Trade of the century

Popular politics and the hidden costs of protectionism: why investors should take note

Rathbones
Look forward

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Edward Smith
Asset Allocation Strategist

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Foreword

Populist political campaigns have free trade in their sights. Free trade and globalisation have helped lift billions out of poverty worldwide, while productivity has soared, but the past 30 years have left many people behind. As we approach the American presidential election, we urge investors to pay close attention to the insidious creep of protectionism, as politicians in the US and elsewhere look opportunistically to harness the anger of those feeling disenfranchised.

We believe that protectionism – the practice of shielding a country's industry from foreign competition – and the prospect of a descent into a beggar thy neighbour global trade war is one of the biggest risks to investment returns over the next decade, and it's not getting nearly enough attention. Indeed, politicians are already succumbing: according to the Global Trade Alert initiative, the number of protectionist measures enacted globally in the first four months of 2016 was three times the average number of measures passed in the same period over the last decade. Protectionism may offer short-term relief, but it will only raise living costs and slow economic growth. And that won't help those people who are struggling to get by.

Inside this paper we discuss why we believe protectionism to be a very poor means of alleviating the widespread discontent. We highlight which countries are most at risk of resurgent protectionism, before discussing in detail the investment implications for both long-term and tactical investing. In this section we focus on the US, and dip into how either a President Trump or a President Clinton may impact financial markets.

Free trade has undoubtedly accelerated the broader process of 'creative destruction' and the corollary is greater disruption to working lives. If politicians wish to secure the benefits of trade for future generations they would do well to implement policies that soften the disruption and diffuse the more immediate spoils, else the nationalistic demagoguery of maverick, anti-establishment politicians could deliver shock results – to politicians and investors alike.

Edward Smith
Asset Allocation Strategist

Edward Smith
Edward supports Rathbones' investment process with proprietary macro-based, multi-asset research and is a member of the strategic asset allocation committee.

He joined the firm in 2014 from Canaccord Genuity Wealth Management, where he was global strategist and co-lead manager of their Risk Enhanced Multi-Asset Portfolio service. He started his career at BlackRock, working with liability-driven investment solutions for institutions.

He is a CFA charterholder, has completed a course in Quantitative Economic Methods at Birkbeck, University of London and received an MA from the University of Oxford. Edward is a published expert on risk management for multi-asset portfolios, recently appearing in *Quantitative Approaches to High Net Worth Investment*, edited by Andrew Rudd and Professor Stephen Satchell. He is a member of the Society of Business Economists.

Executive summary

– Taken at face value, protectionism – the practice of shielding a country's industry from foreign competition – provides a large, easy-to-quantify gain to a small but visible and vocal number of people. But it simultaneously delivers a small, hard-to-quantify loss for every member of a large and silent majority. The aggregated impacts of those small losses invariably far outweigh the ostensible gains.

– To highlight those countries most at risk of a protectionist insurgence, we bring together in figure 4 our survey of the social science and economic history literature on what determines popular trade policy preferences. The US and Italy are clear front runners. The consequences of these two economies sliding into popular protectionism would be grave and far reaching – unfortunately they both have leadership contests to navigate.

– A protectionist turn for American trade policy after the November presidential elections would lower our long-run expected returns on US equities. This is primarily due to a weaker outlook for productivity growth. This risk is greatest under a Trump presidency – there are at least four emergency powers with which he could impose tariffs without Congressional approval – but we wouldn't discount the risk of protectionism under Clinton as she looks to consolidate support from the left-leaning caucuses within her own party.

– Over the long term, shareholder returns are tied to economic growth. With declining contributions from demographics and investment, productivity will drive economic growth in the 21st century. However, protectionism reduces productivity by discouraging competition. It also diverts both labour and investment capital into industries in which a country has no comparative advantage. Preventing resources from flowing to the most productive industries lowers productivity and therefore lowers growth.

– Protectionism would likely raise real interest rates, but lower longer-term growth – a bad combination for equities. More progressive policies to mend the broken covenant of globalisation could also raise real interest rates, but could potentially raise growth – a net-neutral or even positive combination for equities.

– At face value, high tariffs mean fewer imports and fewer dollars sold to buy foreign goods, theoretically appreciating the exchange rate. That said, over the long term, we believe that a protectionist turn would catalyse the reversion of the overvalued US dollar back toward our measure of the 'equilibrium rate', which would also likely shift lower.

– We model the impact of resurgent protectionism in the first one to three years as an 'uncertainty shock'. Our analysis suggests that such a shock would lower GDP growth by 1–2% relative to what it would have otherwise been. However, the analysis assumes a larger monetary policy offset than it may be possible to deliver, meaning that the impact on GDP could be materially larger.

– At a sector level we expect a Trump victory or resurgent protectionism to hurt companies with a high sensitivity to economic uncertainty, a high correlation with the US business cycle and a high proportion of earnings originating in China. Automotives & parts, general industrials, tech hardware & equipment and electrical & electronic equipment rank poorly across all measures. US manufacturers that source many component inputs from China would also suffer, and many of them are also found in these industry groupings.

A protectionist turn for American trade policy after the November presidential elections would lower our long-run expected returns on US equities via a weaker outlook for productivity growth.

– Growth also outperforms value during periods of spiking uncertainty.

– We also show the UK sectors most exposed to the US in terms of their revenue streams, the business cycle and sensitivity to economic uncertainty. 'Defensive' sectors outperform when US uncertainty rises, but, interestingly many of these sectors also derive a considerable amount of income from US sales – over 35% in the case of pharmaceuticals and utilities.

– Neither Clinton nor Trump is clearly good for markets. Finally, we highlight some sectors that may benefit either from a Democrat or Republican victory in November – infrastructure, defence and perhaps regional banks.

1. Introduction: what's going on?

Budgetary dynamics aside, politics per se have rarely exerted an observable influence on financial markets over the last 25 years. Even geopolitics: look at a chart of the S&P 500 or the FTSE 100 over the last 40 years and you would be hard pressed to pick out 9/11 or 7/7 if there were no dates printed on the horizontal axis. But this seems to be changing, and it's not due to war or terrorism but a groundswell of populist alternatives to the political consensus that has ruled developed democracies for the last four decades.

At Rathbones, we have created measures of economic 'uncertainty' in both the UK and the US. It is important to have the tools to keep a close eye on these things: there is a growing literature on how uncertainty impacts hiring, investing and spending (cf. Bloom et al. (2015)), while we've noticed a strong negative correlation between uncertainty and equity market valuations. These measures aggregate, for example, survey-based variables such as gauges of business confidence about the need to invest, a gauge of what newspaper articles are hung up on, as well as some market-based measures such as expected exchange rate volatility or the spread of analysts' expectations about the future earnings of domestic equities. We can calculate 'uncertainty' for every quarter over the last 30 years and spikes in the series occur only during periods of global economic – not political – turmoil. Sometimes a large increase in uncertainty precipitates a change of political direction, but political dynamics alone have never before caused uncertainty to spike. Until today.

Even before 23 June UK uncertainty had risen to within a whisker of the levels only before seen in the Global Financial Crisis of 2008–09 and the eurozone crisis of 2011. The US measure is similarly on a tear; it hasn't quite reached UK levels, but it's on its way. And a popular political and ideological backlash has driven these moves.

So what's brought us here? Why has a spate of political insurgencies eroded the foundation of establishment parties to such an extent – unprecedented in our era – that it is affecting economic confidence? Why are radical, nationalistic parties at the top of the polls in Austria, Hungary and the Netherlands? Why has Donald Trump's unique brand of bellicose economic nationalism gathered such a head of steam in the US?

Social scientists differ on whether it's more about economics - inequality and the divergence of the returns to capital and the returns to labour since the 1970s – or whether it's something more socio-cultural – a loss of national identity or the waning power of trade unions. It's almost certainly an interaction of the two – both a by-product of 'globalisation', of course – and the indisputable result is a broad disquiet with established political philosophies and a restive desire among voters to regain some control of the forces that shape their lives.

And that can be quite arresting. Even a cursory survey of the economic history of the Western hemisphere since the 18th century reveals that when the gains from economic progress and liberalisation become too unevenly distributed, a popular backlash ensues, to which politicians all too often respond with misguided, concessionary policies that lower the prospects for economic growth – and therefore the expected return on investment – for years to come. Perhaps for the first time since the early 1980s, long-term investors should take note of the political context.

In this paper, we consider why protectionism – the practice of shielding a country's industry from foreign competition – is back on the agenda, touching on what might have gone wrong with free-market globalisation since the Reagan–Thatcher era.

Free trade and globalisation have helped lift billions out of poverty, while productivity has soared.[1] But the last thirty years have left many people behind. We look at why those left behind may be angry, not because we're in the business of writing moral discourse, but because the way in which politicians may choose to soothe, appease or even harness that anger will have important ramifications for firms, asset prices and investors' expected returns.

In section 2 we survey what free trade and globalisation have done to the world. We try to set out in lay terms why, in theory at least, free trade works, and why protectionism in all but exceptional circumstances is a very poor solution to the problems facing many Western democracies.

Having established that protectionism could materially lower economic growth, we ask in section 3 which countries sport voters with whom the idea may gain the most traction.

In the boxed text on page 13 our ethical analyst, Matt Crossman, provides an interesting detour into the problematic world of 'green protectionism'.

In section 4 we discuss investment implications. We look at the effect of protectionism on long-run expected returns and exchange rates – focusing on the US, where a protectionist resurgence is most likely. We then employ a simple econometric framework to try to gauge the likely impact of a Trump/protectionist ascendancy on US GDP over the first two years or so. We then think tactically and consider an equity sector strategy for such a scenario – in the US and the UK – before finishing with some ideas about how to get through the fast-approaching election period.

To conclude we expend a few paragraphs in section 5 contemplating some alternative policies to protectionism and how they may affect financial markets over the next decade.

1. And as we shall see wage growth and higher standards of living ultimately depend on improving productivity.

2. How free trade helps the economy

Why do countries benefit from trade?
The benefit of trade is perhaps most easily understood at an individual level. Despite some of our 'River Cottage' escapist fantasies, most of us do not produce even a fraction of what we consume. We specialise in a certain activity, earn some income and use it to buy the things others can produce more efficiently. Add to that the slightly more complex notion of 'comparative advantage' and the benefits of international trade are really quite that simple still.

Comparative advantage is the concept that trade is driven by the comparative rather than absolute costs of production, first spelled out by the 18th century economist, David Ricardo. Although a country may be twice as productive as its trading partners in making clothing, say, if it is three times as productive in making electronics, it will benefit from making and exporting electronics and importing clothes. Its trading partners will gain by exporting clothes – in which they have a comparative but not absolute advantage – in exchange for these other products. The clothes manufacturers now have a larger market in which to sell their wares and their people can have access to cheaper electronics, while the producer of electronics can concentrate on making products to which it adds considerable value without needing to divert manpower and investment capital to producing its own clothes at a much lower value-add. In this way, the living standards of both countries will rise, as each country can earn a higher income than would otherwise be the case.[2]

Figure 1: The burden of protectionism
Three ways consumers lose from protectionism.

Tariffs and duties	Tariffs collected on both final and intermediate goods (component parts) are generally paid for by the consumer
Higher consumer prices	Protected industries generally produce at much higher unit costs; products become scarcer; without competition, domestic producers can exploit consumers
'Deadweight' losses	Labour and capital are not allocated efficiently and the economy produces less than its potential, lowering national income

Source: Rathbones.

Unfortunately politicians frequently use protectionism as a political expedient, proclaiming that it 'saves jobs' in industries that do not have a place in their country's comparative advantage. But the idea that protectionism saves jobs is misleading. Study after study shows that the number of employees in a country is largely determined by the size of the labour force. Trade plays a negligible role. As we shall see below, protectionism saves the wrong kind of jobs, preventing comparative advantage from maximising national income.

Moreover, free trade is invariably in the consumer's interest, protectionism in the producer's (and even then only in the short term).[3] When an import is restricted, the product becomes scarcer in the domestic market, driving up the price. In this way protectionist barriers act as a direct transfer of wealth away from the consumer. Where protectionism takes the form of tariffs or duties, consumers must shoulder three burdens (figure 1). First, the tariff revenue itself (or a decrease in the variety of goods). Second, an implicit tax or transfer of funds from consumers to producers, reflecting the increased prices of protected domestic products. Third, what we call 'deadweight losses',[4] caused by the misallocation of resources that trade barriers encourage (more on that below).

The duplicity of protectionism has been noted for centuries. Adam Smith reviled the mercantilist cronyism of his era, in which the consumer's interests were 'duped' into subservience to the producer's. In 1776 he wrote, 'In every country it always is and must be the interest of the great body of the people to buy whatever they want of those who sell it cheapest. The proposition is so very manifest that it seems ridiculous to take any pains to prove it; nor could it ever have been called in question had not the interested sophistry of merchants and manufacturers confounded the common sense of mankind. Their interest is, in this respect, directly opposite to that of the great body of the people.'

Free trade is invariably in the consumer's interest, protectionism in the producer's (and even then only in the short term).

Some real world examples may illuminate the matter further. Between 2009 and 2011, the US raised tariffs on imports of Chinese tyres from 4% to 39%. Although President Obama proclaimed in his 2012 State of the Union address that this measure had saved over 1,000 workers from unemployment, a detailed study by the independent and fiercely respected Peterson Institute for International Economics suggested that, even if that was the case, these jobs came at a very high price. The policy cost the American consumer $1.1 billion per year (so, at best, $1 million per job 'saved' per year).

The problem was that most American tyre makers had long ago exited the low-cost tyre market in which Chinese firms compete. Total tyre imports did

2. The impact of free trade on poor, developing economies is beyond the scope of this paper, but there is some evidence that the system of comparative advantage can hold back the development of more advanced technologies in certain cases. For a passionate discussion of how globalisation has not benefited developing economies in the way that one may have hoped, see Stiglitz (2006)
3. Unless employment is heavily concentrated in one or two industries, in a way that it is not for any contemporary developed market economy.
4. Firms naively produce more (as the domestic price rises above the world price), but consumers consume less.

not fall during the tariff period; Mexican, Indonesian and Thai producers simply gained market share. And given that the price of a tyre from these countries was 50% higher than China's, the US consumer was worse off. Where US tyre makers did benefit, they appear to have taken the opportunity to raise prices (as we discussed in theory above): the domestic producer price index of car tyres rose far faster than the producer price index of manufactured goods in general during 2009–11. Of course the extra money Americans spent on tyres lowered spending on other retail goods and services, therefore lowering employment elsewhere.[5] The study concluded that on balance tyre tariffs cost the economy at least a net 2,531 jobs – and most likely far more (Hufbauer & Lowry (2012)).

There are innumerable studies on the application of tariffs that draw similar conclusions. According to the US government's own General Accounting Office, protecting US sugar growers and refiners during the 1990s benefited producers to the tune of $1bn, but cost consumers $1.9bn. The Department of Commerce reported in 2006 that three confectionery jobs were lost for every sugar-growing job protected. Worse still, when protection is targeted against a specific country, the target usually responds with a retaliatory tariff of its own. In response to the tyre tariff, China taxed US chicken feet, costing the food industry $1bn (Irwin (2015)). When a German solar panel producer with operations in the US successfully lobbied the US to put a duty on Chinese panels, China responded with a 57% tariff on the import of a type of silicon used in the making of solar cells. This was an industry thriving in the US largely due to an exponential increase in Chinese demand; billions of dollars of new investment was shelved (Reuters (2016)).

So why does protectionism ever pass? It passes because at face value it provides a large, easy-to-quantify gain to a small but visible and vocal number of people, versus a small, hard-to-quantify loss diffused throughout a large but silent majority, even though the aggregated impact of those small losses can be substantial.[6] Given that protection acts as a de facto tax on the consumer, a far less costly alternative would be to raise taxes by a penny or two and funnel the proceeds into helping and retraining workers displaced by changing patterns of trade. But of course taxes are not as politically expedient as 'saved' jobs!

Figure 2: Productivity growth is essential
Contributions to growth from labour and capital have fallen in the US.

Source: UN and Oxford Economics.

Preserving jobs is an incredibly emotive issue. Although polls in the US suggest the clear majority of Americans support free trade, framing the question in terms of 'protecting' American jobs causes that support to collapse (Gallup (2016), Bloomberg (2016)).

We'll return in a moment to the ebb and flow of winners and losers from free trade – the impetus for this paper, in many ways. Before then it's important to describe how free trade affects economic growth, something that should be of particular interest to long-term investors.

Trade, competition and growth

Trade encourages competition, and competition pushes firms and governments to develop new processes, new policies, new infrastructure and new institutions to improve productivity. As Nobel laureate Paul Krugman once said, 'Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker,' (Krugman (1994)).

Economic growth is a function of the growth of the working age population (the number of people available to produce stuff), the growth of the capital stock (the accumulation of computers, factories, roads, etc. with which people can work) and the growth of productivity (the 'grease in the machine' if you will). As figure 2 shows, with an ageing population and slowing investment,[7] contributions to growth from labour and capital are set to be much smaller over the next two decades. GDP growth in developed economies will be all about productivity, and long-term asset

5. Employment also suffers when components and parts are caught up in protectionist policies. As domestic exporters may have to pay a premium on their inputs that foreign competitors do not, the domestic producer must squeeze costs elsewhere and this usually falls on wages and headcount.
6. Making matters worse, when a small number of capital owners gain dramatically, they are more likely to devote huge sums to lobbying for protection. In the US, the 2000 Byrd Amendment dictates that duties collected on anti-dumping levies now go back to the domestic producing industry who filed the suit!
7. For reasons on which economists cannot agree, a discussion of which falls well beyond the remit (and length!) of this paper.

allocators should take note. Productivity determines the rate of return on investments and attracts investment to a country or industry. Most of all, raising living standards year after year requires workers to produce higher value year after year and this requires becoming more productive.

Protectionism, by definition, is a policy that discourages competition. It thereby discourages productivity growth too. As well as closing markets to foreign competition, protectionism inhibits productivity growth in a number of other ways. Openness exposes an economy to new technologies. Furthermore, in today's interconnected world, most firms source components and parts – what we call intermediate goods – from far and wide. Restricting these hinders a firm's ability to concentrate on adding value – the complex part of production that makes rich countries rich. Protectionism, particularly in the form of subsidies and bailouts, valorises firms that have lost their comparative advantage, and so impedes the efficient allocation of investment capital to firms that can generate the highest returns. It keeps resources in relatively unproductive industries and therefore increases the costs of labour and materials for industries that have higher productive potential.

Inevitably, the efficient allocation of capital entails what economists call 'creative destruction'. That means that obsolete or poorly productive firms with no comparative advantage will go out of business. In this way trade will 'destroy' jobs. But so too does technology - and few people oppose that. And, as we have discussed, 'destroy' is a misnomer. Competition is not the dog-eat-dog, zero sum game that vernacular semantics imply: it is really about the facilitation of an environment that permits the most efficient allocation of resources – both labour and capital – creating wealth and improving welfare the world over. Trade does not destroy jobs, only relatively unproductive jobs.

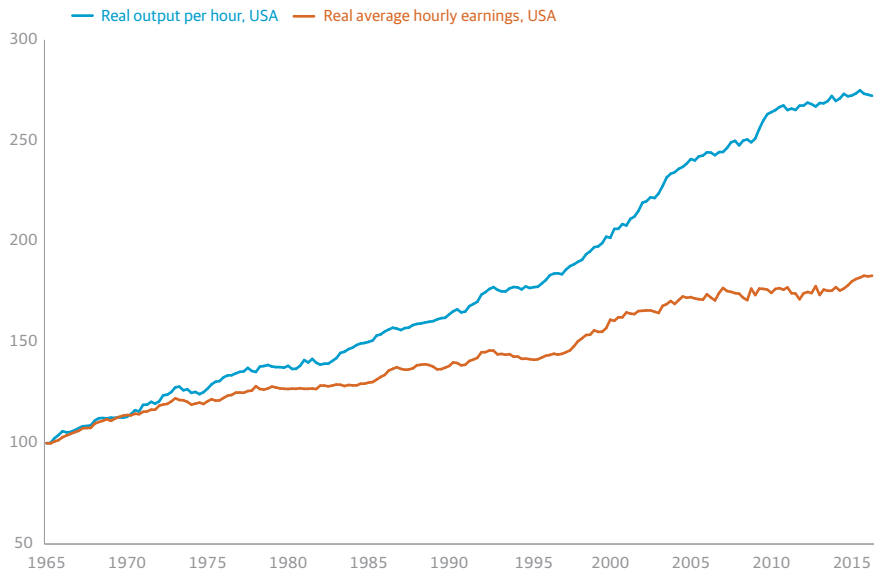
Globalisation has sped up the process of creative destruction and while that has generated huge gains from rapid improvements in productivity, those gains have been distributed very unevenly. Successive governments have failed to create the environment in which people – a hard grafting worker in an industry that has lost its comparative advantage, for example – do not get left behind by the rapidly shifting patterns of global supply and demand (see the next subsection). But the answer is not to hinder foreign competition and disincentivise productivity. It may offer short-term relief, but protectionism will only raise the cost of living and slow economic growth, and that won't help those struggling to make it.

Inevitably, the efficient allocation of capital entails what economists call 'creative destruction'. That means that obsolete or poorly productive firms with no comparative advantage will go out of business.

Countless empirical studies have illustrated the impact of trade on competition. Estevadeordal & Taylor (2008) show how lowering tariffs on investment goods and intermediate goods during the 1990s raised GDP growth by 1%. After the US-Canada Free Trade Agreement of 1987, productivity increased by 2.1% per year in the manufacturing industries previously 'protected' by high tariffs (Trefler (2001)). This process isn't just the privilege of wealthy nations, either. A study in Indonesia showed how a 10% reduction in the tariffs on intermediate goods led to a 3% increase in productivity growth (Amiti & Konings (2005)). Even the eminent economists who have become disillusioned with the current version of globalisation, due to the disruptive or polarising impact on labour markets, do not dispute the overwhelmingly positive role trade has in promoting competitiveness (Rodrik (2011); Blinder (2009)).

Figure 3: The jaws of the snake

The gains from productivity improvements have not been distributed fully to the average worker.



Source: Datastream and Rathbones.

Trade and inequality

So far in this section we have concentrated more on the benefits of world trade. Of course not everybody wins. The process of offshoring production to low-wage emerging market producers may have lowered consumer prices and served up greater choice; it may have induced productivity improvements and imports from China may have raised living standards by

$250 per person in the US in 2008 alone (Edwards & Lawrence (2013)). But all of that is neither here nor there if you have lost your job in the process and are struggling to find a new one.

In the long run higher productivity reallocates rather than destroys jobs, but in the interim the upheaval can have a significant impact on the distribution of wages and income (Haldane (2014)). Similarly, while fears that foreign competition lowers domestic wages overlook the fact that productivity is by far the most important determinant of wages over the long term, the benefits will come too far down the line to help out many displaced workers in the rest of their working lifetime.

Furthermore, if the gains from trade – as set out above – accrue disproportionately to the wealthy, both the middle and working classes may have a case for feeling a little defrauded too. There is considerable evidence that income inequality is increasing (at least before taxes and government benefits) across the developed world, particularly in the US. Real wages have stagnated for the average Western earner for at least a decade (figure 3). Two-thirds of households in 25 advanced economies were in a cohort whose market incomes either did not advance or were lower in 2014 than they had been in 2005 (McKinsey (2016)).

Winners and losers are inevitable but societal stability rests on the general interpretation of the distribution of the gains being somewhat 'fair'.[8] One might think of this as the 'covenant of globalisation'. Political scientists have long written that it is the universal expectation of citizens that governments will limit the costs and distribute the benefits of open markets, and that the success of economic liberalism depends upon a government's willingness or ability to do so successfully (cf. Ruggie (1982)).

A number of studies have tried to quantify the effect of trade liberalisation on income inequality in developed markets. Results vary considerably and are highly sensitive to how one defines trade, liberalisation and inequality, rendering their results extremely difficult to interpret (cf. Lawrence (2014) or Krugman (2008) for an overview). The clear majority of studies however suggest that increasingly liberal trade is not the main determinant of inequality. Instead technological change (such as computerisation and robotisation displacing manpower) and government or corporate policy (remuneration policies, for example) explain much more of the widening gap between the very rich and poor.

Similarly, research into job layoffs quite clearly concludes that trade and foreign competition are not the main culprits for widespread worker displacements. The US government used to collect data on 'mass layoff events' where 50 or more workers were laid off for at least five weeks, recording the reason for these severances or furloughs. Even in the five years after China joined the World Trade Organization (causing an unprecedented decrease in tariff barriers to imports from China), 'import competition' only ever accounted for a few percent of the severances in question (BLS (2004–2010)). Harvard economist Robert Z. Lawrence estimates that 97,000 US jobs were displaced by Chinese imports between 2000 and 2007, less than 5% of involuntary job losses in the economy as a whole over that period (Lawrence (2014)).

On the other hand, trade and trade policies are hardly blameless. A number of studies show how manufacturing workers struggle to find new jobs that pay as much as the one that they've just lost, and that government retraining programmes have limited success. Where manufacturing displacement causes workers to switch industries (usually to the service sector), their real wage losses are large and persistent at around 15%. Workers with more than six years of tenure experience a 30% loss in earnings relative to their previous earnings trajectory (Jacobson, Lalonde & Sullivan (2011)).

Free trade has undoubtedly accelerated the broader, inescapable process of creative destruction and the corollary is greater disruption to working lives.[9] If politicians wish to secure the benefits of trade for future generations they may need to implement policies that ease the disruption and diffuse the more immediate spoils.[10] Else the nationalistic demagoguery of maverick, anti-establishment politicians could deliver shock results – to politicians and investors alike.

The clear majority of studies suggest that increasingly liberal trade is not the main determinant of inequality. Instead technological change and government or corporate policy explain much more of the widening gap between the very rich and poor.

8. It is not for us to comment on what 'fair' is, rather to note that if the popular definition, whatever that may be, does not align with the current situation, a destabilising backlash may ensue.
9. As workers previously employed in secure manufacturing jobs are pushed into low-paying service sector roles with less job security, they may lose out again if the globalisation and decentralisation of the service sector gathers pace (Blinder (2009)).
10. We discuss some alternatives to protectionism that investors should watch for in section 5.

3. When does popular protectionism arise and which countries are most at risk?

If protectionism can materially lower economic growth, investors should be mindful of which countries sport voter bases with whom the idea may gain the most traction.

Surveys have consistently found that years of education – a proxy for professional skill level – correlates positively with attitudes to free trade (Irwin (2015)). This is fairly obvious, of course: if you're a machinist without a high school diploma, you might be rather worried about your job moving to Vietnam.

A number of studies have confirmed that other factors influence popular policy preferences beyond rational self-interest. In one of the deepest, its authors analyse the influence of a broad range of economic, demographic, geographic, cultural and ideological variables on citizens' advocacy of protectionism across a large number of developed and developing countries (O'Rourke & Sinnott (2001)). They found that even when controlling for the usual economic variables, cultural and ideological variables still have a profound effect on popular policy preferences. They found that patriotism, gender,[11] religion and political leanings exert an influence in their own right (i.e. not just because women or those with nationalistic feelings may be more likely to work in the factories most likely to lose out to globalised trade, for example).[12]

Another study demonstrates that the larger the 'net replacement rate' (the average proportion of wages made up for by unemployment benefits after job loss) the more likely individuals are to support free trade (Hays, Ehrlich & Peinhardt (2005)). Similarly, the higher the spending on 'active labour market programmes' (programmes dedicated to raising employment, re-employment and wage prospects) the higher the support for free trade also.

The influence of such welfare-support factors on attitudes to trade is amplified in countries in which a larger proportion of people work in tradeable, import-competing industries. This more formally ties in policy preferences with the notion of the covenant of globalisation discussed earlier.

The extent to which governments were honouring this covenant was a key determinant of the slide back into protectionism in Europe in the late 19th and early 20th centuries. As today, free trade became less well-received when displaced workers were forced to go it alone, and indeed one can observe a symbiotic relationship between freer trade and government spending during the period (Huberman & Lewchuk (2003)). Expanding welfare support for workers was the alternative to protectionism (or a blind eye that fuelled the political instability that ultimately led to the First World War). Denmark and Belgium – Belgium was the most internationally open economy in Europe at the time – responded to their worker backlashes by increasing social spending. In Belgium, the *Parti Ouvrier Belge* exchanged its calls for protectionism for better social programmes, and industrial workers consequently became enthusiastic supporters of free trade. In Germany, worker strife and popular agitation reached such heights in the 1890s that it directly challenged the government. It was quelled by labour market protection (albeit alongside some trade protectionism too). Where governments didn't respond in this way, protectionism won.

To highlight those countries most at risk of a protectionist insurgence, we bring together in figure 4 our survey of the social science and economic history literature on what determines popular trade policy preferences.[13] We score our panel of countries on four categories:

1. On the characteristics of the workforce – age, education and the proportion employed in industrial jobs
2. On the level of social benefits given to the unemployed
3. On income inequality

Surveys have consistently found that years of education – a proxy for professional skill level – correlates positively with attitudes to free trade.

4. On politics – trade unionism correlates negatively with support for free trade, while a system of proportional representation helps to limit sudden shifts in voter sentiment and pork-barrel politics (Rogowski (1987)).[14]

Our tabulation suggests that it should have come as no surprise that Trump's own brand of pugnacious protectionism would resonate throughout Middle America. One could sound two notes of caution after this finding. First, that investors should not become too complacent about Clinton's chances.

11. It is interesting that gender by itself can explain attitudes to trade. Certainly women have a disproportionately large number of jobs in those low-paying manufacturing industries most likely to be displaced by trade. We also know that women have low re-employment rates in general (Irwin (2015)), and indeed it may be this unprivileged position that explains some of the low re-employment rates associated with trade displacement more broadly. But that gender still influences policy preferences even when industry and skill level are accounted for is surprising. It perhaps goes some way to explain why Bernie Sanders polled so well with women, to the detriment of Hillary Clinton, a tireless supporter of gender equality. And this may still count against her in November.

12. Also this study again ascertained that skill level has a powerful influence, but that the 'sign' changes depending on whether the citizen is in a low or high income country. Low skilled factory workers in wealthy countries are likely to be strongly protectionist, but their counterparts in the developing world are very likely to be pro-free trade.

13. Due to data restrictions we limit our analysis to members of the OECD, which means that we can include education as a variable, as the correlation of education or skill-level with attitudes to protectionism is dependent on a country's level of development.

14. If a radical anti-free trade movement becomes a dominant voice in 5 out of 100 constituencies, their voice will be heard and counted, but not if they only account for a small percentage of the electorate.

Second, if conditions are as ripe for protectionist sympathy as our analysis suggests, we may even see Hillary make further protectionist concessions as we enter the final phase of the race.

Italy ranks second, and this supports the proposition that Beppe Grillo's anti-EU Five Star Movement could continue its arresting rise, thereby raising the risk of European politics once again destabilising asset markets in the region. Investors should be only too aware of how episodes of acute equity market stress in Europe have coincided with political events over the last few years.

Current polling is tight between the ruling PD party and the anti-establishment Five Star – near 30% apiece – with the latter riding high after wins in the Rome and Turin mayoral elections in June. The incumbents are already walking a political tightrope. The economy is in a mire, requiring sweeping structural reform to break free from the stagnation. It requires labour market reform to encourage job creation, reform to remove the productivity dousing protectionism in the country's service sector, judicial reform not least to ensure that bankruptcy proceedings can no longer take up to 10 years, and banking reform to restructure its dysfunctional monetary institutions. Yet such sweeping reform often means that people will lose jobs in the short term, and that will only antagonise popular protectionist tendencies. For example, the prime minister's recent attempt at labour market reform, designed to increase job security for the young by dismantling the cumbersome dismissal laws that simply encourages businesses to hire temporary workers, ran into a union brick wall.

A quick review of protectionism during the Great Depression offers a reminder of why peripheral Europe may be particularly susceptible to protectionism right now. As you may know, many countries engaged in rampant protectionism in the early 1930s, but the extent to which a country followed such a policy can be best explained by whether that country stayed on or broke free from the gold standard (Eichengreen & Irwin (2009)). In other words, if a country was either unwilling or unable to abandon the gold standard – thereby prohibited from stimulating its economy with a cheaper currency and the freedom to lower interest rates – it had to resort to tariffs on imports in order to try to stimulate domestic demand. There are clear parallels with today. The euro is far too strong for many eurozone economies with poor productivity and flagging domestic demand – Italy, in particular. There is a risk that politicians will see protectionism as the next best thing.[15]

Our tabulation suggests that it should have come as no surprise that Trump's own brand of pugnacious protectionism would resonate throughout Middle America.

15. A 2011 study on the coincidence of import protection with the business cycle found that during the period 1988-2008, countries which underwent a large (1 standard deviation) appreciation of their exchange rate were likely to increase import protection measures by 33% (Brown & Crowley (2011)).

Figure 4: Barriers to trade

Countries most at risk of a protectionist backlash.

	Overall rank	Workforce			Social benefits			Inequality		Politics	
	Popular proclivity for protectionism	Employed with undergraduate degree (%)	Employed 50+ (%)	Employed in industry (%)	Net replacement rate >60m unemployed* (%)	Minimum-income benefits relative to median income** (%)	Minimum wage relative to median (%)	9th to 1st decile wage ratio	GINI coefficient (%)	Proportional representation***	Union membership (%)
US	1	33	32	22	25	23	37	5.0	39	0	11
Italy	2	20	31	27	9	0	n.a.	2.2	33	1	37
Korea	3	35	35	25	42	42	46	4.8	30	0	12
Portugal	4	18	30	24	48	29	57	3.9	34	1	19
Canada	5	45	31	20	52	36	45	3.7	32	0	26
Czech Republic	6	22	29	38	57	42	37	3.6	26	1	13
Greece	7	33	25	15	17	8	46	3.3	34	1	22
Hungary	8	26	26	30	29	24	54	3.7	29	1	10
UK	9	41	29	19	61	57	48	3.5	36	0	25
Israel*	10	49	27	17	47	36	56	5.0	37	1	23
Spain	11	41	27	20	44	23	41	3.3	35	1	17
Poland	12	31	27	30	48	43	50	4.0	30	1	13
Germany	13	29	34	28	61	54	n.a.	3.4	29	1	18
Sweden	14	37	32	18	63	42	n.a.	2.3	28	1	67
New Zealand	15	39	33	22	55	40	60	3.0	33	1	19
Japan	16	46	37	26	65	50	39	2.9	33	2	18
Austria	17	21	27	26	69	50	n.a.	3.3	28	1	28
Finland	18	42	33	22	73	48	n.a.	2.6	26	1	69
France	19	36	28	18	59	39	61	3.0	29	0	8
Belgium	20	41	27	21	64	38	51	2.3	27	1	55
Switzerland	21	36	31	23	69	40	n.a.	2.7	30	1	16
Norway	22	40	30	20	69	42	n.a.	2.5	25	1	52
Denmark	23	34	30	19	72	63	n.a.	2.6	25	1	67
Australia	24	40	27	20	52	44	53	3.5	34	2	15
Netherlands	25	35	30	15	70	50	48	2.9	28	1	18
Ireland	26	45	27	19	74	64	43	4.0	31	2	34
Luxembourg	27	43	22	19	73	49	57	3.4	28	1	20

*If qualified for housing assistance. **2 child family with housing assistance. ***0 = no PR; 1 = PR; 2 = PR with high threshold.
Source: OECD, ILO, Datastream and Rathbones.

Box 1: Protectionism camouflaged as 'care for the environment'
By Matt Crossman — Ethical Research Analyst, Rathbone Greenbank

Protectionism by stealth is something regulators of international trade rules are only too aware of. Simple restrictions of imports and exports to favour domestic markets are easy to spot. But what about other restrictions on imports which might, on the face of it, seem to be motivated by purer leanings? For example, should a country be able to restrict the imports of televisions that do not meet strict laws on hazardous chemical use or recyclability, thereby favouring domestically produced goods?

This issue — known as 'green protectionism' — was recognised as far back as the 1947 General Agreement on Tariffs and Trade, but has come to prominence more recently as the EU has developed case law to help countries navigate these tricky waters. While the EU treaty generally prohibits restriction on trade, there are loopholes. Article 30 allows for laws which have the effect of restricting trade in the interest of "the protection of the health and life of humans, animals and plants".

The EU case law on green protectionism comes from a situation involving Danish beer bottles. In Denmark, a strict deposit and return system had been instigated, whereby all containers for beers and soft drinks must be recyclable, as approved by the Danish regulator. The goal being to drive up recycling rates. In 1984 the Danish government made rules that limited the volumes of drinks shipped in unapproved containers that could be sold in Denmark; this disproportionately affected foreign brands whose bottles did not meet Denmark's standards.

The European Commission ruled in 1988 that although countries retained the right to make environmental regulations, they must do so in a way which affects free trade the least. They ruled that the Danish system was overly inflexible.[1] This set the general context — namely that protectionist effect doesn't necessarily imply protectionist intent — but the burden of proof was on the maker of said laws to demonstrate that the least restrictive options had been taken in the pursuit of environmental policy goals.

However, the world has changed dramatically since the early 1990s, and the environmental movement has grown hugely. The temptation and opportunity to indulge in green protectionism has increased in step. Since its establishment in 1994 the World Trade Organization (WTO) has dealt with its fair share of alleged 'green protectionism'. Here the major case concerned the US and Thailand, and US restrictions on the import of shrimp caught without necessary protections for certain categories of at-risk marine life. The US Endangered Species Act required shrimp fishermen to have 'turtle-excluding' nets in order for their produce to be legally sold in the US. Facing competition from Thai imports, the US relied on the lack of such protective nets as a means of restricting trade. Some argue that as environmental standards increased towards the turn of the century, developing world producers were being unfairly excluded from markets. However this reflects basic divide in the world — namely that rich countries tend to place greater weight on environmental protection.

The WTO recognises that environmental requirements can impede trade and even be used as an excuse for protectionism. However, it also claims that the solution is "not to weaken environmental standards, but to set appropriate standards and enable exporters to meet them."[2] The onus is on the developed world to design their regulations in a way in which developing countries can meet the higher environmental standards, all with the caveat that the aim of the rules must be legitimate.[3]

Interestingly, the effect on companies has been to drive standards higher. If a company wants to be sure that its products are marketable in the widest variety of regions, it would do well to ensure that its products meet the highest possible standards. The alternative is much less palatable; global trade rules cannot be used as a means of driving all health, safety and environmental standards down to the lowest common denominator.

It is therefore disheartening that the proposed EU–US trade deal known as TTIP contains legislation that would permit US companies to contravene the EU's more rigorous environmental protection laws. As we know very well at Rathbone Greenbank, balancing economic and environmental objectives is a complex task.

1. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A61986CJ0302
2. https://www.wto.org/english/tratop_e/envir_e/envir_req_e.html
3. This is determined by asking a simple question - would the country instigating the rule in question have adopted the measure if its own nationals rather than foreign firms would have been required to pay the costs?

4. Investment implications

4.1 Long-run US equity return expectations

We believe that one of the most overlooked risks for financial markets over the next decade is the American imposition of tariffs on imports. Clearly this risk is greatest if Trump wins in November, but as we discussed in the previous section, conditions are ripe for protectionism to have popular appeal. It is quite conceivable that less outré politicians will use it to secure votes. Remember that Obama – arguably one of the most ardent advocates of free trade since Reagan – dabbled with protectionism in the early days of his presidency, as the global financial crisis undercut his popularity rating. More recently, popular figures on the Democratic left have introduced alarmingly anti-free trade rhetoric into their speeches, most notably Bernie Sanders, of course, but also Elizabeth Warren and the veteran Representative Rosa DeLauro. While their impassioned attacks against the proposed Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP) trade deals are not necessarily followed up with proposals to march backwards into protectionism,[16] they have awoken a beast that had lain dormant left of the aisle for most of the 20th century.

Even Hillary Clinton's stance on free trade is not unswerving: although the TPP and TTIP were developed by Hillary's own department when she was Secretary of State, she asserted that it was time for free trade to take a 'time-out' when she ran for the Democratic nomination in 2008, while we have already witnessed her pivot on the Asian free-trade deal (TPP) in late April of this year (interestingly Trump started to gain popularity almost from the day she made that announcement).

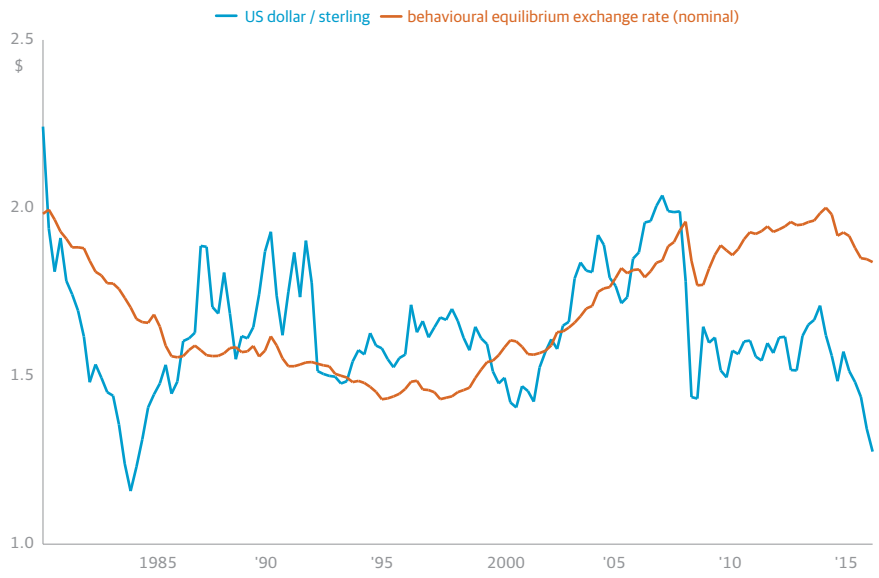
A protectionist turn for American trade policy would lower our long-run expected returns on US equities. As we have discussed at length in the preceding sections, protectionism inhibits productivity. Ignoring cyclical ebbs and flows, economic theory dictates that over the long run revenue growth is tied to economic growth (GDP). A structural impediment to productivity growth is an impediment to the revenues that can be generated in the US economy. Furthermore, as figure 2 showed, contributions to growth from labour and capital are set to be much smaller over the next two decades, with an ageing population and an apparent slowdown of invested capital. This means that GDP growth in developed economies in the 21st century will be all about productivity.

4.2 Interest rates and treasury yields

Various pundits have speculated that China would retaliate by dumping hundreds of billions of dollars of US treasuries into the market should the US impose punitive tariffs on Chinese goods.[17] This would surely have a significant impact on treasury yields. A study published by the Federal Reserve estimates that every $100bn of official foreign purchases/(sales) decreases/(increases) yields by between 0.17% and 0.20% at the five-year maturity, and can be even more disruptive in the short term (Beltran, et al. (2012)).

Of course, China has kept tight-lipped and gauging the likelihood of such a reaction is little more than conjecture. However it is worth pointing out that such a reaction would not help the People's Republic achieve one of its primary goals - to replace the US as the economic hegemon of the Asian world. For this it needs to provide a stable

Figure 5: Protectionism could hurt the US dollar
The US dollar is very overvalued relative to long-term economic drivers.



Source: Datastream and Rathbones.

16. Ms Warren, for example, most frequently argues instead for more transparent trade policies, which involve the computation and publication of the economic, social and environmental gains and costs of new trade deals. As Harvard economist, Dani Rodrik, argues, such transparency will be essential if we are to avoid an insurgent popular backlash against globalisation over the coming decades.
17. China held $1.24 trillion of US government debt as at the end of June, according to data from the US Treasury.

currency and to be seen to have a steady hand on the monetary policy rudder. A fire sale of foreign assets is likely to set back China's agenda, particularly the establishment of the renminbi as a reserve currency and the funding currency of choice throughout the region.

Trade policy, the impact on the labour market and, in turn, how firms respond can also affect the 'neutral' or underlying real interest rate – the fundamental driver of yields. The complexity of the relationship has kept countless scholars in refectory meal tickets over the last decade, but we'll try to distil a few key points.

The neutral rate is the rate of interest that keeps savings and investment in equilibrium. If desired savings start to exceed desired investment then the neutral rate falls, thereby incentivising investment relative to saving and bringing the two back into balance. Since the 1980s, globalisation and free trade have given firms access to a global army of labour that has reduced the requirement for capital (i.e. machines). This has theoretically lowered neutral interest rates as desired investments were less than desired savings.[18] If protectionism were to effectively make labour more scarce for an economy (no more outsourcing to foreign sources of labour), then firms would be incentivised to substitute labour with machines (capital) as labour gains greater bargaining power. This would raise neutral interest rates. On the other hand, if protectionism were to raise the price of investment goods (as component parts become much more expensive, for example) and lower the structural outlook for economic growth (for all of the reasons discussed in section 2), it is not clear that firms would actually have an incentive to act in such a way.

If developed market governments repaired the covenant of globalisation with more progressive policies that led over time to a redistribution of income back towards the median earner (see section 5) then the neutral rate of interest may also rise for three reasons: (i) lower savings, as middle and lower income earners have a much higher marginal propensity to consume extra income; (ii) higher investment due to the incentive to replace labour with capital; (iii) better outlook for productivity raising potential GDP growth. Higher interest rates generally mean lower equity market valuations as they affect the rate at which future earnings are discounted into today's, but in this scenario the impact on equity valuations should be offset by the structurally higher rate of growth at which earnings could grow into perpetuity.

Ignoring cyclical ebbs and flows, economic theory dictates that over the long run revenue growth is tied to economic growth. A structural impediment to productivity growth is an impediment to the revenues that can be generated in the US economy.

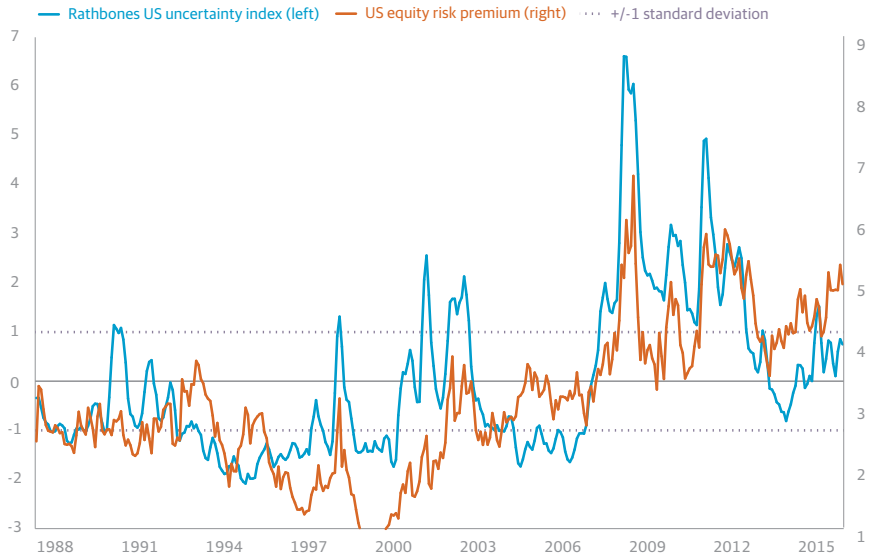
4.3 The US dollar

A protectionist turn is also likely to accelerate the devaluation of the US dollar against sterling back towards what we call the 'equilibrium exchange rate'. An equilibrium exchange rate can be thought of as something of a lodestone from which the actual exchange rate may deviate but to which it will gradually return over time. The location of the lodestone at any point in time is determined by fundamental relationships long observed by empirical and theoretical economics (cf. Rathbones (2016) for a full technical explanation of our equilibrium exchange rate framework).

On our measure, the dollar has become more than two standard deviations overvalued since the global financial crisis (figure 5). Approximately half of this departure can be explained by the relatively stronger performance of the US business cycle, but the divergence still remains stark. Although analysis involving long-run equilibrium fair values will not help us judge the direction of exchange rates over the short term, there is considerable evidence to suggest that it is very useful for assessing currency returns over the longer term. Based on our analysis of 15 currencies over the last 35 years, an exchange rate has converged on the equilibrium rate within a median three years after it has become plus or

Figure 6: A Trump shock?

Our uncertainty index obtains a single gauge of uncertainty from seven different measures of economic, political and financial market conditions.



Source: Datastream, Bloomberg and Rathbones.

18. Especially as the returns to cheap labour disproportionately accrued to the very wealthy who have a higher propensity to save additional income.

minus two standard deviations over or undervalued on this measure.

At face value, high tariffs mean fewer imports and fewer dollars sold to buy foreign goods. Theoretically, this appreciates the exchange rate, but not if trading partners retaliate with tariffs of their own. Over the long term, we believe that a protectionist turn would catalyse the reversion of the actual, overvalued dollar back toward the equilibrium rate.

It may also lower the equilibrium rate too. It could do this via three channels. Firstly, via lower relative productivity in tradeable industries (market barriers as well as lack of competition). Secondly, via a deterioration in the terms of trade. Although protectionism is supposed to improve the terms of trade (how many imports one can buy with one's exports), large tariffs on Chinese goods may actually reduce the terms of trade, as many Chinese imports (particularly component parts) cannot be substituted by US goods (a beggar-thy-neighbour tariff war may also lower the terms of trade). Finally, if protectionism is accompanied by policies that prevent immigration, the population would age more rapidly. A larger economically inactive population reduces national savings and decreases the current account balance, thereby requiring a lower real exchange rate to generate the trade surpluses necessary to service their external liabilities.

4.4 How might the US economy perform in the first two years of Trump/ resurgent protectionism?

Thinking more tactically, a rapid rise in the likelihood of protectionism will affect some investments more than others. Pre-empting what tariffs will be applied to which goods is a hugely speculative task, and we prefer instead to analyse the scenario via a 'shock' increase in economic uncertainty. After all, a drastic change of trade policy would cause uncertainty over the price at which firms could sell their wares abroad, to whom they could feasibly sell them and at what price they could purchase component parts or outsourced services. The regime change would likely result in the postponement of expansion plans as well as the general belt tightening that usually accompanies uncertainty shocks.

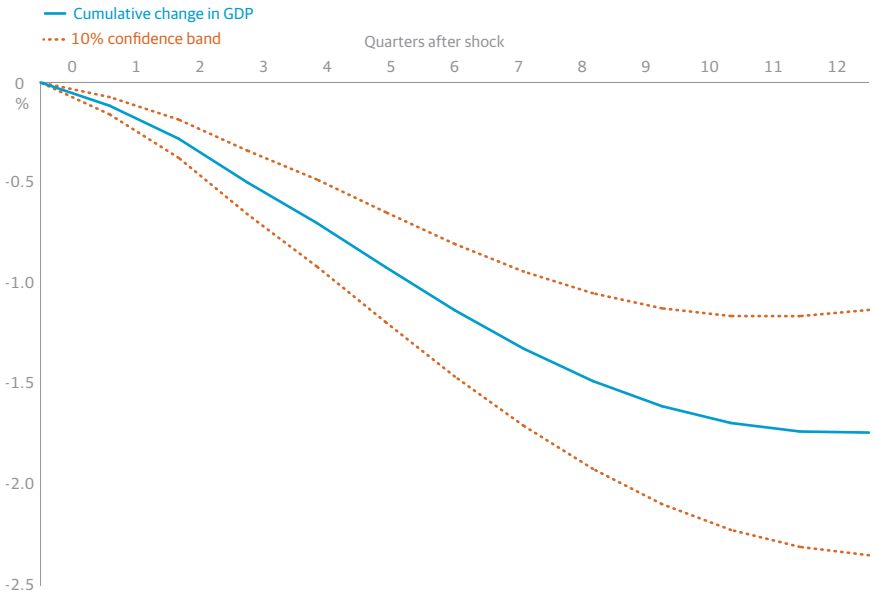
We define economic uncertainty by our own proprietary indicator (figure 6). Our measure obtains a single gauge of uncertainty from seven different measures of economic, political and financial market conditions. Next, we build a simple model of US GDP growth using the Vector Autoregression (VAR) methodology well-established in the academic literature[19] (see Appendix for references and the technical exposition). As ever, we deploy such quantitative analysis not to make investment forecasts of spurious accuracy, but to get a handle on an otherwise intractable problem with a number of moving parts.

This analysis suggests that a one standard deviation shock increase in uncertainty renders US GDP between 1 and 2% lower after two years, relative to what it would have otherwise been (figure 7). This means that if GDP is expected to otherwise grow an accumulative 4% over the next 24 months, a shock to economic uncertainty would lower that expected rate of growth to just 2–3%. On the same basis, the analysis suggests that employment would be between 0.8 and 1.5% lower than the base case.

Although our measure of uncertainty is already one standard deviation higher than the historical norm, we posit that a Trump presidency would cause at least a further one standard deviation increase in uncertainty from here.[20] Note in figure 6 how our quantification moved six standard deviations above the historic norm after the collapse of Lehman Brothers in 2008.

Before we move on, it is worth commenting on the monetary policy response. As is common practice, we include a monetary policy variable in our simple model, in this case the Fed Funds rate set by the central bank. In our analysis discussed above, an uncertainty shock would usually cause the Fed Funds rate to move 1–2% lower (i.e. the central bank would cut interest rates to help cushion the blow to employment). However, today, that would mean cutting interest rates deep into negative territory,

Figure 7: Shocks have long-term impact
Cumulative change in GDP after an 'uncertainty shock'.



Source: Datastream, eViews and Rathbones.

19. Recently used by the Bank of England for assessing the impact of economic uncertainty in the UK (we also used this approach in our analysis ahead of the Brexit referendum).
20. Indeed, it is not just his trade policy that could cause uncertainty: his budgetary plans do not yet add up and his alienation of Hispanic and Muslim Americans – who account for 17.6% and 1% of the population respectively (US Census (2015) and Pew Research Center (2015)) – could cause social unrest.

something that policymakers are unlikely to be willing or able to do.

Of course, the Federal Reserve could use so-called 'extraordinary' policy tools to proxy the cushioning effect of cutting interest rates, most obviously quantitative easing (QE). Such an approach has arguably done a serviceable job over the last eight years. However with the interest rates on long-term government debt now so low – far lower than they were at the beginning of any QE programme – it is difficult to theorise how QE could be as effective today. As such, in a low interest rate world, the response of GDP growth to an uncertainty shock may be significantly larger than our modelling analysis suggests.

4.5 Equity sector strategy for Trump/ resurgent protectionism

Now that we have set out how Trump/ resurgent protectionism could lower GDP growth by (at least) 1–2% in the first two years, we turn to how one might position for that within US equity markets.

In figure 6, we overlay our US uncertainty indicator with the Equity Risk Premium (ERP) of the S&P 500 stock index. The ERP is the compensation investors demand in return for taking on the risk associated with the future earnings of the 500 companies in the index. Unsurprisingly, rising uncertainty is associated with a higher risk premium. Or, in other words, investors start discounting tomorrow's earnings into today's valuation at a more punitive rate as they become more uncertain. Figure 6 suggests that investors are already demanding a notably higher ERP than what one would expect from the current level of uncertainty. Although this gives us some comfort, we would still expect a Trump victory to cause the ERP to increase further, lowering equity market valuations.

At a sector level we expect Trump/ resurgent protectionism to hurt industries with a high sensitivity to economic uncertainty, a high correlation with the US business cycle and a high proportion of earnings originating in China. In figure 8 we rank the 40 industrial sectors on these criteria and highlight the top and bottom quintiles (i.e. those most exposed and those most immune, respectively). The coloured text denotes sectors that appear in at least two of the three columns (and not at all in the opposite quintile). Automotives & parts, general industrials, technology hardware & equipment and electrical & electronic equipment rank poorly across all measures. US manufacturers that source many component inputs from China would also suffer, and many of them are found in these industry groupings too.

Figure 9 tabulates the price-to-earnings valuation multiples of the most and least sensitive/exposed sectors, alongside the premium above the historic average valuation at which each sector is currently trading. Immunity from Trump and protectionism does not come cheap – all sectors in green trade above their historic valuations.

We also perform the sensitivity and exposure analysis on those stocks classified as 'growth' and those classified as 'value'. Growth tends to outperform during periods of economic uncertainty (figure 10) and when the business cycle turns down. That said, value stocks have half the revenue exposure to China of growth stocks (4% of total revenue versus 8%), but derive 74% of sales from the US, versus 65% for growth stocks.

Finally, figure 11 shows the UK sectors most exposed to US revenue streams, the American business cycle and most sensitive to US economic uncertainty. As one would expect, the classic 'defensive' sectors in the UK outperform when US uncertainty rises,

Figure 8: An uncertain outlook
US sectors most exposed to a Trump/protectionist ascendancy.

	Sensitivity to US uncertainty	Sensitivity to US business cycle	% of total revenue from China
Top quintile	Financial services	Electric/electronic equipment	Tech hardware
	Automotives & parts	Tech hardware	Electric/electronic equipment
	Media	Travel & leisure	Chemicals
	Tech hardware	Industrial engineering	Tech software
	Real estate services	Industrial metals	General industrials
	General industrials	Financial services	Oil equipment & services
	Mobile telecommunications	Automotives & parts	Aero/defence
	Banks	General industrials	Automotives & parts
Bottom quintile	Oil & gas	Electricity	Fixed line telecommunications
	Healthcare equipment & services	General retail	Healthcare equipment & services
	Tobacco	Healthcare equipment & services	Real estate investment trusts (REITs)
	Food & drug retail	Household goods	Mining
	Personal goods	Personal goods	Food & drug retail
	Electricity	Beverages	Mobile telecommunications
	Beverages	Food producers	Electricity
	Food producers	Pharmaceuticals & biotech	Gas/water/multi utilities

Source: Rathbones.

Figure 9: Protectionism is not cheap
Trump/protectionist sensitive sectors and valuations.

	Current p/e ratio	Current p/e relative to 25-year average
Electric/electronic equipment	26.0x	+10%
Automotives & parts	9.5x	-54%
Tech hardware	17.1x	-39%
General industrials	18.5x	-8%
Financial services	18.7x	+16%
Healthcare equipment & services	24.6x	+2%
Food & drug retail	21.9x	+2%
Electricity	23.2x	+49%
Beverages	27.4x	+8%
Food producers	25.9x	+26%
S&P 500	**20.9x**	**+8%**

Source: Datastream and Rathbones.

but, interestingly many of these sectors also derive a considerable amount of income from US sales – over 35% in the case of pharmaceuticals and utilities. As the Western bellwether economy, US uncertainty tends to precipitate a global 'risk-off' environment in financial assets that benefits the defensive sectors. However, this may not be the case if uncertainty is driven by trade policy disruption and a policy-induced threat to potential economic growth over the longer term. UK investors should be mindful of revenue exposures when selecting domestic defensive names.

4.6 Will a Clinton presidency provide a boost to markets?

This paper is not intended to provide a 'side-by-side' comparison of Trump versus Clinton policy proposals, or to set out a prescriptive portfolio strategy for investors to follow during and after the election period. Nevertheless, given the timing of the publication, we thought some observations may be helpful.

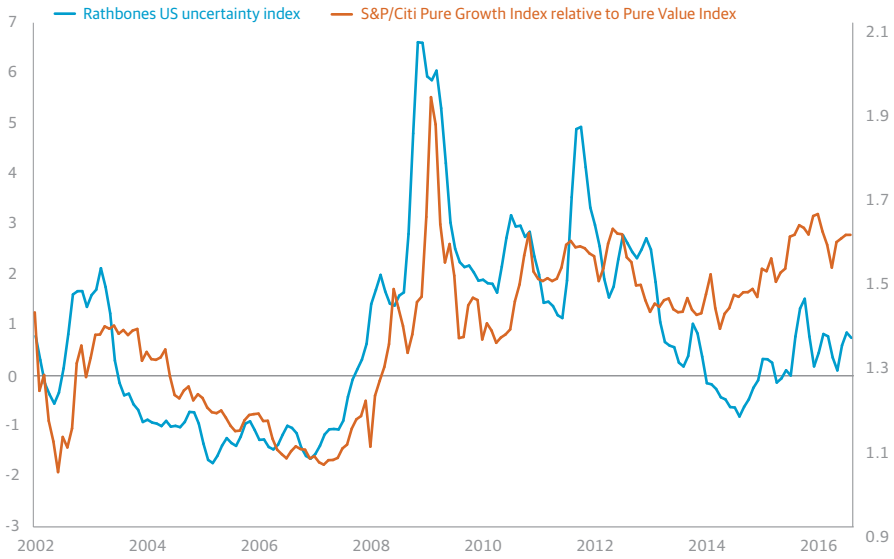
A Clinton presidency is unlikely to generate the uncertainty that will weigh on US equity valuations if Trump wins in November. Yet if the Democrats take a clean sweep – winning the Oval Office as well as regaining majorities in both the Senate and the House – investors may still remain nervous. That's because, in such a scenario, Clinton may look to consolidate support within her party early in her term by making concessions to the aforementioned populist factions in the left wing.

Clinton pivoted on the Asian free-trade deal (TPP) in April, and she continues to vow to make life difficult for fossil fuel companies, investment managers, student lenders and big brand pharmaceutical producers. It is quite conceivable that she could make life tougher for Wall Street, close corporate tax relief programmes, tax profits stored overseas or raise the minimum wage. Furthermore, her anti-shale policy could push up the global price of oil, given that US shale is now assumed to be the marginal producer at today's prices. This would be bad for US manufacturing as well as lower income households, which would have less disposable income available for discretionary spending if energy prices rose.

Here investors face a temporal conundrum. A Democrat clean sweep is most likely to enact policies that will support those left behind by technological change and globalisation, and reverse the growing gap between the incomes and wealth of the rich and the poor, thereby stemming the rise of popular protectionism that is arguably one of the greatest threats to investment returns over the next decade or more. But of course, in the short term, these policies are unlikely to help companies' bottom lines, either by increasing their average tax rate or by raising labour costs.

Some investors even believe that a Trump presidency with a split Congress (one party winning the House

Figure 10: Growth outperforms during periods of uncertainty
Growth versus value stocks and uncertainty.



Source: Datastream and Rathbones.

Figure 11: Protectionism and the UK
UK sectors most exposed to Trump/US protectionism.

	Sensitivity to US uncertainty	Sensitivity to US business cycle	% of total revenue from US
Top quintile	Life insurance	Electric/electronic equipment	Pharmaceuticals & biotech
	Banks	Financial services	Gas/water/multi utilities
	Automotives & parts	Industrial transport	Aero/defence
	Electric/electronic equipment	Life insurance	Tech hardware
	Fixed line telecommunications	Industrial engineering	Automotives & parts
	Media	Automotives & parts	Construction & materials
	Financial services	Mining	Electric/electronic equipment
Bottom quintile	Food producers	Tobacco	Real estate services
	Oil & gas	Food & drug retail	Fixed line telecommunications
	Beverages	Electricity	Mobile telecommunications
	Food & drug retail	Food producers	General retail
	Tobacco	Pharmaceuticals & biotech	Real estate investment trusts (REITs)
	Electricity	Gas/water/multi utilities	Electricity
	Gas/water/multi utilities	Beverages	Food & drug retail

Source: Rathbones.

and the other the Senate) is the best outcome for markets, averring that he would be unable to enact his more renegade plans and would concentrate instead on cutting taxes (good for after tax earnings, but bad for staving off popular protectionism over the longer term). On this point we note that the president has at least four executive powers with which he could impose tariffs on China and Mexico without Congressional approval, at least for the first few years.

Furthermore Trump has outlined $4 trillion of tax cuts, 40% of which benefit only the top 1% of earners. This policy would need to be funded with spending cuts that would disproportionately affect the bottom 50% of earners (Oxford Economics (2016)). Insofar as the spending patterns of the top 1% of earners are largely insensitive to extra income (high marginal propensity to save), Trump's fiscal plan is negative for overall consumption. Given Trump's voter base is largely middle and working class, a tax plan so biased in favour of the rich would almost certainly need to be accompanied by heavily protectionist trade policies if he is to retain any legitimacy among his support.

'Election hedge' equity sectors

Investors would do well to look for stocks that would benefit from both Democrat and Republican initiatives. An increase in defence spending has been well flagged by both candidates. Low-end consumer discretionary stocks should fare well under both parties as they pledge to help out the working and lower-middle classes. But in the event of a Democrat sweep, one may wish to focus on firms that have already implemented their own 'minimum'/'living' wage.

Infrastructure is perhaps the standout, although investors should watch for overseas earnings in this grouping. Giant walls aside, the Clinton plan is likely the larger one, promising to spend $250bn over five years and committing a further $25bn to establishing an infrastructure bank. There is talk that the $250bn will be financed by 'Build America' quasi-government bonds, which the Federal Reserve could even buy if more extraordinary monetary policy were ever required. Comparing the quality and sophistication of US infrastructure to other countries', rail and broadband stand out as in need of investment (very few high-speed rail lines and very expensive broadband), and the World Economic Forum assess America's roads and utilities to be of middling quality.

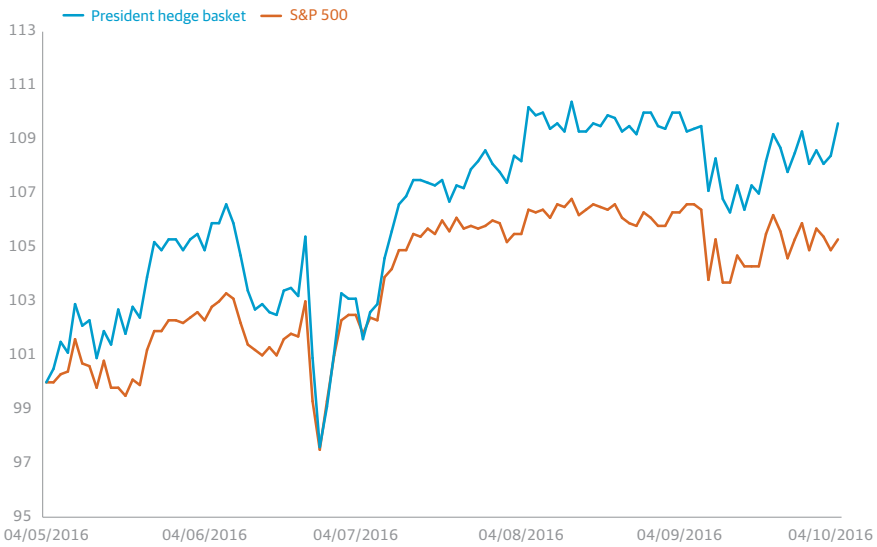
A Democrat clean sweep is most likely to enact policies that will support those left behind by technological change and globalisation, and reverse the growing gap between the incomes and wealth of the rich and the poor, stemming the rise of popular protectionism.

Finally, regional banks may outperform the market. Trump has discussed reinstating the Glass-Steagall Act (i.e. banning Wall Street from Main Street) and while Clinton is unlikely to do so (her husband was the President who repealed it!) she may push through similar legislation to bring on-side the anti-Wall Street caucus centred around Senator Warren.

In figure 12 we track the performance of a 'presidential hedge' basket of equities, consisting of defence stocks, regional banks and the infrastructure plays best geared into government projects.

Figure 12: The home stretch

Our basket of defence stocks, regional banks and infrastructure plays has outperformed the broader market since the two final candidates were known.



Source: Datastream and Rathbones.

5. Alternative policies to watch for

As we're sure you can tell, we hope that policymakers do not resort to protectionism. But we also hope that they can dispel the blinkered anti-trade, anti-globalisation and anti-capitalist sentiment that appears to be gaining currency. Political elites often dismiss the ordinary voters trading in this currency as 'emotional' – a term invariably applied pejoratively. Yet it shouldn't be surprising that those who have entered into the covenant of globalisation but have not benefited from the bargain are 'emotional'. If globalisation is to continue to create wealth, governments must be seen to be honouring the covenant. (although you can't share wealth that isn't being created, of course). Dismissing the emotions of a large group of society that has fallen behind economically and is unlikely to catch up in its members' lifetimes demonstrates an holistic ignorance that could be the undoing of economic growth for a generation.

To do this, governments will need some new policies. To conclude this report we highlight a few possibilities that could have important investment implications.

As we have discussed, in the long run productivity drives increases in standards of living. Therefore the decline in investment spending and the concomitant plateauing of productivity growth must be arrested with policies to encourage higher productivity, innovation and entrepreneurship. Tax-breaks on investment and, perhaps more importantly, on profits earned and repatriated from overseas to fund such investment, may become more important.[21]

As discussed in section 4, government infrastructure spending is also likely to be part of the plan. The consultancy, McKinsey estimates that at least $57 trillion in infrastructure investment – more than the estimated value of the existing infrastructure stock – will be needed by 2030 to support GDP growth (McKinsey (2016)). Infrastructure projects provide low- and middle-skill jobs. Spending on public goods has been deployed as a solution to popular unrest since ancient times. When technological change caused unemployment in Ancient Greece, Pericles launched huge public works programmes to provide paid work to the jobless.

Higher minimum wages may also feature: they can appeal to both the left – clear benefit to lower quartile earners – and the right – less onus on often unwieldy benefit management offices. The common concern is that employers will just fire low-skill workers or hire them informally, but most studies suggest that the effect on employment is minimal (Neumark (2015)).[22] Perhaps the best argument for raising the minimum wage is that it will remove the subsidy gained by producers with a higher share of low-wage workers that is currently provided via social transfers to their workers. A 2013 study by economists at Berkeley found that more than half of the families of fast-food workers are enrolled in one or more social security programmes. The cost of public assistance to families of workers in the fast-food industry is nearly $7 billion per year (Allegretto, et al. (2013)). Higher wage bills and potentially higher capex would have significant implications for the retained earnings of companies in low-wage paying sectors.

Greater investment in adult education and retraining opportunities would help displaced workers. Car et al (2010) suggest that government-run programmes have very little success. Republicans are perhaps more likely remove the federal barriers to government use of private education services in order to facilitate this, opening up a significant new market for private companies. Governments may also invest in sophisticated job matching software and services to decrease frictional unemployment caused by worker displacement. Private companies could benefit here too.

The decline in investment spending and the concomitant plateauing of productivity growth must be arrested with policies to encourage higher productivity, innovation and entrepreneurship.

The most radical solution to pique our interest was raised 10 years ago by Kaushik Basu, now the chief economist of the World Bank. He suggested that governments give their working classes an equity stake in the companies profiting from outsourcing parts of the production process to countries with cheaper labour or employing machines instead of workers (Basu (2006)). In other words, public investment portfolios – perhaps Rathbones could lend a hand there...

21. Although such corporate tax relief has been brought before the House of Representatives' Ways and Means Committee a number of times before, it may have greater success now that popular discontent has led to the threat of a President Donald or a President Bernie!

22. Historically, employers have been spurred to invest more in machinery and technology to increase productivity which could of course fuel further worker displacement, so higher minimum wages must be accompanied by other policies.

Appendix: econometric methodology

A Vector Autoregression model (VAR) is a statistical tool with which we can assess the linear interdependencies between a set of variables. In this instance we use it to construct a simple model of US GDP. We include five macroeconomic variables, including our uncertainty indicator.

The first step in constructing the VAR is to express the variables in terms of a set of equations. In these equations, every variable is dependent on its own past values, the past values of every other variable in the model, plus a contemporaneous error term, which captures the effect of phenomena unobserved by the model. This can be written as:

$$\begin{bmatrix} uncert_t \\ GDP_t \\ L_t \\ r_t \\ spread_t \end{bmatrix} = A_1 \begin{bmatrix} uncert_{t-1} \\ GDP_{t-1} \\ L_{t-1} \\ r_{t-1} \\ spread_{t-1} \end{bmatrix} + A_2 \begin{bmatrix} uncert_{t-2} \\ GDP_{t-2} \\ L_{t-2} \\ r_{t-2} \\ spread_{t-2} \end{bmatrix} + A_3 \begin{bmatrix} uncert_{t-3} \\ GDP_{t-3} \\ L_{t-3} \\ r_{t-3} \\ spread_{t-3} \end{bmatrix} + E_t$$

Where:

$uncert_t$ is our uncertainty indicator, derived from the first two principal components of six variables: the news flow component of Baker, Bloom & Davis's economic policy uncertainty indicator; an average of the policy components of Baker, Bloom & Davis's economic policy uncertainty indicator; the employment confidence component of the U. Michigan consumer sentiment survey; the Vix; the equity risk premium of the S&P 500; the standard deviation of analysts' 12m forward EPS forecasts.

GDP_t is the quarterly level of GDP in log deviations from trend

L_t is the quarterly level of employment in hours worked, in log deviations from trend

r_t is the level of the Fed Funds rate in deviations from trend

$spread_t$ is the yield of the Moody's BAA corporate credit index relative to the Fed Funds rate in deviations from trend

All trends are computed using a Hodrick-Prescott filter with lambda set to 1600.

We use data from 1988 to 2014 (we stop at end 2014 due to the likelihood that there will be revisions to GDP data still to be applied by the Bureau of Economic Analysis).

The extent to which each variable is affected by movements in other variables is described by coefficients in the matrices A_1, A_2 and A_3.

Once the coefficients have been estimated we can simulate the effect of a 1 standard deviation shock to the uncertainty equation at time t, and trace the response of the other variables over time.

The impulse response analysis is conducted using a Cholesky decomposition with the order: Uncert, spread, r, L, GDP.

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Contact us

If you would like further information or to arrange an initial meeting, please contact us on 020 7399 0000 or email info@rathbones.com

Head Office
1 Curzon Street, London W1J 5FB
020 7399 0000

We also have offices at the following locations:

Aberdeen
01224 218 180
rathbones.com/aberdeen

Birmingham
0121 233 2626
rathbones.com/birmingham

Bristol
0117 929 1919
rathbones.com/bristol

Cambridge
01223 229 229
rathbones.com/cambridge

Chichester
01243 775 373
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0131 550 1350
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Rathbone Greenbank Investments
0117 930 3000
rathbonegreenbank.com

For offshore investment management services:
Rathbone Investment Management International
01534 740 500
rathboneimi.com

@Rathbones1742
Rathbone Brothers PLC
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