WHITEPAPER SERIES

January 20, 2020

Bitterroot CAPITAL ADVISORS

US vs. European Equity Markets

Examining the Sources of Valuation Difference

After a decade of US equity markets' outperformance vs. European equity markets since the Global Financial Crisis , the valuation gap between US equity markets and European equity markets has widened. In this paper, we granularly break down the sources of difference comprising the valuation gap and analyze the implications.

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U S VS. EUROPEAN EQUITY MARKETS – DEEP DIVE ON VALUATION

After a decade of significant US equities outperformance vs. European equities, investors are questioning whether US equities are expensive relative to European equities and whether European equities will likely mean revert and outperform the US over the next several years. In this whitepaper, we analyze the sources of valuation differences between the US and European equity markets. We also opine on whether the US market actually is expensive relative to Europe or whether it is fairly valued on a relative basis.

US (S&P 500) vs Europe (Stoxx 600) Annual Returns and Current Valuations (as of 12/31/19)

Annualized Returns		
S&P 500	**Stoxx 600**	**Difference**
13.5%	6.1%	7.4%

Current Valuations (NTM P/E)		
S&P 500	**Stoxx 600**	**Difference**
18.4x	15.0x	3.4x

Presently, the Stoxx 600 Index (European large-cap equities) is trading at 15.0x next-twelve-months (NTM) earnings (P/E) vs. the S&P 500 at 18.4x. On a relative basis, the Stoxx 600 is thus trading at a 18.4% discount to the S&P 500. Over the past fifteen years, this discount has ranged between 9% and 26% and has averaged roughly 15%. Historically, multiple reasons have contributed to this discount including:

- Faster revenue and earnings growth for the S&P 500 vs. the Stoxx 600
- Higher political instability among certain European nations and fragmented nature of EU vs. single-country US
- More shareholder / business friendly climate in the US with regards to labor flexibility and capital allocation

Breaking Down the Valuation Discount Between the Stoxx 600 and S&P 500

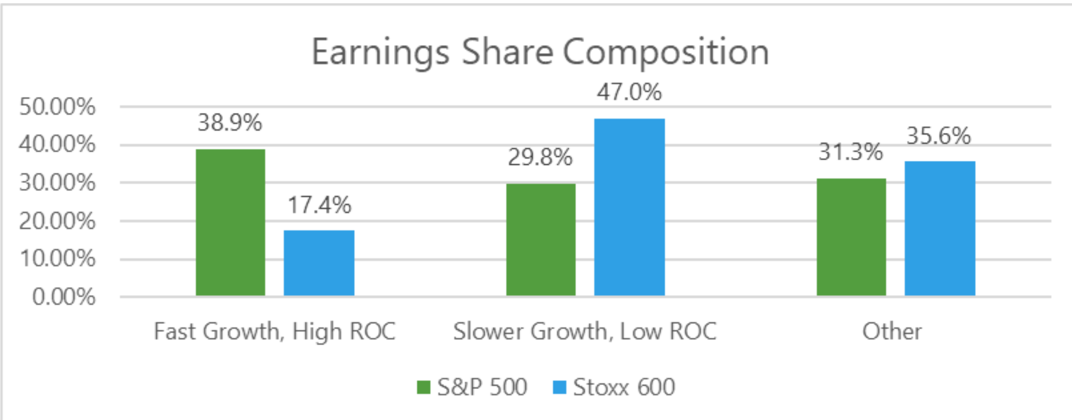
While the Stoxx 600 trades at a discount to the S&P 500, we postulate that the European market is <u>actually much less cheap</u> vs. the US than appears on the surface. We attribute the P/E multiple difference to three main factors.

- Structural differences due to significantly different sector weightings between the S&P 500 and Stoxx 600 indices.
- Idiosyncratic single-stock and single-sector US outliers (Amazon, US real estate) having a disproportionate “accounting earnings” effect on the S&P 500 valuation
- “True” valuation effect (like for like basis) which we believe is warranted given US Equities’ superior quality, faster structural growth, higher predictability of earnings, greater shareholder friendliness / better capital allocation and less influence from government policies.

Sector Weighting Difference between S&P 500 and Stoxx 600 (See Appendix for more detail)

Several sectors of the European market are similarly or more expensively valued vs. those comparable sectors in the US market (See Appendix A). As illustrated below however, a significant portion of the overall market valuation difference is structural in nature and is driven by a difference in sector weightings for the respective indexes.

- The S&P 500 has a significantly higher weighting to the higher-multiple technology and communication services (internet-like) sectors vs. the Stoxx 600. Conversely, Stoxx 600 has a much higher-weighting to lower-multiple financial and energy sectors both in terms of market capitalization, and even more so in terms of earnings-share (see graph below)



- While technology valuations are similar in the US vs. Europe at 21.7x vs. 21.3x NTM P/E, the weightings are vastly different across the two indices. <u>Technology represents 23% of the S&P 500 but only 6% of Stoxx 600</u>. The technology sector deservedly tends to trade at higher multiples as technology companies are faster-growing, have higher-returns on capital and have better competitive moats.
- The Communication Services sector is valued at 17.2x in the US vs. 14.2x in Europe and the US has a higher weighting at 10.6% to this sector vs. 4.4% in Europe. The sector in the US trades at a higher multiple given a greater composition of faster-growing internet / technology-like companies such as Facebook, Disney, Netflix and Google whereas the companies comprising the European sector are traditional slow-growth telecommunication services companies like Vodafone.
- <u>Financials and energy comprise 18% and 7% of Stoxx 600 respectively vs. 13% and 4% of the S&P 500</u>. Financial and energy sectors trade at much lower multiples given their slower-growth, lower return-on-capital, and more highly cyclical characteristics.
- <u>If we normalize the sector weight factor by applying S&P 500 sector weights to Stoxx 600 sector valuations, the valuation difference between S&P 500 and Stoxx 600 narrows from 3.4x multiple points to 1.7x (see below)</u>

Adjusted Valuations – S&P 500 sector weights applied to Stoxx 600		
S&P 500 NTM P/E Multiple	**Adj. Stoxx 600 NTM P/E applying S&P 500 Sector Weightings**	**Adjusted Multiple Difference**
18.4x	16.7x	1.7x

Idiosyncratic US Single-Stock and Sector Outliers - Amazon and US REITS sector accounting further distort comparisons

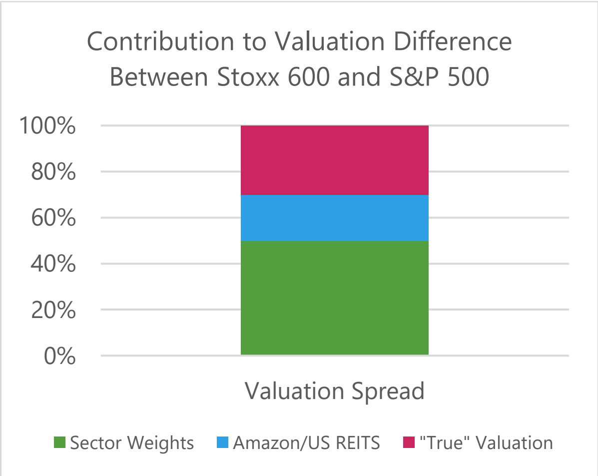
In addition, to the differing sector weights, the valuation difference between Stoxx 600 and S&P 500 is distorted by other significant idiosyncratic outliers (Amazon and US REITS).

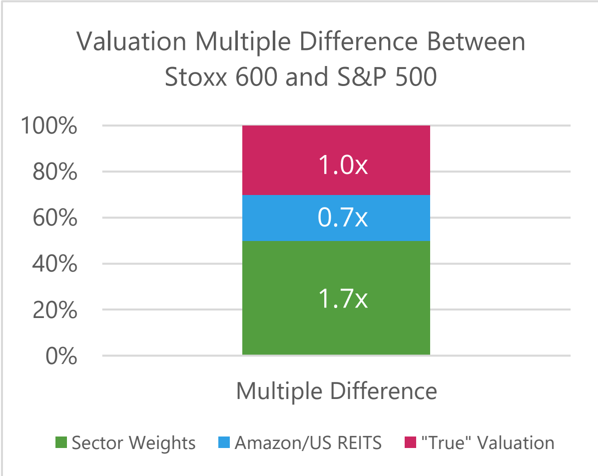
- Amazon represents 4.3% of the S&P 500 and is mega-cap consumer discretionary e-commerce stock. There is no equivalent company to Amazon within Europe. Amazon trades at 67x NTM P/E vs. the S&P 500 market multiple of 18.4x. Amazon's valuation is deceptive however as its free cash flow profile is far greater than its reported earnings. On free-cash flow, Amazon trades at 25x NTM FCF whereas the S&P trades at roughly 20x FCF.
    - Both the S&P 500 and Stoxx 600 have roughly 10% weighting to consumer discretionary. However, the S&P 500 consumer discretionary multiple is 22.3x vs. 14.3x in Europe. A large portion of this discrepancy is due to Amazon which trades at an optically high 67x NTM P/E. If Amazon's accounting earnings were adjusted to reflect FCF, the S&P 500's overall multiple would decline by 0.3x. Hence, the Amazon accounting earnings vs. economic cash flow effect accounts for 0.3x of the 3.4x multiple difference between S&P 500 and Stoxx 600 (or roughly 10%)
- The real estate sector is relatively small in both S&P 500 and Stoxx 600 indexes at 2.9% and 1.4% respectively. However, the P/E valuation multiple differs significantly at 43x for the S&P 500 vs. 18.4x for Stoxx 600.
    - Much like Amazon however, the S&P real estate P/E multiple is artificially high and its true free cash flow multiple is much lower (closer to 20x). US GAAP accounting standards lead to artificially low reported earnings (due to depreciation accounting) vs. economic free cash flow. The IFRS accounting standards used in Europe do not have this distortion. In actuality, the true valuations of publicly traded real estate in the S&P 500 and Stoxx 600 are quite similar. This difference between valuing S&P Real Estate on a GAAP earnings vs. cash flow basis accounts for 0.4x of the 3.4x multiple difference between the two indices.
- Taken together, the Amazon and US Real Estate outlier effects account for 0.7x of the 3.4x multiple difference between S&P 500 and Stoxx 600 NTM P/E valuation (see below).

Adjusted Valuations Stoxx 600 applying S&P 500 Sector Weights and Adjusting for Amazon / US REITS			
S&P 500 NTM P/E Multiple	**Adj. S&P 500 NTM P/E adj. for Amazon & US REITS effects**	**Adj. Stoxx 600 NTM P/E applying S&P 500 Sector Weights**	**Adjusted Multiple Difference**
18.4x	17.7x	16.7x	1.0x

"True" Valuation Effect and Conclusion

As described above, the sector weight differential coupled with the limited outliers account for the majority (70%) of the valuation difference between the S&P 500 and Stoxx 600 NTM P/E multiples. Pure like-for-like valuation differentials only account for 1.0x of the 3.4x difference (roughly 30%). Put another way, adjusted for the effects described above, the "true" discount for Stoxx 600 vs. the S&P 500 is only 5.7% rather than the 18.4% detailed at the beginning of this paper. As such, <u>we would not describe Europe as being cheap relative to the US.</u>





Implications

Just because we do not believe Europe is truly cheap vs. the US does not mean European equities cannot outperform US Equities.

- European equities outperformed US equities from 2000-2007 and in 2009, 2012, and 2017.
- European equities have outperformed US equities when there has been a clear expectation of an upward trend in global growth momentum (i.e. global trade and global GDP)
  - Conceptually, this makes sense as Europe has much greater exposure to cyclically exposed companies (energy, financials, industrials and autos). These companies' earnings fluctuate significantly with macro-economic conditions given their higher fixed costs.
- However, as seen earlier, European equities significantly underperformed US equities from 2010-2019 in relatively low (by historical standards) global recovery environment post the financial crisis.

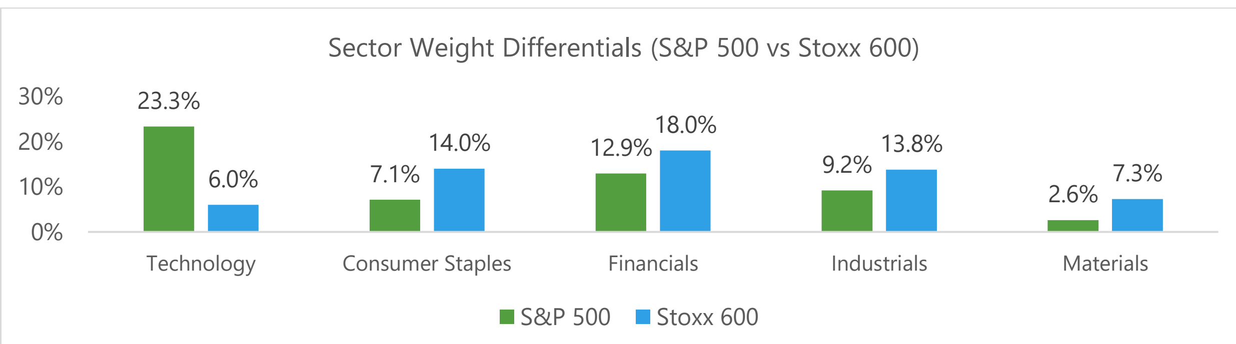
If one believes that we are at an inflection point with a multi-year trajectory of improving global growth, then it stands to reason that European equities may likely outperform US equities. However, if one believes that the growth cycle is likely later stage or we are in an elongated slower-for-longer global growth environment, US equities will likely continue to outperform given higher exposure to greater secular growth companies.

Appendix A - S&P 500 vs. Stoxx 600 Valuation with Sector Breakouts

S&P 500 vs. Stoxx 600 Valuation

	S&P 500			Stoxx 600		
	Weight	NTM P/E Multiple	Earnings Share	Weight	NTM P/E Multiple	Earnings Share
Technology	23.3%	21.7x	19.5%	6.0%	21.3x	4.1%
Healthcare	14.1%	16.0x	16.1%	13.8%	17.0x	11.8%
Financials	12.9%	13.3x	17.7%	18.0%	10.3x	25.2%
Communication Services	10.6%	17.2x	11.1%	4.4%	14.2x	4.5%
Consumer Discretionary	9.8%	22.3x	8.0%	10.0%	14.3x	10.4%
Consumer Staples	7.1%	20.0x	6.5%	14.0%	17.9x	11.3%
Industrials	9.2%	17.1x	9.8%	13.8%	17.3x	11.6%
Materials	2.6%	17.6x	2.6%	7.3%	15.3x	6.9%
Real Estate	2.9%	43.0x	1.2%	1.4%	18.4x	1.1%
Utilities	3.3%	19.7x	3.0%	4.4%	15.1x	4.2%
Energy	4.4%	17.6x	4.5%	6.9%	11.4x	8.8%
Total Index	**100%**	**18.4x**	**100%**	**100%**	**15.0x**	**100%**

Appendix B – Largest Sector Weight Differentials Between the S&P 500 and Stoxx 600



Appendix C – Highest Multiple Differences in Selected Sectors (S&P 500 vs. Stoxx 600)