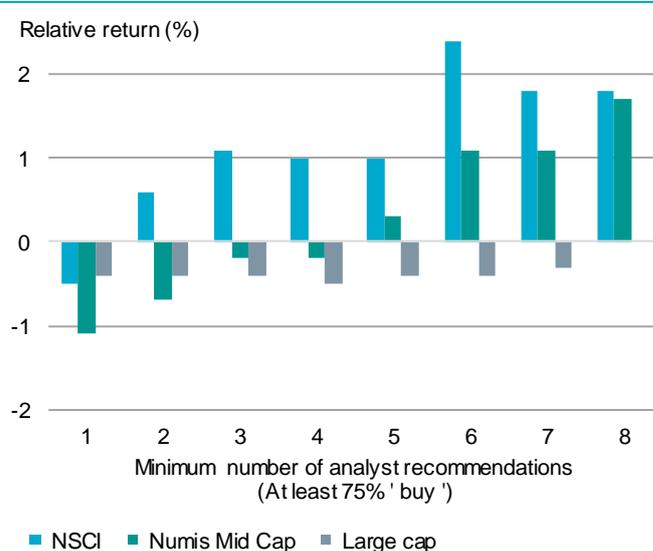
Brokers' research comprises much more than just recommendations. Top analysts are valued for their depth of knowledge about, and insights into, companies. Their research can be invaluable, even if their recommendations are not. It is a major bonus, therefore, to discover that, at least within the Numis universe, brokers' recommendations do have value, although the number of recommendations and the degree of consensus also matters.

Figure 10. Level of research coverage and relative returns



Source: Scott Evans and Paul Marsh, Numis

Figure 11. Relative returns and analyst recommendations



Source: Scott Evans and Paul Marsh, Numis

When do small caps do well?

Financial market strength

Financial markets have been doing well, with 2017 seeing record highs in many major markets. UK small- and mid-caps did particularly well. Global growth has been strong and the financial crisis is ten years behind us. Valuations may be high, but volatility is at a record low, which for some investors is indicative of strong and stable markets.

Concerns are rising

Other investors take a different view and are concerned that the bull market in financial assets could soon end abruptly. They are concerned that the rise in share prices has taken place against a backdrop of increasing political and economic uncertainty. In the UK, inflation has risen and interest rates have been hiked for the first time in ten years (albeit by only 0.25%). Brexit is still a major unknown that may discourage investment and dampen the level of inward investment. There is also a possibility of a Labour government, which some believe to be a threat to business and economic growth.

Identifying different scenarios

Given the changing economic and political backdrop, the question arises of how the NSCI will fare under different scenarios. Under what economic, monetary, market and political conditions do small-caps do well or badly? To address this, we have used the 63-year back-history of the NSCI and looked at nine different scenarios/regimes.

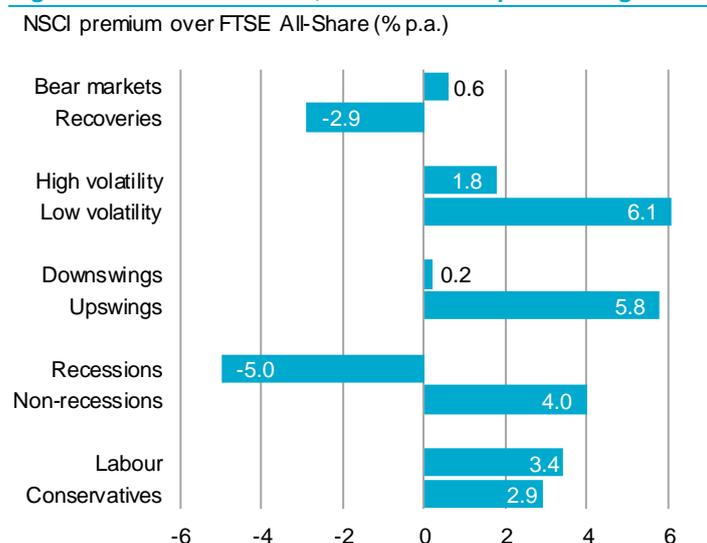
The scenarios and the four charts

The charts below show the scenarios we have examined, and the annualised historical NSCI premium (or discount) over the FTSE All-Share in each case. The left hand chart looks at different market, economic and political regimes, while the right-hand chart focuses on monetary and interest rate variables. On the facing page, the left-hand chart shows the total time spent in each regime (out of 63 years), while the right-hand chart shows absolute returns on the NSCI and FTSE All-Share under selected regimes.

Bear markets and recoveries

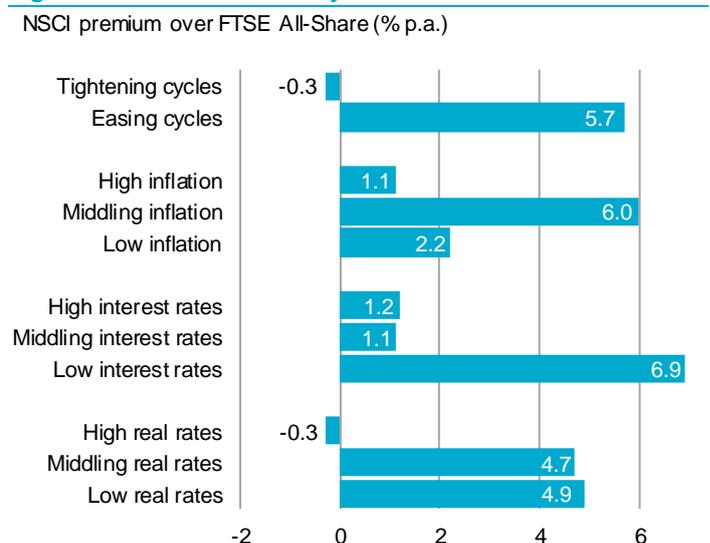
We identify, with hindsight, bear markets defined as being the major down-markets for UK equities. Also with hindsight, we select the bottom of the market and then invest until the market has recovered, or one year has elapsed, whichever is sooner. These are “recovery” periods. Figure 14 shows that 10.6 years (out of 63) were spent in bear markets. Figure 15 shows that absolute returns were dire (by definition), but recovery period returns were consolingly strong. Figure 12 shows that, in relative terms, the NSCI slightly outperformed in bear markets, but underperformed in recoveries. However, these small premia are dominated by the magnitude of the absolute returns over these periods.

Figure 12. Different market, economic and political regimes



Source: Scott Evans and Paul Marsh, Numis

Figure 13. Different monetary and interest rate conditions



Source: Scott Evans and Paul Marsh, Numis

Low volatility has been good for the NSCI

We estimated monthly UK market volatility using intra-month daily data. We then compared returns over the third of months with the highest volatility and the third with the lowest. Figure 12 shows that small caps do best when volatility is low, with a 6.1% premium. However, they do relatively well during high volatility, with a 1.8% premium.

Downswings and especially recessions are bad for the NSCI

We identify UK recessions as a decline in gross domestic product (GDP) for two or more consecutive quarters. We use Economic Cycle Research Institute data to identify peaks and troughs, and hence economic cycle upswings and downswings. Figure 12 shows that in periods of recession small-caps underperform larger companies by a significant margin (5%). However, Figure 14 shows that only 6.8 years out of 63 were spent in recessions, while just over 30 years could be categorised as downswings. If we focus on downswings, rather than the more extreme periods of recession, we find that small-caps perform more or less in line with larger companies (a near-zero premium), but do particularly well in upswings. Figure 15 shows the annualised absolute returns over these periods.

The NSCI premium has been indifferent to political party

Figure 14 shows that Conservative-led governments have been in power for almost two-thirds of the time since 1955. Figure 15 shows that annualised returns have been some 4% higher for both the UK market and the NSCI during Conservative administrations. However, Figure 12 shows the NSCI premium has been slightly higher under Labour.

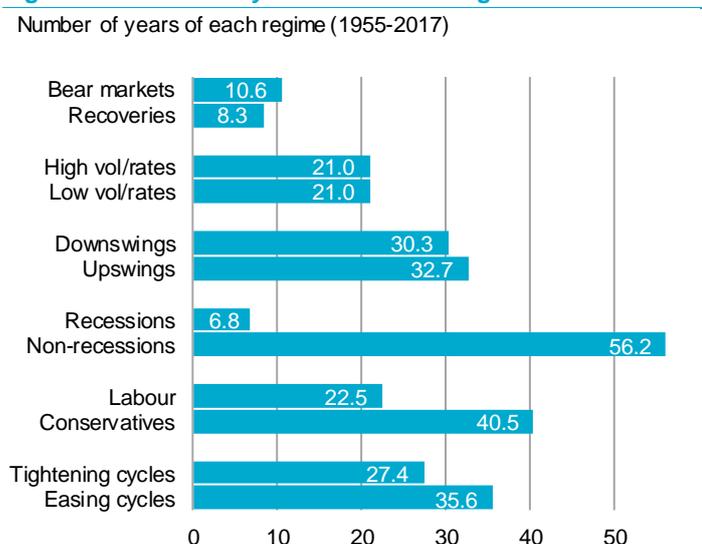
Tightening cycles have been bad for the NSCI

A tightening cycle is a period when interest rates rise; the first rate cut then defines the start of an easing cycle; this runs until the first rate rise, when a new tightening cycle begins. Figure 13 shows that the entire NSCI size premium was earned during easing cycles; during tightening, small-caps slightly underperformed. We also look at inflation, short-term nominal interest rates and real interest rates. To do this, we sort monthly data on these variables, and examine the one third of months with the highest value versus the one third with the lowest. Figure 13 shows that the most positive scenario for small-caps has been one of low nominal rates, middling inflation, and low to middling real rates.

Good and bad scenarios

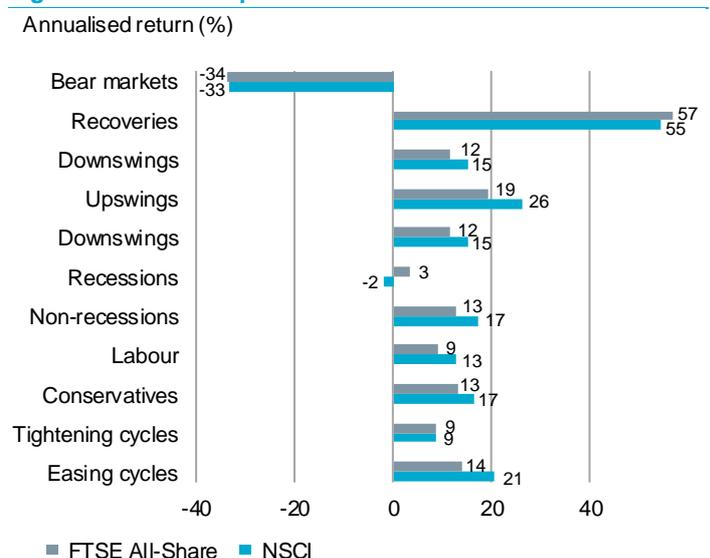
To conclude, our analysis reveals that small caps have done particularly well in relative terms in periods of low volatility, normal economic growth, low interest rates and middling inflation. They do relatively badly in periods of recession, downswings, high real rates, tightening cycles and during market recoveries. History can only ever be a partial guide for investment decisions, but these results provide helpful background. The harder task is deciding exactly where we are with regards to macroeconomic and market conditions.

Figure 14. Number of years of different regimes/conditions



Source: Scott Evans and Paul Marsh, Numis

Figure 15. Absolute performance in a selection of scenarios



Source: Scott Evans and Paul Marsh, Numis

Most significant event in the post war era

BREXIT - one year (and three months) to go

The decision made by the UK electorate in June 2016 to vote in favour of leaving the European Union is regarded as one of the most significant political events to occur in the post-war period. Six months after the vote, the word Brexit entered the Oxford English Dictionary. The impact that Brexit had on financial markets led us to devote a substantial part of the Highlights section of the 2017 Annual Review to the impact of the Brexit vote on smaller companies. Now one year on, we are updating some of our findings.

Overseas sales and devaluation

We are revisiting the aspects of our research that last year generated the greatest interest. First, we look at the performance differential between domestically oriented companies and those with a substantial proportion of their business overseas. Second, we revisit the performance of the NSCI following major sterling devaluations, of which Brexit was one of four cases examined. Since we looked at the 250-day period after the currency decline, last year's chart was "unfinished", as only half this period had then elapsed.

In 2016, high overseas exposure stocks performed the best

Last year, we collected geographical sales data for every company quoted on the London stock exchange. We found that NSCI XIC companies with the highest overseas exposure outperformed domestically oriented stocks by almost 30%. The mining sector had a major impact, but even ex-miners, the performance gap was 12%. Both groupings were showing similar returns on the eve of Brexit, so this appeared to be a pure Brexit effect.

High overseas exposure stocks again outperformed in 2017

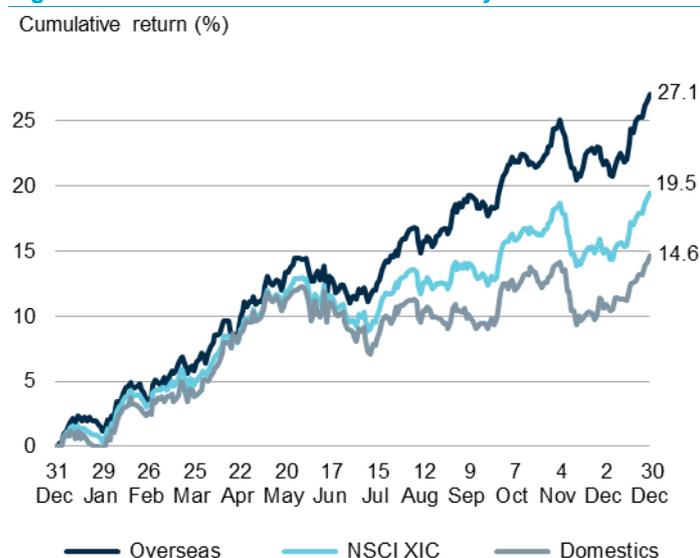
Arguably, this was a one-off effect from the fall in sterling. Now the initial shock of Brexit has dissipated and sterling has appreciated somewhat, we might expect no further impact. However, the left-hand chart below shows that the differential was equally apparent in 2017. The half of the NSCI XIC by value that was most exposed to overseas sales outperformed the domestically oriented half of the index by 12.5%. Clearly, investors are still finding reasons to favour overseas, rather than domestic, exposure.

Positive impact but much lower than previous devaluations

With regard to the relationship that devaluation has had on NSCI performance we have extended our time series to include the full 250 trading days post the Brexit-induced sterling devaluation. Figure 17 plots the cumulative performance for the four main devaluations since 1955. All four events have been followed by a period of positive returns, although the Brexit devaluation has so far had the lowest impact.

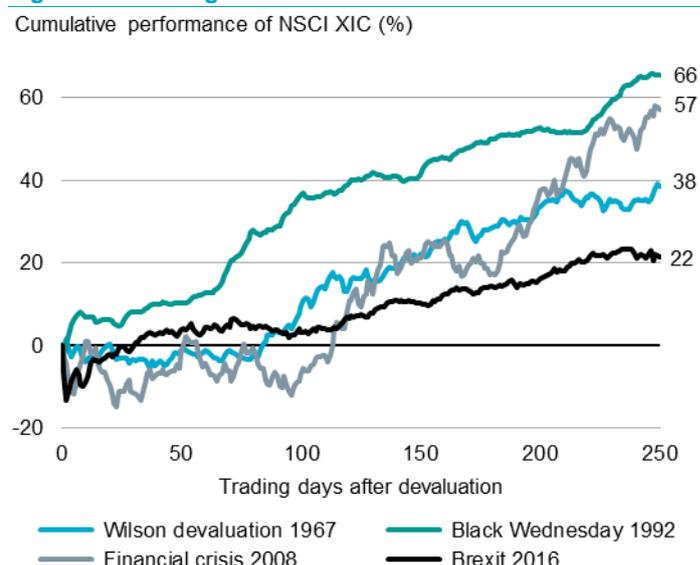
As the deadline for Brexit looms, and uncertainty of what it entails increases, we fully expect to be writing about this subject in the Annual Review 2019. So, watch this space.

Figure 16. Performance of the NSCI XIC by overseas sales



Source: Scott Evans and Paul Marsh, Numis

Figure 17. Sterling devaluation and the NSCI



Source: Scott Evans and Paul Marsh, Numis

1. Index overview

by Scott Evans and Paul Marsh

Excellent year for the NSCI

Despite another year of political and economic uncertainty, 2017 proved to be excellent for smaller companies. All of the Numis indices ended the year on all-time highs, except the newly introduced Numis Alternative Markets index, which was the star performer last year. Unlike 2016 when returns varied widely between the first and second halves of the year, 2017 saw consistently strong performances from smaller companies. The result was a total return for the NSCI of 18.8% compared to 13.1% for the FTSE All-Share. Excluding investment companies, the total return of the NSCI XIC was even higher at 19.5%, an outperformance of 6.4% compared to the FTSE All-Share.

The Mid Cap index rebounds

The Numis Mid Cap index, often seen as the more economically sensitive of the indices had a particularly good year in 2017. This was despite a backdrop of forecast downgrades to UK economic growth and the surprise result of the snap general election held mid-way through the year. Having been the laggard in 2016, the Mid Cap index was far more resilient in 2017 giving a total return of 19.6% and 20.3% ex-investment companies.

Strong performance from the minnows

The NSC 1000, which includes the smallest of the NSCI companies, also put in a very strong performance. Excluding investment companies, the NSC 1000 XIC recorded a total return of 19.8% placing it marginally ahead of the NSCI XIC and only a fraction behind the Mid Cap index.

The Numis Alternative Markets index the star performer

Still a long way off its all-time high, the Numis Alternative Markets index was the star performer of 2017, generating a total return of 27.4% (28.1% XIC). Having been a poorly performing index for much of its history, the very strong performance in 2017 follows on from the good performance in 2016 when it outperformed most other small-cap indices.

All-time highs

As we enter 2018, the NSCI is at an all-time high with a combined market capitalisation of £272 billion. The cut-off for inclusion has increased to £1,527 billion and the total number of companies has risen slightly over the year to 703. The top 20 companies have a combined value of £28.6 billion, 11 of which hit lifetime highs during the year. The top 20 also includes five fallen angels, two of which have seen their valuation decline by over 50% from their highs. The bottom 20 has a combined valuation of just £15 million and all but one of them have been worth more, and in most cases considerably more than they are today. In summary, the NSCI remains an eclectic mix of past winners and losers, but an excellent hunting ground for the small-cap investor.

Table 1. The Numis indices during 2017

	Start-2017	End-2017	2017 High	2017 Low	All-time High
Total return index					
NSCI	16866.82	20039.99	20039.99 (29 Dec 17)	16866.82 (30 Dec 16)	20039.99 (29 Dec 17)
NSCI ex-Inv Cos (XIC)	19074.80	22794.71	22794.71 (29 Dec 17)	19074.80 (30 Dec 16)	22794.71 (29 Dec 17)
NSC 1000 XIC	17819.64	21351.66	21351.66 (29 Dec 17)	17819.64 (30 Dec 16)	21351.66 (29 Dec 17)
Numis Mid Cap XIC	19415.89	23349.66	23349.66 (29 Dec 17)	19415.89 (30 Dec 16)	23349.66 (29 Dec 17)
Numis Alt. Markets	1826.89	2327.36	2327.36 (29 Dec 17)	1826.89 (30 Dec 16)	5403.42 (10 Mar 00)
FTSE All-Share	6424.25	7265.66	7265.66 (29 Dec 17)	6402.77 (31 Jan 17)	7265.66 (29 Dec 17)
Capital gains index					
NSCI	6520.20	7527.27	7527.27 (29 Dec 17)	6520.20 (30 Dec 16)	7527.27 (29 Dec 17)
NSCI XIC	7308.17	8492.54	8492.54 (29 Dec 17)	7308.17 (30 Dec 16)	8492.54 (29 Dec 17)
NSC 1000 XIC	8839.40	10292.03	10292.03 (29 Dec 17)	8839.40 (30 Dec 16)	10292.03 (29 Dec 17)
Numis Mid Cap XIC	7097.83	8293.01	8293.01 (29 Dec 17)	7097.83 (30 Dec 16)	8293.01 (29 Dec 17)
Numis Alt. Markets	1037.88	1297.00	1297.00 (29 Dec 17)	1037.88 (30 Dec 16)	3898.22 (10 Mar 00)
FTSE All-Share	3873.22	4221.82	4221.82 (29 Dec 17)	3858.26 (31 Jan 17)	4221.82 (29 Dec 17)

Source: Scott Evans and Paul Marsh, Numis

NSCI size cut-off is £1527 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 2017, the market capitalisation cut-off for the NSCI was set at £1,527 million, and the largest company in the index as at the rebalancing date (close of business on 28 December 2017) was Polar Capital Technology.

This cut-off is the upper limit on market-cap for the 2018 NSCI indices. The rebalanced NSCI now contains 703 companies and 753 underlying securities. The rebalanced NSCI XIC now has 350 constituent companies and the same number of underlying securities.

NSC 1000 cut-off is £611 million

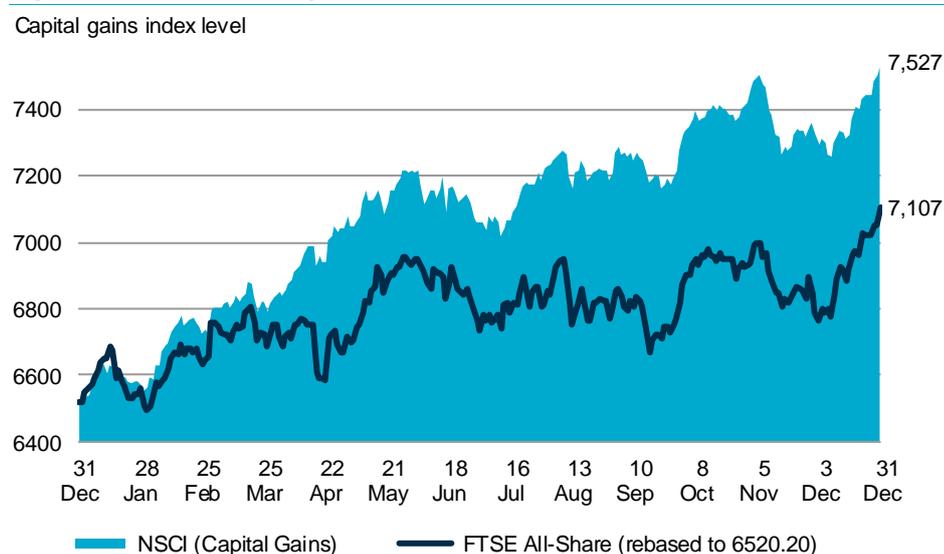
The NSC 1000 targets "minnows" covering the bottom 2% by value of the UK equity market (where, in this case, the value excludes investment companies). When we first launched the index, the 2% cut-off rule gave rise to exactly 1000 constituents, including investment companies, hence the index name. For 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 2018, this rebalancing rule gives an NSC 1000 cut-off of £611 million; the rebalanced NSC 1000 now has 531 companies and 583 underlying securities.

NSCI worth 2.6x 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 3.8% today. If it were rebalanced at the same date as the NSCI, the largest FTSE SmallCap constituent would have been worth £707 million (this being the 351st ranked FTSE-eligible company), which is above the cut-off for the NSC 1000 (£611 million) but far smaller than the NSCI cut-off (£1,527 million).

In the following section we look in more detail at the performance of all of the Numis indices over 2017. This is followed by a detailed analysis of the characteristics of the indices as we enter 2018. Section 4 then updates the long-term performance record.

Figure 18. The NSCI during 2017



Source: Scott Evans and Paul Marsh, Numis

2. Index performance during 2017

NSCI outperformance

Figure 18 compares the capital value of the NSCI index to the FTSE All-Share over 2017. The indices entered 2017 at a level of 6,520 (with the FTSE All-Share rebased to the NSCI's opening value). As the chart shows, following some initial volatility, both indices put in a good performance for the first few months of the year. Towards the end of the first quarter, the differential performance between the two indices began with the NSCI outperforming the FTSE All-Share by a significant margin.

This strong performance of the NSCI continued up until the announcement of the snap general election held in June. After the election, the FTSE All-Share moved sideways for most of the summer period, whereas the NSCI was more resilient and quickly regained its composure, putting in a strong performance for the remainder of the year. Spurred on by the rally in global equity markets, the FTSE All-Share staged a recovery in the final part of the year but, nevertheless ended the year 6% behind the NSCI.

Enhanced performance from AIM

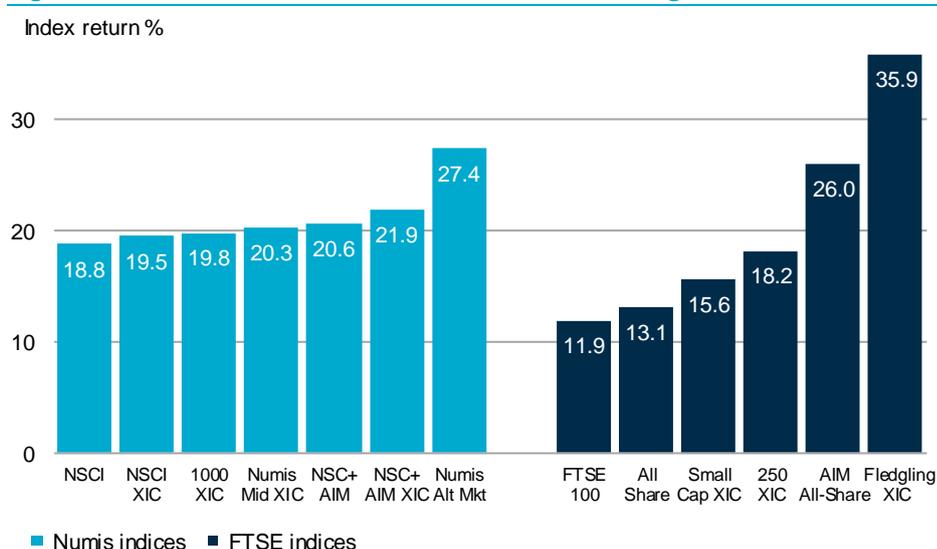
The chart below shows the differential in performance between small, mid and large-cap companies over the year. On the left of the chart, we show the performance of the Numis indices, including reinvested dividends. As we reported earlier, apart from the Numis Alternative Markets index, the total returns of the Numis indices were relatively close, ranging from 18.8% for the NSCI (including investment companies) to 21.9% for the NSC plus AIM (excluding investment companies). Given the strength of the Numis Alternative Markets index, which returned 27.4% over the year, it follows that the indices that included AIM listed companies performed the best.

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 performed the worst with a total return of 11.9% for the year. As the FTSE 100 makes up 78.8% of the FTSE All-Share, the latter's performance was only marginally enhanced by the inclusion of small- and mid-cap companies, leading to an extra 1.2% return for the FTSE All-Share above the FTSE 100.

In line with the performance of the Numis indices, the mid-cap companies of the FTSE 250 (XIC) performed ahead of the smaller companies of the FTSE SmallCap (XIC) with total returns of 18.2% and 15.6% respectively. The real stars of the FTSE indices were the companies in the tiny FTSE Fledgling XIC which gave a total return of 35.9%.

Figure 19. Total returns on Numis and FTSE indices during 2017



Source: Scott Evans and Paul Marsh, Numis