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The Value Premium: Fact or Fantasy?

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INTRODUCTION

The underperformance of value stocks relative to their growth counterpart in recent years has led many investors to question whether a value premium truly exists.

This paper reconsiders the evidence about the value premium. In the first section, we apply a three-step test to determine whether the difference in returns between value and growth can be referred to as a “premium.” The second section provides evidence about the origin of the underperformance of value stocks in recent years. Finally, our concluding remarks will discuss the investment consequences of our findings and will highlight a few value investing caveats.

This report was written by Raymond Kerzérho, PWL Capital Inc. The ideas, opinions, and recommendations contained in this document are those of the author and do not necessarily represent the views of PWL Capital Inc.

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1. A test of the value premium

Marketing material from investment firms often emphasizes backtests demonstrating the outperformance of a type of stock (example: value, low vol, high quality) or a strategy (example: momentum, trend following, risk parity). But what differentiates a premium from a good backtest? A premium is an excess return that is observed in the data and that has a high likelihood of persisting in the future.

In this section, I will submit value stocks to a simple three-step test:

- A true premium is backed by a sound theory
- A true premium is supported by academic literature
- A true premium will be validated in the most up-to-date data. A true premium will be confirmed over extended periods of time, in many sub-samples in several markets and will display high t-statistics (t-stat). The general convention is that a t-stat in excess of 2 in several samples and sub-samples has a high likelihood of being “statistically significant;” in other words, it is not fortuitous, and the observed excess return is likely to persist in the future.

1.1 Theoretical foundation

- Diverse securities have different discount rates. This can be observed directly in the bond market, where all else being equal, lower-priced securities display a higher yield-to-maturity. Unlike fixed income, equity securities discount rates cannot be observed directly. To differentiate stocks with lower from higher discount rates, researchers scale stock prices with some fundamental valuation metrics. Fama and French (“FF” hereafter) research has demonstrated that Book-to-Market (BtM) does a better job of scaling prices to discriminate across the various levels of expected returns than other valuation metrics, such as earnings yield or dividend yield.
- Several investment firms (the Vanguard Group and AQR, among others) estimate equity expected returns using the Shiller E/P yield. By doing so, they endorse the view that scaling stock prices provides insight about their expected returns. If we accept the notion of scaling prices with book value rather than earnings (which is supported by empirical tests in FF 1992), then high BtM (value) stocks likely have higher discount rates than low BtM (growth) stocks.
- This does not mean actual realized returns will inevitably be higher for value stocks. Expected and realized returns will often differ, even for long periods of time. When making decisions, portfolio managers must consider the a priori expected returns, but also the risk that the higher expected returns may not be realized over a period of time.

1.2 The academic literature is generally positive about the value premium

1.2.1 U.S. market

Value has been tested positively as a premium on several occasions (FF 1996, Davis, Fama & French 2000 in the U.S., FF 1998 for international stocks and many other authors). However, recent research (FF 2020, recapped in Table 1 below) finds excess return but no premium for value in general in the U.S. for the 1992-2019 sub-period. The authors suggest this new evidence is not enough to overturn previous results. They implicitly suggest the recent weak performance of U.S. value stocks during the 1992-2019 sub-period is a random event. In all periods and sub-periods and all market segments, value stocks had positive excess returns, but the t-stats are weak for the 1992-2019 sub-period.

Table 1: Monthly Excess Returns on U.S. Value Factors

(Source: FF 2020, p. 15)

	Market Value – Market	Big Value – Market	Small Value – Market
Complete period 1963-2019	0.26% (2.4)	0.21% (1.8)	0.45% (3.2)
Sub-period 1963-1991	0.42% (3.3)	0.36% (2.9)	0.58% (3.2)
Sub-period 1992-2019	0.11% (1.4)	0.05% (0.24)	0.33% (1.5)

t-stat in ()

Another study (DFF 2000) documents large and significant Value minus Growth premiums in the 1929-1963 and 1963-1997 periods (Table 2).

Table 2: Monthly Excess Returns on the U.S. Value Factor

(Source: DFF 2000, p. 393)

	Value Minus Growth
Complete period 1929-1997	0.46% (4.2)
Sub-period 1929-1963	0.50% (2.8)
Sub-period 1963-1997	0.43% (3.4)

One of the earliest papers we found in support of the value premium using long-short portfolios was FF 1996 (Table 3).

Table 3: Monthly Excess Returns on the U.S. Value Factor

(Source: FF 1996, p. 73)

	Value Minus Growth
Complete period 1929-1997	0.46% (4.2)

Houge and Loughran 2006 are dissenting voices in the literature about the value premium. They studied the difference in the returns of the S&P500 Value and Growth sub-indices from 1975 to 2002 and the Russell 3000 Value and Growth sub-indices from 1979 to 2002. They found statistically insignificant negative four-factor (Carhart) Alphas for value stocks over growth stocks, as displayed in Table 4.

Table 4: Four-Factor Monthly Alphas (Houge and Loughran 2006)

	Alpha (t-stat)
S&P500 Value Minus Growth 1975-2002	-0.09% (-0.96)
Russell 3000 Value Minus Growth 1979-2002	-0.15% (-1.64)

1.2.2 International markets

Recent research (FF 2017, Table 5) finds a value premium (t stat ≥ 2) in Europe, Japan and the Pacific ex. Japanese markets for the 1990-2015 period. The study finds an excess 0.20% return per month in North America, with a low t-stat (1.1).

Table 5: Monthly Excess Returns on Global Value Factors 1990-2015

(Source: FF 2017 p. 445)

	Value Minus Growth
North America	0.20% (1.1)
Europe	0.32% (2.3)
Japan	0.36% (2.2)
Pacific (excl.-Japan)	0.59% (3.4)

Source: FF 2017

t-stat in ()

Asness, Moskowitz and Pedersen 2013 (Table 6) obtained similar results for the 1972-2011 period, with statistically significant value premiums for Europe and Japan, but non-significant excess returns for the U.S. and the U.K., although the t-stats for the latter two countries were not far from 2.

Table 6: Annual Excess Returns on Regional Value Factors 1972-2011

(Source: AMP 2013, pp. 940-941)

	Value Minus Growth
U.S.	3.7% (1.8)
U.K.	4.5% (1.8)
Europe	4.8% (2.3)
Japan	12.0% (4.3)

One of the papers presenting the most compelling evidence in favour of the value premium is FF1998 (Ref. Table 7). The paper found positive Value Minus Growth excess returns in 12 of 13 countries reviewed and showed t-stats in excess of 2 in only 6 of these countries. When aggregating all 13 countries, the Global Value Minus Growth has a very high excess return (7.68%) and a very high t-stat (3.45).

Table 7: Annual Excess Returns on Country Value Factors 1975-1995

(Source: FF 1998, pp. 1979-1980)

Country	Value Minus Growth
US	6.79% (2.2)
Japan	9.85% (3.5)
UK	4.62% (1.08)
France	7.64% (2.1)
Germany	2.75% (0.9)
Italy	-5.99% (-0.9)
Netherlands	2.30% (0.4)
Belgium	4.39% (1.99)
Switzerland	3.49% (0.8)
Sweden	8.2% (1.2)
Australia	12.32% (2.4)
Hong Kong	7.16% (1.4)
Singapore	9.67% (2.4)
Global	7.68% (3.45)

1.3 Empirical data validation

1.3.1 Regional evidence

In Table 8, we have compiled an analysis of the excess returns for the market premium, Value Minus Growth, Large Value Minus Large Growth and Small Value Minus Small Growth for the U.S., International Developed Markets and Emerging Markets. Where possible, we have produced analyses for sub-samples.

Table 8: Regional Monthly Value Minus Growth Excess Returns

(Source: Ken French Data Library)

	RM-RF	Value - Growth	Large Value - Large Growth	Small Value - Small Growth
U.S. Market*				
Full sample 07/1926 - 06/2020	0.66%	0.31%	0.24%	0.42%
<i>t-stat</i>	4.16	2.55	1.98	3.88
Sub-sample 07/1926 - 06/1963	0.86%	0.44%	0.40%	0.46%
<i>t-stat</i>	2.78	1.79	1.67	2.30
Sub-sample 07/1963 - 06/1991	0.38%	0.43%	0.33%	0.51%
<i>t-stat</i>	1.51	2.72	2.12	3.33
Sub-sample 07/1991 - 06/2020	0.69%	0.02%	-0.06%	0.28%
<i>t-stat</i>	2.99	0.09	-0.35	1.46
International Developed Markets				
Full sample 01/1975 - 12/2019	0.57%	0.37%	NA	NA
<i>t-stat</i>	2.77	3.40		
Sub-sample 01/1975 - 06/1990	0.93%	0.49%	NA	NA
<i>t-stat</i>	2.56	2.67		
Sub-sample 07/1990 - 12/2020	0.38%	0.31%	0.03%	0.46%
<i>t-stat</i>	1.53	2.27	0.26	3.34
Emerging Markets				
Full sample 07/1989 - 06/2020	0.65%	0.35%	0.28%	0.91%
<i>t-stat</i>	2.05	2.48	1.84	4.30

*U.S. data from the U.S. Research Returns Data Series. All other data from the International Research Returns Data Series.

For the full samples, the value premium is significant ($t > 2$) in all three regions. In the U.S., the value premium is less significant than the market premium: the VMG premium has a t -stat of 2.55, compared to 4.16 for RM-RF. However, the inverse is true for International Developed and Emerging Markets, with higher t -stats for the value premium than for the market premium. Also, in all regions, we can observe that the value premium is primarily driven by small cap stocks, with large caps generally posting a positive value excess return, but with $t < 2$ in most instances.

1.3.2 Country evidence

To validate our regional results from the previous section, we have updated the results from FF1998 (reproduced in Table 7 above) to see whether the results would differ at the country level. In addition to the Value Minus Growth data, we have added the Market Minus Risk Free data for additional insight. In our results, we have also included Canada, which was not present in the original paper. Our results are displayed in Table 9.

Table 9: Country Monthly Value Minus Growth Excess Returns 1975-2019

(Source: Ken French Data Library)

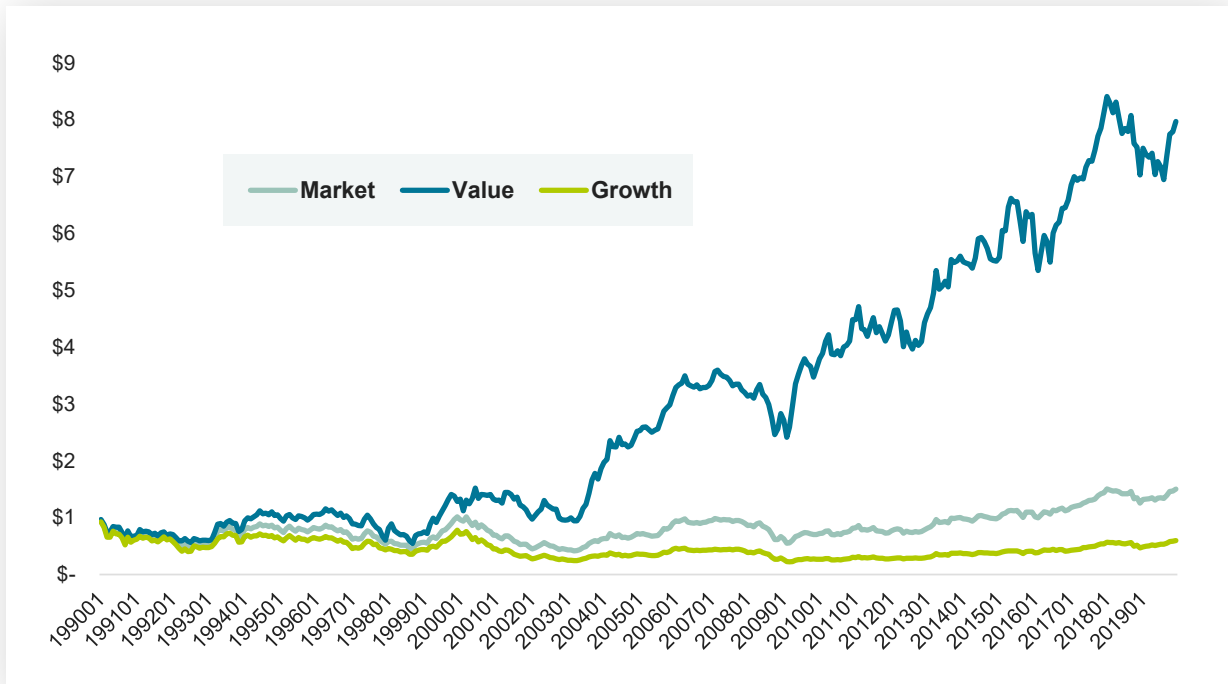
	RM-RF	t-stat	Value Minus Growth	t-stat
U.S.*	0.71%	3.73	0.24%	1.83
Japan	0.48%	1.92	0.76%	3.97
UK	0.80%	3.09	0.14%	0.87
France	0.74%	2.72	0.27%	1.42
Germany	0.62%	2.45	0.36%	2.13
Italy	0.51%	1.65	-0.19%	-0.87
Netherlands	0.84%	3.59	0.10%	0.42
Belgium	0.73%	3.07	0.32%	1.53
Switzerland	0.69%	3.27	0.03%	0.17
Sweden	0.90%	3.14	0.46%	1.92
Australia	0.73%	2.59	0.37%	2.12
Hong Kong	1.09%	3.13	0.42%	1.80
Singapore	0.77%	2.41	0.73%	3.19
Canada 1/1977-2019	0.55%	2.29	0.18%	0.88

*U.S. data from the U.S. Research Returns Data Series. All other data from the International Research Returns Data Series.

The data in Table 9 bears a striking similarity to the FF 1998 results reported in Table 7. Value produces excess return in thirteen out of fourteen countries, the exception being Italy. Four out of fourteen had t-stats in excess of two (compared to six in the original study). We also note that the equity excess returns dominated the value excess returns with higher t-stats for 12 out of 14 countries. It is remarkable that, since 1990, the Japanese value excess return has performed extremely well in the context of the great equity bear market, as demonstrated by Chart 1.

Chart 1: One U.S. Dollar Invested in Japanese Stocks 1/1990 - 12/2019

(Source: Ken French Data Library)



1.4 Is there a value premium?

I believe there is substantial evidence from theory, academic literature and from the most up-to-date data that the excess returns of value stocks over growth stocks are not the result of chance. I believe value stocks have higher expected returns than growth stocks. Theory supports the notion that not all stocks have the same expected returns. If this is true, then it makes sense that low-priced stocks have the relatively higher expected returns, similarly to what can be observed in the bond market. Academics have found significant value premiums in the U.S. and across the world. Finally, my own fact-checking produces the same conclusion: significant t-stats are found for the full samples in the U.S., in the International Developed Markets and in the Emerging Markets. I found high t-stats in 7 of 15 sub-samples/sub-periods reviewed in Table 8. And in the country data (Table 9), excess returns are observed in 13 of 14 countries.

2 Why did value stocks underperform in recent years?

The data reveals that there has been a huge discrepancy between the valuation multiples of U.S. value and growth stocks. While the Price-to-Book ratio for value stocks has remained stationary around 1-times the book value since the 1990s, the valuation of growth stocks has literally exploded since 2009, from 3.4 to 8 times the book value as observed in Chart 2.

Chart 2: Price-to-Book Ratio of Growth and Value Stocks in the U.S. 1926 - June 2020

(Source: Ken French Data Library)

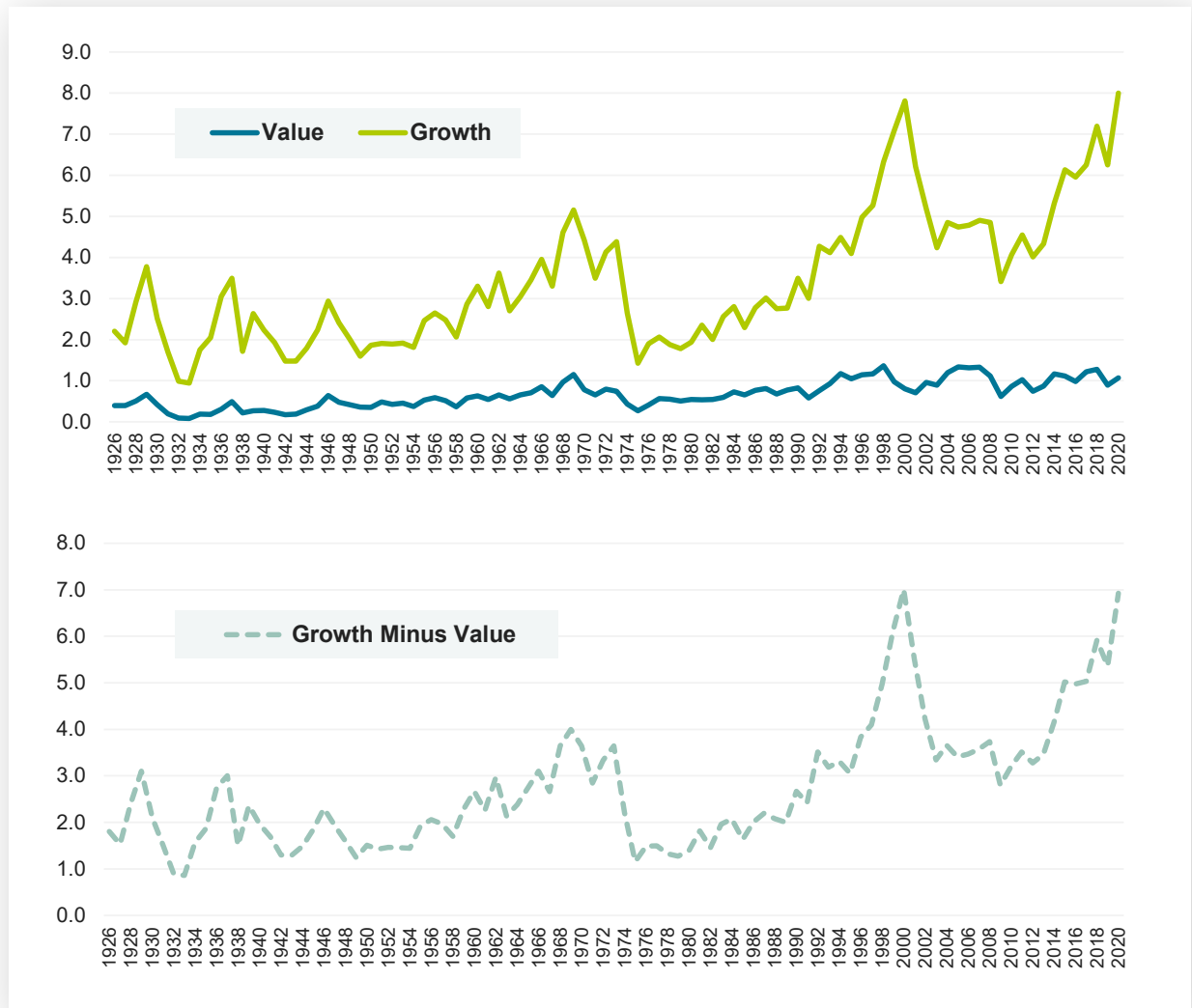
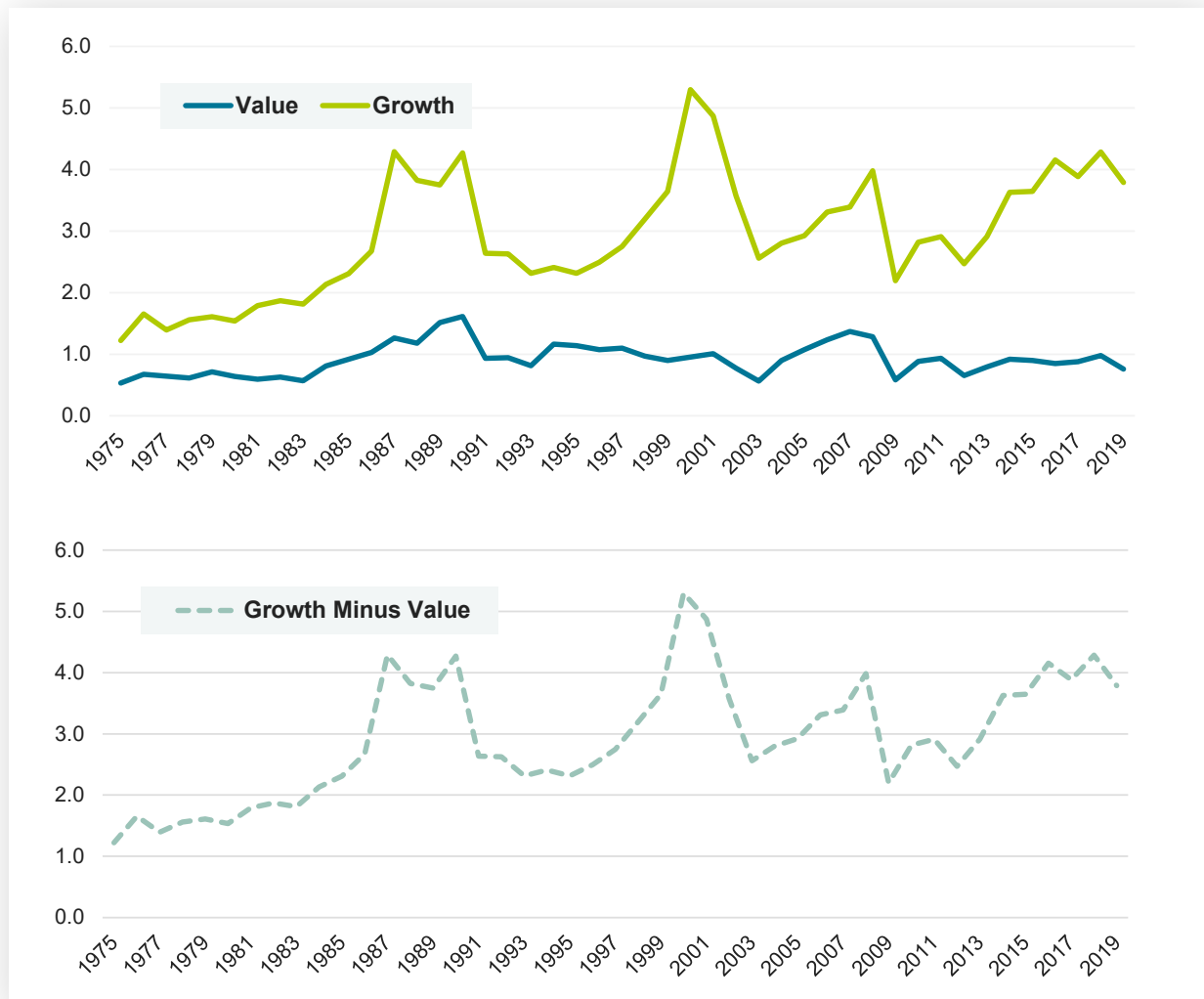


Chart 3 depicts a similar behaviour for the International Developed Markets. Value stocks have hovered close to 1-times the book value for most of their history, while growth stocks have experienced a surge of their Price-to-Book ratio.

Chart 3: Price-to-Book Ratio of Growth and Value Stocks in International Developed Markets 1975 - 2019

(Source: Ken French Data Library)



Is this time different? Are the current relatively high valuations of growth stocks justified? Here's what Arnott, Harvey, Kalesnik and Linnainmaa 2019 conclude:

"Many narratives purport to explain why "this time is different," why value may be structurally impaired. These narratives include the new-normal interest rate environment, growth of private markets, crowding, less migration, stranded assets, and technological change, among others. We examine many of these explanations and find insufficient evidence to declare a structural break."

"The reason B/P HML has suffered a -55% drawdown has nothing to do with failings in the structural return and is entirely due to the collapse of relative valuations."

In other words, value stocks have underperformed because of the expansion of multiples of growth stocks rather than because of their relatively poor operating performance. In a recent blog post, Asness 2020 comes to a similar conclusion. He points out that whatever measure of value is used (price-to-book, price-to-sales, price-to-earnings, etc.), growth stocks are currently at an extremely

high valuation level historically. He dispels the idea that the relative appreciation of growth stocks is explained by either tech stocks, mega-cap stocks or by a small number of high-performing companies. In other words, the market is currently showing a broad-based preference for growth stocks that cannot be explained by any special characteristic or technological revolution.

How likely is it that value stocks outperform in the future?

I can't answer this question directly, but I accept history as a rough guide: Charts 4 and 5 below are insightful.

Chart 4: U.S. Value Minus Growth 10-Year Annual Rolling Return 1936-2020

(Source: Ken French Data Library)

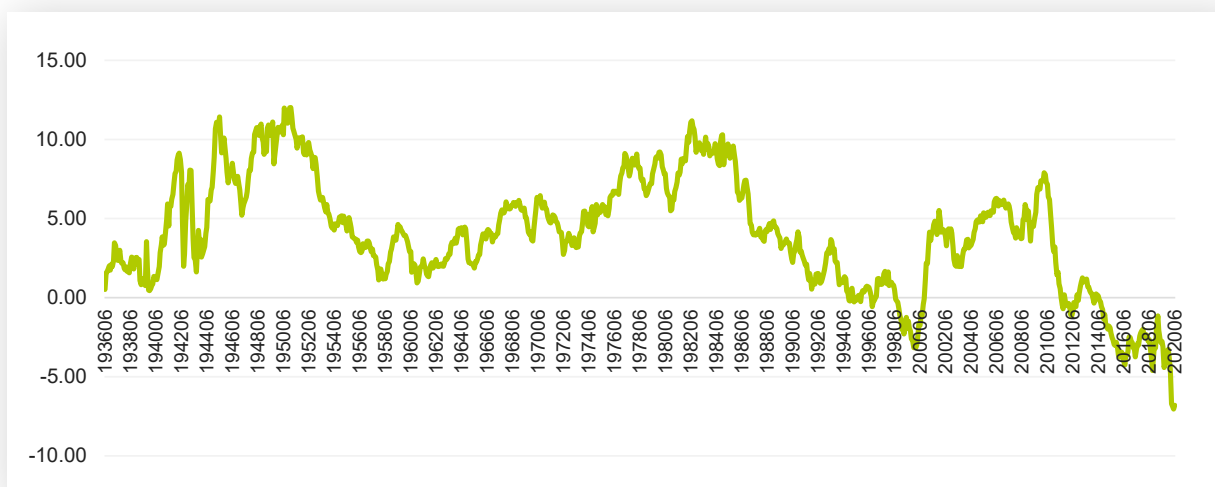
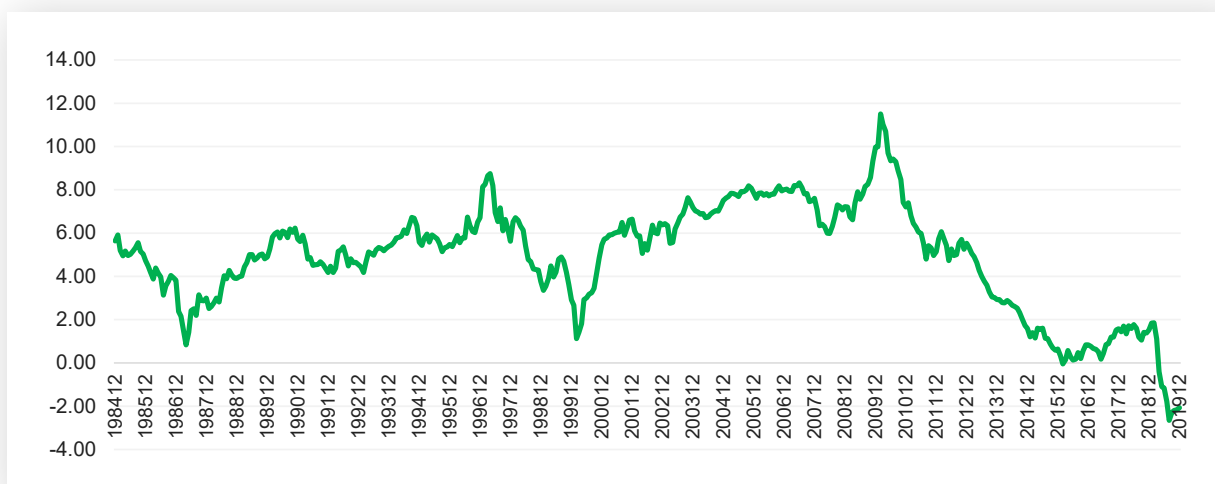


Chart 5: International Developed Value Minus Growth 10-Year Rolling Annual Return 1985-2019

(Source: Ken French Data Library)



Historically, U.S. value stocks have outperformed growth stocks in 87% of 10-year rolling periods since 1936. International value stocks have outperformed their growth counterpart in 98% of 10-year rolling periods since 1985.

3 Investment conclusions

Value stocks are currently cheap relative to growth stocks. I would not be surprised if the valuation multiples of value and growth stock eventually returned closer to the historical norm.

Despite the underperformance of value stocks in recent years, there is substantial theoretical and empirical evidence that value stocks bear higher expected returns than growth stocks. This recent underperformance is not explained by special factors, like the outperformance of a narrow group of growth stocks. The underperformance of value stocks is explained by a broad increase in the valuation multiple of growth stocks, while the multiple for value stocks remained relatively stable. I believe this expansion is driven by a strong current preference for growth stocks. As experienced in the past, the preference for growth is a pendulum that can swing both ways.

In a financial market with near-zero interest rates, premiums are a rare resource. I believe investors who have the capacity, desire and need to obtain higher returns beyond the market portfolio should consider an allocation to value stocks.

This said, I would like to express a few reservations:

- a. Expected premiums are not guaranteed. Leaning towards value introduces a risk of underperforming the market in the long run.
- b. It could take a very long time to capture the value premium. Value stocks have experienced underperformance stretches spanning more than 10 years. Here's a quote from a blog post on smart beta strategies my colleague, Dan Bortolotti, wrote in 2016:

"It's not uncommon for investors to lose faith in a strategy after a year or two. It's hard to imagine many will hang on to an underperforming smart beta fund as it lags the market for even five years—let alone 18—because they're confident it will outperform over a lifetime."

- c. I am not convinced that having a value-tilt portfolio in a small market such as Canada is the best strategy. As expressed in Table 9, Value Minus Growth displays high t-stats in the markets of only 4 of 14 countries. The value premium is not nearly as reliable on a per country basis as it is on a regional basis. The Canadian market represents a small sample of stocks. Many Canadian investors hold between 20% and 50% of their total equity allocation in Canadian stocks. I find that the concentrated nature of the Canadian market, high allocations to Canadian stocks and a value-tilt strategy are not a good mix. I believe value-tilt strategies make sense for broadly diversified stock portfolios.
- d. The evidence presented in this paper uses extensively Fama-French data and analyses. I find that a lot of the most of the recent good papers about the value premium were written either by FF or by authors who have interests in the investment industry.

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