The real story behind the value/growth rotation

What real rates mean for the rotation from growth to value

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Key points

- The nature of rising interest rates is crucial in terms of understanding the potential impact on equities; real rates can be quite adverse for the asset class
- While one should pay attention to the sector composition of equity factors, currently it seems that rising interest rates explain factor rotation adequately
- Value tends to outperform growth in an environment of rising and high real rates
- The relationship between real rates and the rotation from growth to value stocks is structurally strong but cyclically weak

Please note: All references are to US universe. Equity indices used are all from MSCI. 10Y nominal interest rate and 10Y real rates from Refinitiv. 10Y breakeven inflation from Federal Reserve. Cash is ICE BofA 1-3 Year US Treasury Index. We work with a de-trended real rate (describe in the annex). Rolling coefficients are five-year lookback window and quarterly change. Table averages are weighted by number of events.

Since the start of 2022, expectations of higher interest rates have been materialising. The debate about the transitory nature of the current inflation regime has shifted as persistently high commodity prices, the tightening of labour markets and rising wages have put upward pressure on interest rates. Moreover, central banks were not expected to remain accommodative forever and the Federal Reserve's commitment to normalisation puts additional pressure on nominal interest rates. In theory, the rise in interest rates should narrow the equity risk premium all things being equal and could therefore be a catalyst for investors to reallocate to other asset classes or rotate within equities.

This paper examines the rotation within the asset class. First, we study the reaction of equities to interest rate movements and its individual components. Then we look at the behaviour of value and growth factors as a function of real rates. Finally, we conduct an empirical analysis of the value/growth rotation to see in which case the rotation could hedge against a rise in interest rates.

We conclude that interest rate moves need to be decomposed into real and breakeven components to usefully signal changing equity performance, with rising real rates the most damaging to equities. We show that growth and value stocks are not inverses of each other and that sector composition is important. However, given the current composition, rising real rates should boost value relative to growth stocks. In addition, this relationship has been particularly sensitive of late, suggesting possible further positive returns from a rotation of growth to value if one expects further gains in real yields.

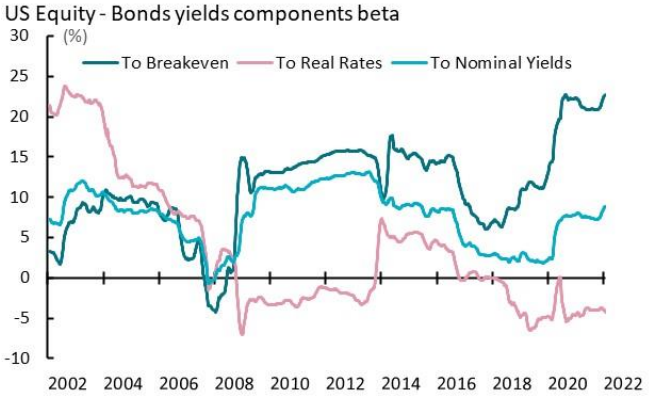
Stock returns and bond yields – a two-step dance

A stock's present value can be determined by discounting future cash flows of the company. It is quite natural to think the discount rate, used to determine the current value of future cash flow, should be positively correlated to nominal interest rates. This suggests the present value of a stock will decrease when interest rates rise. However, this is not always the case. So, what makes the difference?

The expectation of higher inflation levels or tighter monetary policy should lead investors to demand higher yields. To distinguish between these two types of bond selloff movements, we analysed equity returns by decomposing nominal rate changes into real rates and inflation expectations (Exhibit 1).

Since 2008, both the nominal and breakeven inflation rate – the difference in between nominal and inflation-protected yields with the same maturity – have had a positive relationship with equity prices. Historically, rising inflation expectations were mirrored in rising equity performance. Since 2016/2017, the beta between breakeven and stocks increased until 2019 where we observed a stabilisation driving the equity beta versus breakeven to a historically high level of 22.8.

Exhibit 1: Decomposition of yield shifts explains more



Source: MSCI, Federal Reserve, Refinitiv and AXA IM Research, April 2022

The only component to have a negative relationship with equity gains is the real rate, with higher real rates leading to lower stock returns. Today, the beta is low at -4.2, well below its historical average of 3.5. Thus, over the last five years, equities have suffered more from real rate movements.

The lack of a simple, direct connection between interest rate changes and equity returns arises from the fact that rate changes often result from several macroeconomic factors, all of which have implications for the risky asset class.

As an example, Exhibit 2 shows the close relationship between US breakeven rates and the US ISM manufacturing index, revealing the cyclical nature of inflation expectations.

Rising breakeven rates usually go hand in hand with increased economic activity. And during such periods, equities tend to perform well – US equities averaged 0.8% gains on a monthly basis – when the ISM index is rising.

Exhibit 2: Breakeven cyclicality

Source: ISM, Refinitiv and AXA IM Research, April 2022

So, we studied stocks' performance with respect to movements in bond yield components (Exhibit 3). We looked at the quarterly returns of equities in relation to movements in real and breakeven rates (Exhibit 3). We separated the movements of the rate components into three categories: falling, stable and rising, which correspond to the first and last quartile of the respective distribution of each component.

Exhibit 3: Equity returns in different rate environments

		Real rates			
		Falling	Stable	Rising	Average
Breakeven	Falling	-7.5	-1.1	-4.9	-4.0
	Stable	1.3	3.6	3.0	3.0
	Rising	5.4	5.3	5.8	5.5
	Average	-0.5	2.9	1.8	

Source: MSCI, Datastream and AXA IM Research, since 2001, weekly frequency, April 2022, Real rates: slowing (<-20bps), growing (>17bps), Breakeven: slowing (<-14bps), growing (>18bps)

On a quarterly basis[1], the best performance of equities occurs when both breakevens – at more than 18 basis points (bps) and real rates, over 17bps – are rising. Risky assets deliver an average excess return of +5.8%. Conversely, when real rates and breakevens fall, equities are down by -7.5% on average – these periods occur rarely (8% of the time in our sample) but are very adverse for stocks. Finally, by looking at the average by component, rising breakeven (+5.5%) and stable real rates (+2.9%) appeared to be the best environment for stocks.

Currently we are living in a backdrop of rising breakevens and real rates, when on average equities increased by +5.8% over one quarter.

[1] If the frequency is not mentioned, we refer to quarterly changes.

Real rates and the value/growth rotation – a persistent duration bias?

The stock market's reaction to interest rates varies according to the nature of rates' movements. Within the asset class, stocks may react differently depending on the business type.

Acknowledging that stock price is the present value of future cash flows, the discount rate price sensitivity can be viewed as an equity duration.[2] According to Cornell (2000) equity duration can be defined as the share's price sensitivity to changes in the risk-free rate only. As analysts' earnings forecasts, often used for presenting value models, do not completely incorporate the earnings information on inflation,[3] the real interest rate can be used as a risk-free rate[4] proxy.

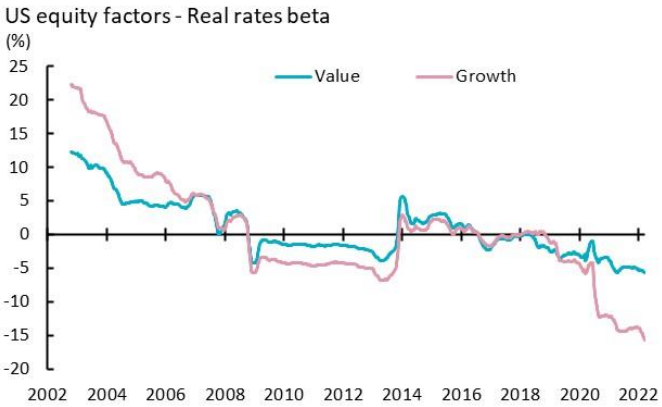
Therefore, in theory, companies with high revenue growth should be categorised as of higher duration and thus be more sensitive to real rates, and vice versa.

Following these definitions, it is quite natural to understand the long duration bias that so-called growth stocks can have – given their exposure to future growth. But the definition of value stocks – stocks with low prices relative to intrinsic value – does not intuitively suggest a short duration bias.

While today the opposition of growth and value is common practice, early academic literature used to denote expensive stocks as the opposite of value stocks.[5] Growth is therefore not an intrinsic opposite of value – while some growth stocks are indeed expensive and over-priced, growth-oriented factors like momentum and quality are long-term drivers of return.[6] This is why the explanation that value stocks are a 'shorter duration' asset than growth stocks has gained traction in recent years.[7]

Exhibit 4 shows the beta to real rates of each factor. It is interesting to note that since 2020 the gap between the value beta and the growth beta has widened. Today, we are at a record high difference in betas of 10%. This suggests both an accrued sensitivity to real rates for the value/growth rotation and that the impact of real rates has been greater on growth stocks.
It's also important to note that the exposure of the factors to sectors has shifted over time. According to FTSE Russell,[8] technological-driven sectors have gained prominence; the technology sector has increased from under 20% to almost 30% in the Russell 1000 Growth index since 2002.

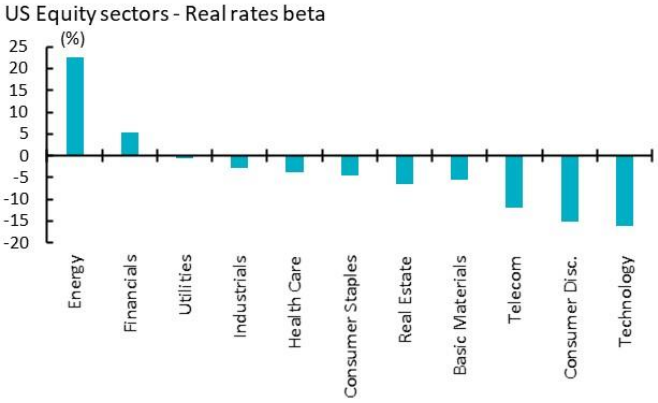
Exhibit 4: A duration bias



Source: MSCI, Datastream and AXA IM Research, April 2022

So, we investigated the real-rate sensitivity of each sector to better understand the evolution of the duration bias in the relationship between value and growth. These vary between sectors and over the time (Exhibit 5). On the one hand, energy and financials are the only sectors which have a positive relationship with real rates (i.e. benefiting from the rise in real rates). On the other hand, all sectors are adversely affected by rising real rates with technology and consumer discretionary being the most impacted.

Exhibit 5: Sectoral inequalities



Source: MSCI, Datastream and AXA IM Research, April 2022, Average since 2002

Following from this, we find the current sectoral distribution of each factor justifies the sensitivity of the rotation.

In Exhibit 6, we compute the current sector bias versus factors, namely the difference between the value factor weight and the growth factor weight, within each sector.

[2] Schröder, D. and Esterer, F., "A new measure of Equity duration", Edhec-Risk Institute, December 2011

[3] Basu, S., Markov, S. and Shivakumar, L., "Do analysts incorporate inflation in their earning forecasts?", 15 September, 2005

[4] Damodaran, Aswath, "Estimating risk free rates", New York Stern School of Business,

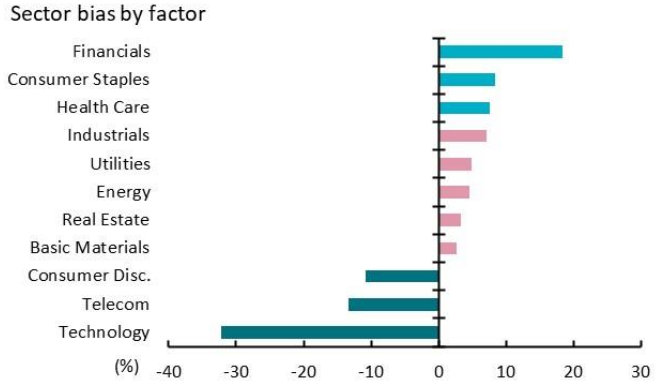
[5] Lakonishok, J., Shleifer, A. and Vishny, R. W., "Contrarian Investment, Extrapolation, and Risk". Journal of Finance, Vol. 49, No. 5, December 1994

[6] Ang, A., "Growth is not the opposite of value", BlackRock Andrew's angle, 7 November 2018

[7] Inker, B., "The duration of value and growth", GMO's White Papers, 24 March 2021

[8] Barnes, M., "Russell Growth and Value Indexes: the enduring utility of style", FTSE Russell, January 2021

Exhibit 6: Value-Growth net factor exposure by sector

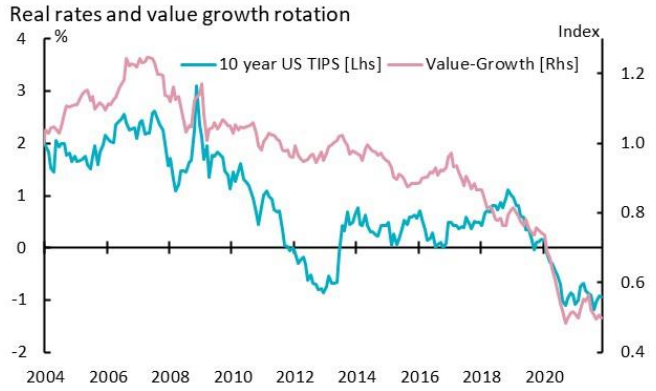


Source: MSCI, Datastream and AXA IM Research, April 2022, factors sectors weights difference, e.g., "Financials = Value sector weight – Growth sector weight"

The key takeaway is that the value factor has its largest overweight in financials, and its highest underweight in technology, relative to growth. Bearing in mind the sensitivity to real rates illustrated in Exhibit 5 – the current sector compositions of both factors reflect the value-growth rotation sensitivity to real rates.

The sector composition of the factors helps us understand the duration bias between factors. This explains why today, the relationship between real rates and the rotation from growth to value works so well (Exhibit 7) despite a long-term inconsistency.

Exhibit 7: A partial relationship



Source: MSCI, Datastream and AXA IM Research, April 2022

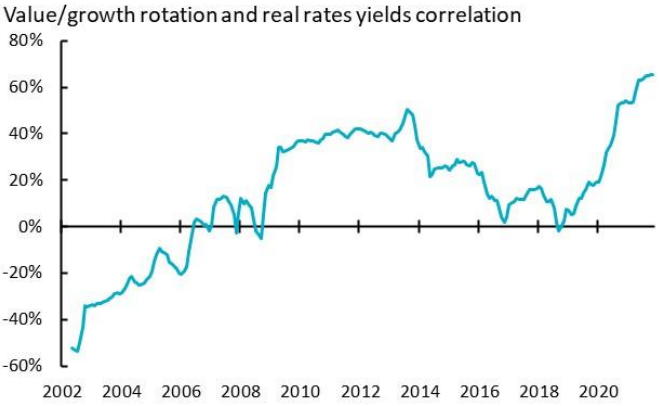
Over the last decade, growth outperformance has become somewhat decoupled from real rates: The abrupt fall in real rates between 2010 and 2012 did not lead to a strong outperformance of growth over value. And the stabilisation of real rates between 2013 and 2017 did not halt the trend. Today, the composition of value and growth sectors seems adequate for the rotation to be explained by real rates. Indeed, the historically high difference between factor sensitivity to real rates gives more ground to expect value overperformance in the event of rising interest rates. However, real rates do not fully explain the rotation from growth to value as, by definition, value factors (not necessarily short duration) are not the opposite of growth (long duration).

Therefore, an investor should be aware of the sectoral composition of the factors, and the sensitivity to real rates of those sectors, when planning a strategy linking those factors to real rates.

Rotation at play

As the value/growth rotation can be driven by real rates, we analyse under what conditions the rotation from growth to value is most profitable.

Exhibit 8: Value-growth correlation to real rates is currently elevated



Source: MSCI, Datastream and AXA IM Research, April 2022

The correlation between value/growth rotation and real rates varies over time (Exhibit 8). The correlation has been mainly positive post-the 2008/2009 financial crisis meaning that value tends to outperform growth when real rates rise. Currently, the correlation between value/growth rotation and real rates is historically high with the coefficient standing at 65% – the highest over the whole sample.

Exhibit 9: Value-growth rotation benefits from rising real rates (momentum analysis)

		Real rates			
		Falling	Stable	Rising	Average
Breakeven	Falling	-4.0	-0.2	1.4	-1.1
	Stable	-1.7	-0.5	-0.1	-0.6
	Rising	-5.0	0.3	1.5	-0.7
	Average	-3.3	-0.2	0.7	

Source: Datastream and AXA IM Research, April 2022, Weekly frequency, Quarterly changes, Real rates: falling (<-22bps), rising (>17bps), Breakeven: falling (<-14bps), rising (>18bps), Weighted average

We examine the value-growth rotation under different regimes in interest rate momentum. When real and breakeven rates are rising, the value bet against growth performs its best (Exhibit 9).

The rotation to value from growth has averaged a 1.5% excess return in these periods[9].

Conversely, the growth factor has strongly outperformed value under falling real rates (less than -22bps) and rising breakeven (more than 17bps) environment – in such periods the rotation to value from growth averaged -5%.

We next consider the value-growth rotation under different regimes in interest rate levels.

We notice that value/growth rotation works best when real and breakeven rates are high (Exhibit 10) – a state we define as when real rates are above -24bps and breakeven above 2.3%. Favouring value over growth then offers excess returns of 2.1% over three months.

Exhibit 10: High real rates may be a tailwind for value (level analysis)

		Real rates			
		Low	Medium	High	Average
Breakeven	Low	-7.8	-3.0	-0.6	-2.7
	Medium	-1.1	-1.3	-1.2	-1.2
	High	0.4	0.9	1.5	0.8
	Average	-1.0	-1.4	-0.7	

Source: MSCI, Datastream and AXA IM Research, since 2001, Weekly frequency, April 2022, Real rates: (low<-100bps), (high>-24bps), Breakeven: (low<1.7%), (high>2.3%)

A strong but structurally weak relationship

Decomposing interest rate movements is necessary to study their impact on equity returns. The nature of the rate rise is key to the impact on equities, with rising real rates more damaging for the asset class than rising inflation expectations.

The rotation between growth and value factors can be partially explained by real rates movements. However, growth is not the opposite of value, and one should pay attention to the sector composition of the factors. Currently it seems to be adequate for the rotation to be explained by rising interest rates.

The evidence shows that value has been likely to outperform growth in an environment of rising and high real rates. The current correlation with real rates may provide a positive technical signal. If one expects higher levels or accelerating Treasury Inflation-Protected Securities (TIPS) – the value/growth rotation could deliver positive returns.

The relationship between real rates and the rotation from growth to value is structurally strong but cyclically weak.

[9] "The value of investments, and the income from them, can fall as well as rise and investors may not get back the amount originally invested."

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