Value Versus Growth in Hong Kong: Modern Investigation into the Controversial Topic

December 24th 2021

Author: Jaehyun Jung

Instructor: Professor Sunny Kwong

Abstract

For decades, researchers and investors have debated on the topic of value versus growth when it comes to investment styles. For a while, the value premium narrative seemed to be the dominant optimal strategy in investment world. However, the structure of balance sheets is changing; intangible assets are now more important than ever, as many of the largest firms today derive a large portion of their outstanding growth from intangible assets. This development is raising new questions towards the validity of the value premium narrative that has been long held as the unbreakable axiom. This study strives to contribute to the current literature on growth versus value by investigating the portfolio returns of value and growth stocks in Hong Kong over a modern period.

Introduction

There is little controversy in the statement that all rational investors strive to select the investment strategy that can maximize returns given their risk portfolio. How an investor picks the optimal investment strategy is something that receives much more controversy. For decades, studies have been conducted to find out the best investment strategy. Among debated investment strategies, undoubtedly the value versus growth debate is one of the most popular topics in the investment community. While studies in earlier years seemed to prove the superiority of value stocks compared to growth stocks, the modern investment community is much more skeptical on what seemed to be a historical truth. Much of the reason is attributed to the fact that phenomenal stock returns over the past decade seemed to be coming from mostly glamour(growth) stocks. In fact, technology stocks such as the FAANG (Facebook, Amazon, Apple, Netflix, Google) are known to have been valued much higher than their peers for consecutive years. Yet they have consistently outperformed most other stocks, making people think that value investing might be just a relic of the past and not a timeless truth.

The value versus growth debate seems like a never-ending controversy whose answer depends on the time period the question is being asked. If asked two decades ago, most would have agreed that the value premium narrative was the mainstream belief. Now, many believe either the value premium is almost impossible to find, or the value premium narrative does not exist anymore.

While there is a number of studies showing proof that the growth factor outperforms the value factor in the US stock market, it is harder to find studies on Hong Kong for modern periods. The Hong Kong stock market is the fastest growing stock market in Asia with its market

capitalization reaching HK$47 trillion. Its importance in the global financial market is being emphasized as the next global powerhouse candidate is most likely going to be China. The Hong Kong stock market also provides a rich database for study as international, local, and Mainland investors are all active in the market.

This study is expected to be a niche within the literature, as there is a limited number of studies specifically focusing on the Hong Kong stock market when it comes to value versus growth. The study will focus on comparing returns of value and growth portfolios over different time periods. Through research, I hope to contribute to the literature by either reinforcing the value premium narrative with evidence from the Hong Kong stock market or refuting the value premium narrative, and hopefully stating valid economic reasons behind the phenomenon.

Overview of Value Versus Growth

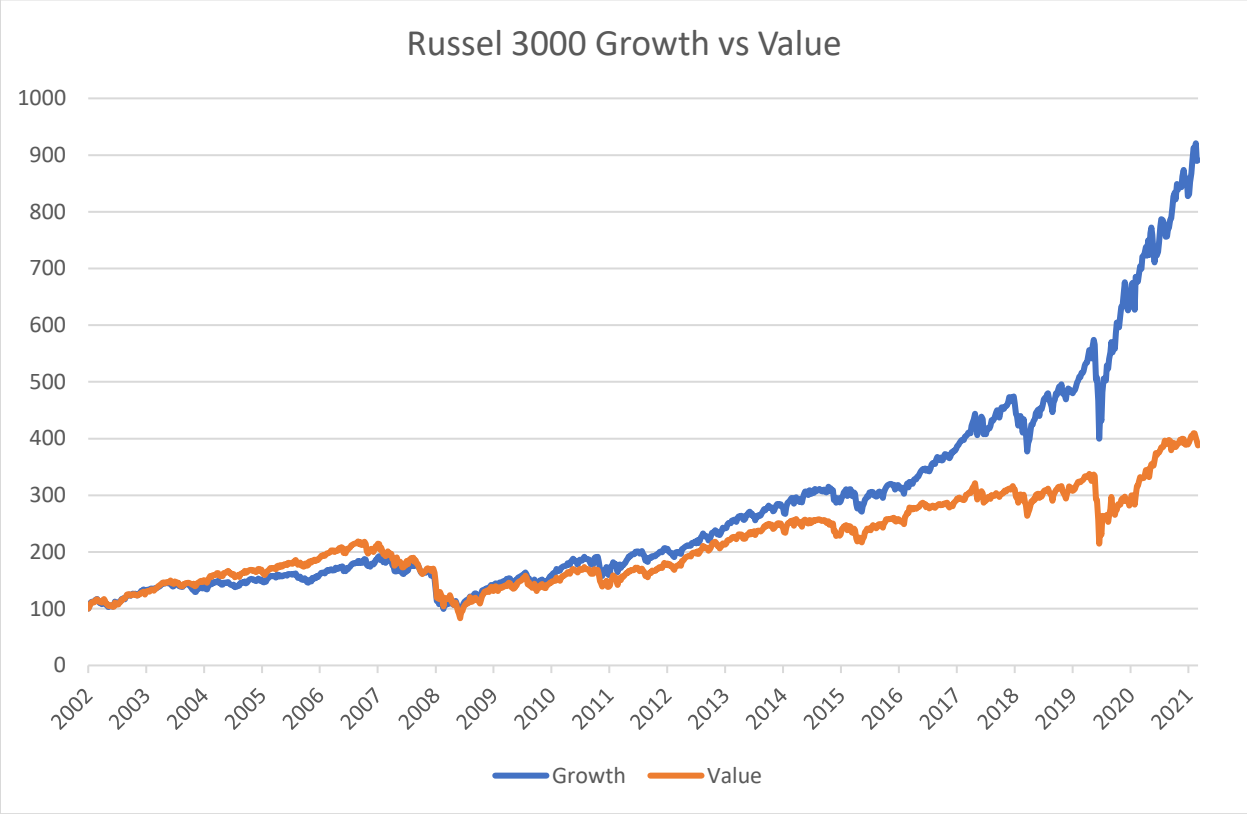

Figure 1: Historical performance of Russel 3000 Growth Index versus Value Index. Gap between growth and value has accelerated since the COVID19.

Within the literature, value stocks refer to companies with low multiples of valuation ratios such as price to earnings, price to book, price to sales, and etc. These ratios are considered as a rough measure of the stock's expensiveness, and it shows the price relative to its intrinsic value. Growth stocks on the other hand have high multiples because people expect these companies to perform very well in the future.

Figure 1 illustrates the historical performance of value and growth stocks; while it was an undebated truth that value stocks outperformed growth stocks in the 1900s, such evidence started to shrink over the past decade. Ever since the Global Financial Crisis of 2008, investors started to

see the value premium disappear, with growth stocks starting to outperform their peers by larger margins. The widening of the gap between the two groups has reached an all-time record after the pandemic broke. Research from JP Morgan argues that shut down of facilities has led people to consume more technology services, which resulted in growth stocks such as online commerce and technology companies being the primary beneficiaries.

To fully understand the factors driving the performance of growth stocks and value stocks, it is imperative to review the financial literature.

Literature Review

Decades ago, the establishment of the Efficient Market Hypothesis depicted all information was reflected in prices of assets and that abnormal returns were impossible to achieve consistently using past and public information. However, early studies showed that abnormal returns were in fact possible to achieve using the discrepancy between valuation ratios. Most notably, Basu (1977) argued that stocks with low price to earnings ratio outperformed those with high price to earnings ratio from April 1957 to March 1971. He proposed that the study results illustrated P/E ratio information was not "fully reflected" in security prices and that there was "market inefficiency" in the point of view of investors. Thus, he argued investors could take advantage of mispriced securities to earn abnormal returns over the long run.

The most well-known studies are from the 1990s and early 2000s. Fama and French (1998) conducted an international study on value versus growth and determined that there is a value premium across most international markets. The results confirmed that the value premium

narrative was not a result of a data mining bias. Value stocks (defined by high BV/MV and low P/E, P/C, P/D) produced higher returns than glamour stocks (opposite definition of value stocks) over long periods of time because systematic risk of value stocks were higher than glamour stocks.

Lakonishok, Shleifer, and Vishney (1994) claimed that the value premium cannot solely reflect the higher risk of value stocks. Instead, they stated that high multiples of glamour stocks reflected investors' exaggeration of rosy outlooks on these stocks. This irrational behavior is only reversed in intermediate time horizons, which explains outperformance of value stocks compared to growth stocks over long periods of time. Chan and Lakonishok (2004) also found out that superior returns from investing in value stocks is not a time-specific phenomenon.

Chan, Karceski, and Lakonishok (2004) showed high levels of price multiples for growth stocks did not mean that these companies showed excessive growth in operating performance. In fact, between 1996 and 1998, growth in operating income before depreciation did not reflect large discrepancies between large-cap growth and value stocks. Thus, the authors argued the high pricing of growth stocks did not reflect fundamentals, but, rather, reflected investors' rosy expectations of future growth and companies' ability to sustain that growth.

Ormala (2006) also illustrated that value strategies in Asian markets produce higher risk-adjusted returns compared to growth strategies. Plus, he proved that the outperformance of the value factor is not due to higher systematic risk as Fama proposed, as value stocks outperformed even during market recessions.

Literature from relatively recent years has recognized the underperformance of value compared to growth. For instance, Lakonishok and Chan (2004) acknowledged value stocks "had

their rough times" since the late 1990s. While they did not believe that the trend was a result of a "paradigm shift," they did mention behavioral traits propagating the trend will continue to persist in the future. In addition, Penman and Reggiani (2018) suggested that value investing can be subject to what they call a "value trap," a phenomenon in which investors buy low multiple stocks that have a high risk derived from high earnings growth that may not materialize.

Methodology

Since the objective of this research is to compare the performance of value stocks and growth stocks in Hong Kong, the methodology will be benchmarked to that of Fama and French (1998). Value and growth portfolios consisted of Hong Kong listed stocks will be constructed based on valuation ratios including P/E, P/B, and P/S ratios; then, portfolio performance will be tracked over periods to compare the difference in returns between value portfolios and growth portfolios. Since investments are characterized not only by their returns but also their proposed risks, risk-adjusted return will be calculated to compare the performance difference between value and growth portfolios.

Investment Universe

While many studies consider all publicly listed stocks of the nation when conducting comparison research between value and growth stocks, this research paper will employ stocks only within the Hang Seng Index from 2002 to 2020. Various resource constraints including time constraint prevent from conducting research that considers all publicly listed stocks within Hong Kong. To minimize the undermining of results from such limitation, the Hang Seng Index has been chosen to represent the investment universe of Hong Kong for this paper.

Hang Seng Index is a market capitalization-weighted index of the largest companies that trade on the Hong Kong Stock Exchange. Launched in 1969, the index covers 65% of the total market capitalization and is also the most widely quoted barometer for the Hong Kong economy. In addition, it covers at least 50% of the most important industries within Hong Kong, signifying that the index is not too concentrated in a single industry (Han Seng Index). Most importantly, international studies on Hong Kong have often used the MSCI Hong Kong index as the stock universe, whose market capitalization is much smaller than the Hang Seng Index.

Data Collection

Financial data such as historical closing prices, and yearly average P/E, P/B, P/S ratios are collected from the Bloomberg Terminal database. Since Bloomberg Terminal only provided data starting from 2002, the study period of this paper starts from 2002 January 1st and ends at 2021 January 1st. While studies by Lakonishok and Fama and French mostly utilize price to earnings and price to book ratio, price to sales ratio has become a popular valuation ratio since the 2000s after famous investor Ken Fisher (1984) mentioned it in his book "Super Stocks." Thus, this study will use the P/S ratio to construct value and growth portfolios along with P/B and P/E ratios.

Construction of Portfolios

Fama and French (1998) used a buy-and-hold approach to compare the performance between growth stocks and value stocks over a long span of time. They took the top 20% of stocks organized by a specific valuation ratio and included them within the growth portfolio. They then took the bottom 20% to construct the appropriate value portfolio. However, the number of the stocks within the investment universe of this study is limited, so the top 30% and

bottom 30% of the sample stocks are included in growth and value portfolios, respectively. Stocks with missing financial data for specific years, outlier returns (more than 1000% of yearly return), and persistent negative returns (calculation of P/E ratio is impossible) were excluded from the portfolio construction process. Then, to mimic a real investment strategy adopted by portfolio managers, the portfolio was rebalanced each year.

As a result, three growth portfolios and three value portfolios were constructed each year for 19 years, and a total of 114 portfolios was employed for this research.

Performance Comparison

The performance of growth portfolios and value portfolios was compared for different periods to see if there were periods in which a specific style (growth or value) outperformed the other. Four time periods, including 2002 ~ 2020, 2002 ~ 2007, 2008 ~ 2013, and 2014 ~2020 were selected for this purpose.

Moreover, the Sharpe ratio was calculated to compare risk-adjusted returns between the value and growth portfolios. The Sharpe ratio is calculated as below.

$$Sharpe\ Ratio = \frac{E[R_p] - R_f}{\sigma_p}$$

R_p is the average yearly return of the portfolio for a specific time period, R_f is the risk-free rate over that same time period proxied by the government bond yield, and σ_p is the average annualized standard deviation of the portfolio for a specific time period.

Results

Portfolio Constituents

Before comparing the returns between value and growth portfolios, it is important to understand the constituents of the constructed portfolios. Below are sample value and growth portfolios for the year 2002 and 2020 based on the price to earnings ratio.

Value Portfolio			Growth Portfolio		
Constituents	**Yearly Return**	**Annual Average P/E Ratio**	**Constituents**	**Yearly Return**	**Annual Average P/E Ratio**
CITIC Ltd	37.50%	4.49	PCCW Ltd	-17.87%	108.40
New World Development Co Ltd	60.26%	6.58	Cathay Pacific Airways Ltd	38.50%	47.56
MTR Corp Ltd	24.24%	8.63	BOC Hong Kong Holdings Ltd	82.50%	42.29
CK Infrastructure Holdings Ltd	30.34%	9.22	Sino Land Co Ltd	76.99%	36.18
CLP Holdings Ltd	17.83%	9.71	Johnson Electric Holdings Ltd	15.79%	30.43
Shanghai Industrial Holdings Ltd	65.12%	9.76	Li & Fung Ltd	79.72%	27.80
Power Assets Holdings Ltd	4.07%	9.78	Television Broadcasts Ltd	59.35%	20.90
Swire Pacific Ltd	60.74%	10.45	Wheelock & Co Ltd	76.41%	19.85
Henderson Investment Ltd	24.32%	11.45	Hutchison Whampoa Ltd	17.32%	19.18

Figure 2: Value and growth portfolios for the year 2002 constructed using the P/E ratio. The value portfolio achieved 36.05% annual return while growth achieved 47.63%.

Value Portfolio			Growth Portfolio		
Constituents	**Yearly Return**	**Annual Average P/E Ratio**	**Constituents**	**Yearly Return**	**Annual Average P/E Ratio**
Bank of Communications Co Ltd	-25.99%	4.89	Sunny Optical Technology Group Co Ltd	25.80%	49.57
Bank of China Ltd	-20.42%	5.01	CLP Holdings Ltd	-12.45%	40.02
CITIC Ltd	-47.31%	5.72	Tencent Holdings Ltd	50.16%	37.64
China Construction Bank Corp	-12.48%	5.81	Hong Kong Exchanges & Clearing Ltd	67.98%	35.24
New World Development Co Ltd	-15.50%	6.00	SHENZHOU INTL	33.45%	32.24
Swire Pacific Ltd	-40.61%	6.05	China Mengniu Dairy Co Ltd	48.57%	31.33
Country Garden Holdings Co Ltd	-14.10%	6.60	Hong Kong & China Gas Co Ltd	-20.11%	30.69
CK Asset Holdings Ltd	-29.24%	6.78	CSPC Pharmaceutical Group Ltd	-18.05%	30.13
China Shenhua Energy Co Ltd	-10.32%	6.86	AAC Technologies Holdings Inc	-36.18%	27.30
ICBC	-16.17%	6.93	AIA Group Ltd	16.14%	27.27
China Overseas Land & Investment Ltd	-44.45%	7.21	Techtronic Industries Co Ltd	74.04%	26.07
CK Hutchison Holdings Ltd	-27.19%	7.31	Sands China Ltd	-18.25%	22.59
Sun Hung Kai Properties Ltd	-16.18%	7.64	Want Want China Holdings Ltd	-22.94%	21.99
Henderson Land Development Co Ltd	-20.92%	7.84	Galaxy Entertainment Group Ltd	4.97%	20.22
China Resources Land Ltd	-17.53%	8.68	China Unicom Hong Kong Ltd	-39.37%	17.81

Figure 3: Value and growth portfolios for the year 2020 constructed using the P/E ratio. The value portfolio achieved -23.89% annual return while growth achieved 10.25%.

In early years, there was not much discrimination between value portfolios and growth portfolios in terms of sectors. However, consumer discretionary stocks were often included in growth portfolios where real estate stocks and financial stocks were often included in value portfolios. However, discrepancy between growth and value portfolios has grown over the past few years as technology stocks were often characterized by high valuation ratios.

Cumulative Returns

Next, the cumulative returns of value portfolios, growth portfolios, and the Hang Seng Index over the entire study period are shown below.

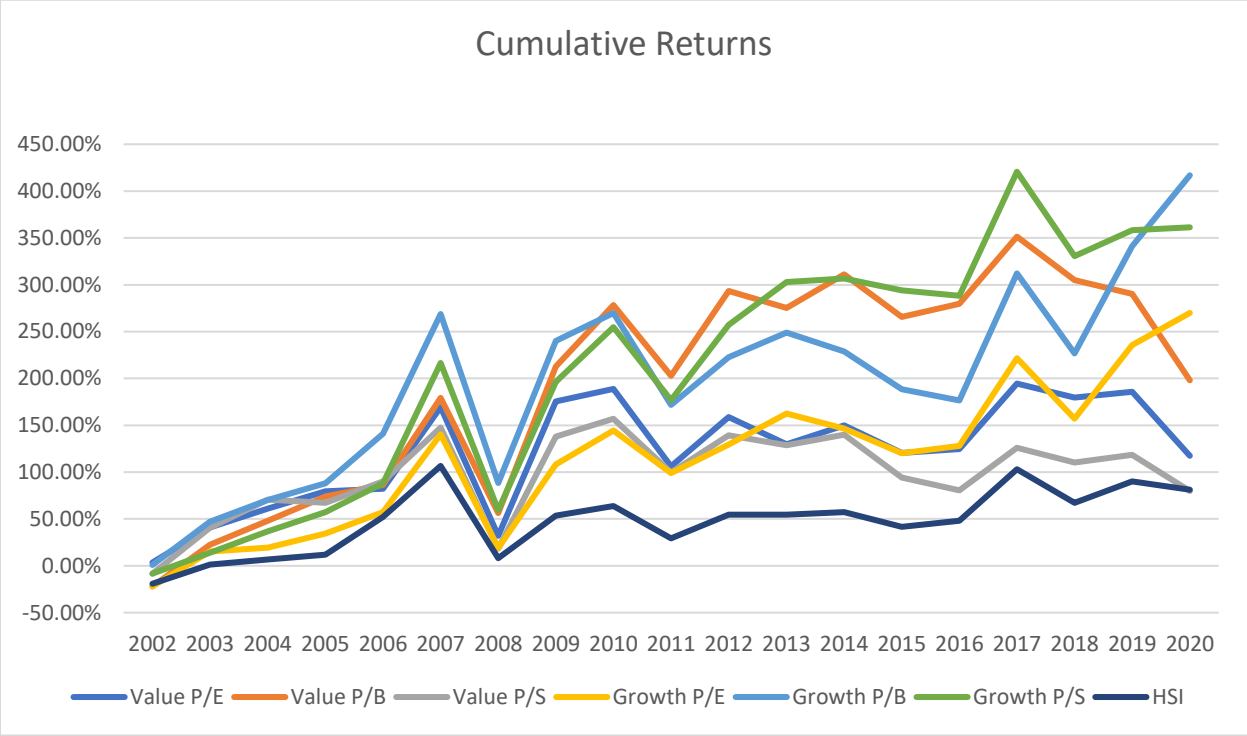

Figure 4: Cumulative returns for value and growth portfolios and the Hang Seng Index over the entire study period (2002~2020). The best performing portfolios are all growth portfolios, while all six portfolios performed on par with or better than the Hang Seng Index.

An interesting observation is the outperformance of growth portfolios relative to value portfolios over the study period. Overall, all three growth portfolios outperformed the value portfolios over the 19-year period, and five out of six constructed portfolios outperformed the general stock market index. It seems that there is no value premium within the Hong Kong stock market from 2002 to 2020. The best performing portfolio was the growth portfolio constructed by taking the top 30% of price to book ratio within the Hang Seng Index. The worst performing portfolio was the value portfolio constructed by taking the bottom 30% of price to sales ratio within the Hang Seng Index.

Average Annual Returns for Specific Periods

While the above section illustrated cumulative returns over the entire study period, this section presents average annual returns for specific time periods.

	Period	Value	Growth	HSI
Average Annual Return	2002~2020	8.84%	12.30%	5.92%
	2002~2007	19.64%	22.47%	14.69%
	2008~2013	10.02%	9.43%	-0.09%
	2014~2020	-1.42%	6.05%	3.56%

Figure 5: Average annual returns of value and growth portfolios and the Hang Seng Index for specific time periods. Growth portfolio has outperformed value portfolio for three out of four periods.

Generally, the growth portfolio achieved higher returns for all periods except for 2008 ~ 2013. A possible interpretation of slight underperformance during the 2008 ~ 2013 is that the Global Financial Crisis of 2008 led to a deflation of highly appreciated glamour stocks, which affected the intermediate return of the growth portfolio.

Another interesting observation is that the value portfolio has underperformed not only the growth portfolio but also the general stock market index over the past few years. This is not so surprising as the stock market has been led by technology stocks characterized by high growth over the past few years, and the COVID19 has only widened the gap between the returns of value portfolio and growth portfolio for the past year.

Risk-adjusted Returns

	Period	Value	Growth	HSI
Sharpe Ratio	2002~2020	0.143	0.268	0.077
	2002~2007	0.637	0.740	0.447
	2008~2013	0.152	0.164	-0.071
	2014~2020	-0.223	0.177	0.090

Figure 6: Risk-adjusted return, or Sharpe ratio, of value and growth portfolios and the Hang Seng Index for specific time periods. Growth portfolio has outperformed value portfolio for all periods.

Surprisingly, for all periods, growth portfolio has on average outperformed the value portfolio when adjusting for risk. This suggests that risk measured by standard deviation for value portfolios and growth portfolios does not differ so much.

Discussion

From above results, we can assert that the value premium does not exist whether we use average annual returns or risk-adjusted returns in Hong Kong. Four plausible explanations are organized in this section. The first explanation is specific to the Hong Kong stock market, and the other three are more general.

First, the Hang Seng Index's industry weights are quite unique compared to those of other stock indices like the S&P 500. While the S&P 500's top three industries are IT, HealthCare, and Consumer Discretionary, Hang Seng Index's top three industries are Financial Services (35%), IT (28%), Consumer Discretionary (10%). An interesting feature is that the Real Estate Sector is an important contributor to the Hang Seng Index, with around 8% of weights on it. However, Real Estate in the S&P 500 only takes up 2.5% of the total market cap. Financial Services and Real Estate firms are generally asset-heavy on their balance sheet, so many of the times they are categorized as value stocks. In Hong Kong, while the Real Estate and Financial Sector led the growth of the economy during the early stage of Hong Kong's development, they are not considered as the fastest growing sectors right now because they are already too large. This could be a reason why value stocks did not perform well compared to growth stocks during the study period.

Second, the emergence of winner-takes-all theory is also applicable to modern economy of Hong Kong. Winner-takes-all refers to market conditions where the leader is constantly exposed to network effects that allow them to form considerable competitive advantages over other firms in the same industry (Mclntyre 2019). Google, Apple, Facebook, and Netflix are popular beneficiaries of these markets. Such phenomenon in the recent decade is becoming much

more common because intangible assets (brand reputation, patents) and technology are becoming more important in forming competitive advantages.

Third, investing in stocks with low valuation ratios might lead investors to confront a phenomenon termed as “value trap.” This occurs when investors look for cheap stocks without considering why those stocks are undervalued. The CEO of famous hedge fund Oaktree Capital, Howard Marks, states that information asymmetry that allowed investors to achieve abnormal returns by investing in stocks with low valuation ratio in the past is much harder to find in modern days because of universal access to complex, public information (2021). Therefore, it is much more difficult to hunt for value stocks that actually reflect asymmetry of information; in other words, it is close to impossible to find cheap stocks that are cheap because of reasons that other people are not aware of. Instead, it is much more realistic to expect that cheap stocks are cheap because of reasons such as low growth prospects and inefficient operations.

Lastly, the macroeconomic environment has been favorable to growth stocks. For the past few decades, interest rate has been trending downwards in US, reaching a level close to zero after the pandemic. In such an environment, growth stocks thrive. This is easy to understand when looking from the lens of the discounted cash flow model (DCF). Intrinsic value of a firm is proxied by its net present value, which is calculated by discounting future cash flows to current value. Growth stocks by definition encompass expectations of much higher cash flows in the future compared to the present. That signifies their net present value is very sensitive to interest rates because their current value is mostly derived from future cash flows. This provides an explanation of why growth stocks have mostly outperformed value stocks over the past decade.

Conclusion

This research paper attempts to find whether there is a value premium within the Hong Kong stock market by constructing artificial value and growth portfolios using three valuation ratios. The result was surprising; adopting a simple buy-and-hold strategy with yearly rebalancing, growth portfolios outperformed value portfolios for the entire study period, not only in terms of annual average returns but also risk-adjusted returns.

However, there are clear limitations of the paper that undermine the significance of the results. First, the number of samples is very limited. Since the investment universe is limited to 40 ~ 50 stocks, value and growth portfolios constructed from the investment universe are naturally limited in sample number. Therefore, there is a high chance of the difference between growth portfolios and value portfolios lacking statistical significance. Second, the study period does not cover before 2002, and it is a widely known fact that value stocks did outperform growth stocks according to numerous studies conducted before 2002. Third, the Sharpe ratio is a limited measure of risk-adjusted return. Future studies could use other measures such as the Treynor ratio or the Sortino ratio. Fourth, though the result is interesting, the applicability of such result is limited because the Hong Kong stock market is not representative of the global stock market.

Hence, future studies that include a larger stock universe, cover a longer study period, use various measures to compare risk-adjusted returns, and test for significance could produce more meaningful results.

Although growth has been outperforming value for the past few years, will that trend continue in the future, or will investor funds rotate into value stocks once again? Legendary

investor John Templeton once said the four most dangerous words in investing are “this time it’s different.” However, not many know that he also admitted that 20% of the time someone says those four words, it is actually different.

There are reasons to believe so. Significance of technology and intangible assets is unparalleled compared to past periods, and we know that growth stocks capitalize on these two factors. On the other hand, interest rates are at rock bottom right now, and it is a known fact that increases in interest rates will hurt growth stocks, notably technology stocks the most, so things might not look so rosy for technology stocks in the future. Hence, the answer is of course, no one knows, but there is one unchanging fact: investors will endlessly have to ponder about this question in the future.

References

Basu, S. "INVESTMENT PERFORMANCE of COMMON STOCKS in RELATION to THEIR PRICE-EARNINGS RATIOS: A TEST of the EFFICIENT MARKET HYPOTHESIS." *The Journal of Finance*, vol. 32, no. 3, June 1977, pp. 663–682, 10.1111/j.1540-6261.1977.tb01979.x.

Bratland, Erik, and David Mäki. "An Empirical Study into Value Investing on the Stockholm Stock Exchange." *Umeå School of Business and Economics*, 2014.

Chan, Louis, and Josef Lakonishok. "Value and Growth Investing: Review and Update." *Financial Analysts Journal*, vol. 60, no. 1, 2 Jan. 2004, pp. 71–86.

FAMA, EUGENE F., and KENNETH R. FRENCH. "The Cross-Section of Expected Stock Returns." *The Journal of Finance*, vol. 47, no. 2, June 1992, pp. 427–465, 10.1111/j.1540-6261.1992.tb04398.x.

Fama, Eugene F., and Kenneth R. French. "Value versus Growth: The International Evidence." *The Journal of Finance*, vol. 53, no. 6, Dec. 1998, pp. 1975–1999, 10.1111/0022-1082.00080.

Fisher, Kenneth L. *Super Stocks*. 1984. New York, Mcgraw-Hill, 2008.

Hang Seng Index. *Hang Seng Index*. Hang Seng Index, Nov. 2021.

Investopedia. "Hang Seng Index (HSI) Definition." *Investopedia*, 24 Dec. 2021, www.investopedia.com/terms/h/hangseng.asp. Accessed 24 Dec. 2021.

JP Morgan Asset Management. "Does This Recession Favour Growth Stocks? | J.P. Morgan Asset Management." *Am.jpmorgan.com*, 5 Jan. 2020, am.jpmorgan.com/au/en/asset-management/liq/insights/market-insights/market-updates/on-the-minds-of-investors/does-this-recession-favour-growth-stocks/.

Krishnan, Ormala. "Value versus Growth in the Asian Equity Markets." *Openaccess.city.ac.uk*, 1 Aug. 2006, openaccess.city.ac.uk/id/eprint/16237/. Accessed 24 Dec. 2021.

LAKONISHOK, JOSEF, et al. "Contrarian Investment, Extrapolation, and Risk." *The Journal of Finance*, vol. 49, no. 5, Dec. 1994, pp. 1541–1578, 10.1111/j.1540-6261.1994.tb04772.x.

Lemke, Tim. "What's inside the Most Popular Stock Index?" *The Balance*, Dec. 2021, www.thebalance.com/what-is-the-sector-weighting-of-the-s-and-p-500-4579847.

Marks, Howard. "Something of Value." Oaktree Capital, Jan. 2021.

McIntyre, David. "Beyond a 'Winner-Takes-All' Strategy for Platforms." *MIT Sloan Management Review*, 13 Jan. 2019, sloanreview.mit.edu/article/beyond-a-winner-takes-all-strategy-for-platforms/.

Reggiani, Francesco, and Stephen Penman. "Fundamentals of Value versus Growth Investing and an Explanation for the Value Trap." *Financial Analysts Journal*, vol. 74, no. 4, 12 Dec. 2018, pp. 103–119, www.tandfonline.com/doi/pdf/10.2469/faj.v74.n4.6?needAccess=true, 10.2469/faj.v74.n4.6.