Benjamin Mandel
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Bygones are not Bygones: What is the Optimal Rebalance from the U.S. into Europe?

The dramatic outperformance of U.S. large cap (SPX) relative to European ex-UK (SX5E) equities over the last decade has convinced many investors that U.S. stocks will everywhere and always outperform Europe. The Covid-19 pandemic has both entrenched this view, insofar as SPX outperformance was amplified into the downturn, but also ignited a vigorous debate about whether early stage business cycle dynamics and Europe's policy response to the pandemic will usher in a period of more friendly macro dynamics for Eurostoxx.

In our view, the most relevant framing of this issue is not (narrowly) whether Europe stands to outperform over the next few months, but rather how investors should think about the massive drift that has accrued to U.S. equity portfolio shares over the past decade and how to rebalance them. In other words, should U.S. outperformance bygones be bygones? In this note, we break down this question into a simple framework of portfolio rebalancing, and argue that moderate tilts from U.S. into Europe would be appropriate today.

In the first instance, we set up a simple optimization problem to assess the extent of rebalancing that would have been optimal, on average, over the past 30 years. We find that, particularly for the period prior to the Global Financial Crisis (GFC), there were modest but non-trivial efficiency benefits to be had. It would have generated a few basis points of alpha in portfolios had the frequency of rebalancing been optimally set and, in every case, it would have reduced portfolio volatility. At a minimum, this exercise suggests that today's optimal degree of rebalancing back into Europe is not zero.

We augment these observations with judgmental forward-looking assessments of relative European performance based on standard regional equity screens, as well as an empirical measure of how much growth and policy is priced into markets. These assessments advocate for a rebalance rule today that is higher than that implied by our backtest exercise.

Recommendations:

- <u>Fractional rebalance into Europe on U.S. outperformance</u>. Cumulative 2020 SX5E underperformance is just shy of 19ppt. Buying back about a third of the associated portfolio drift seems about right. A portion of the drift over the past decade may, in fact, be a bygone.
- <u>Take EUR currency risk alongside SX5E equity risk</u>. The higher probability of SX5E outperformance in dollar terms, coupled with a tactical view that the dollar trends weaker, suggests adding to European equities on an unhedged basis.
- <u>Consider SX5E vs. U.S. small cap positions</u>. Funding SX5E buys with U.S. small cap pairs two relatively high beta indices and aims the rebalance at a lower-ranked part of the U.S. market.

1. How large are the gains from rebalancing?

Lagging European performance translated into extreme amounts of portfolio drift over the past decade. A 50/50 SPX/SX5E portfolio run since 1988 would have ended up tilted 70/30 today, with more than 100% of the change accounted for by post-GFC trends (**Figure 1**). Local currency performance of Eurostoxx pushed the Europe weight to a peak of 57% in late 2007, before beginning a more or less monotone decline thereafter. Unhedged dollar performance exacerbated this trend – with EUR appreciating alongside relative SX5E outperformance though much of the early 2000s, before peaking near 1.6 in early 2008 and trending weaker since. As a result, the Europe share in the unhedged dollar portfolio hit 62% in 2007 before shedding 32ppt.

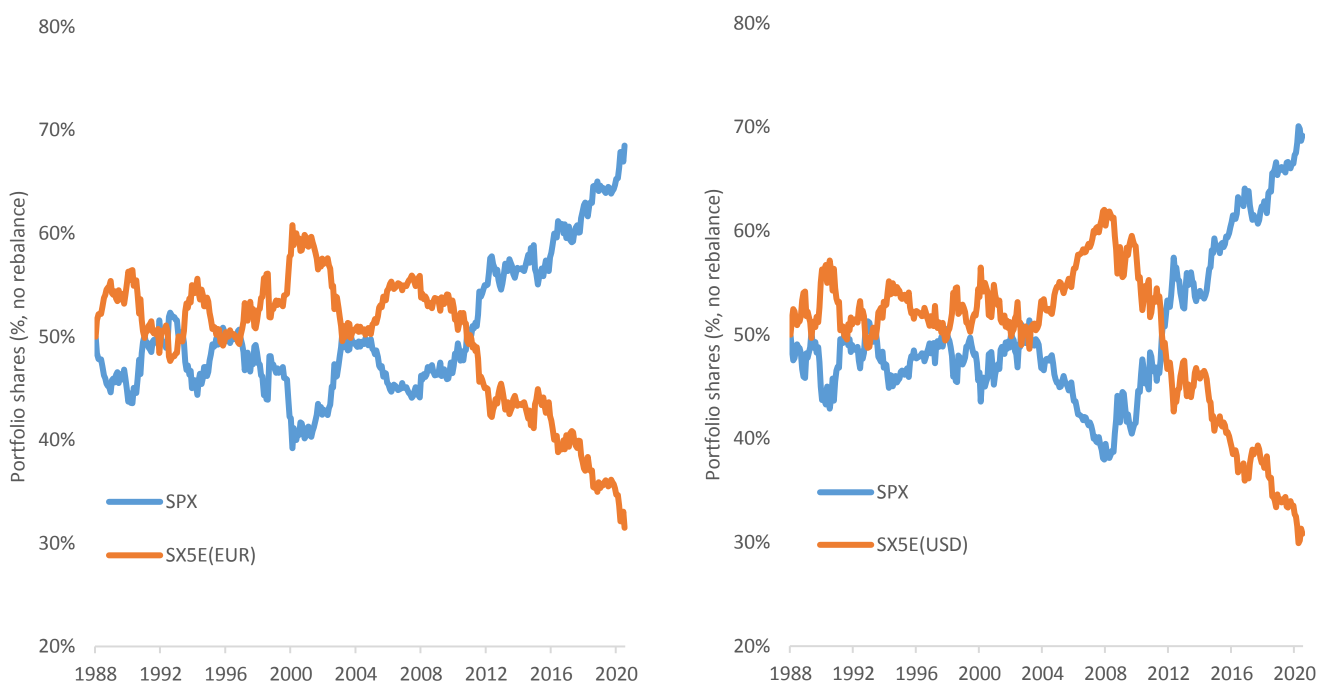

Figure 1: SPX outperformance relative to SX5E generated significant portfolio drift
Source: Bloomberg, author calculations. Monthly data, January 1988 – July 2020.

In light of this drift, what should the optimal rebalance today be? On the one hand, given the high persistence of U.S. outperformance, it is clearly not 100%. Perhaps less obvious is that letting the portfolio drift *ad infinitum* is also not optimal from an efficiency standpoint. To illustrate this point, we provide a few empirical perspectives, the first of which is to simply count the periods of positive monthly U.S. relative returns. This measure has evolved markedly, rising steadily over time and reaching 65% over the last 5 years (**Figure 2**). That said, consistent with the cumulative drift statistics above, a longer historical window yields very different results. For the 25- and 30-year timeframes, the U.S. outperformance rate is only 50% and the differential between currencies is relatively small.

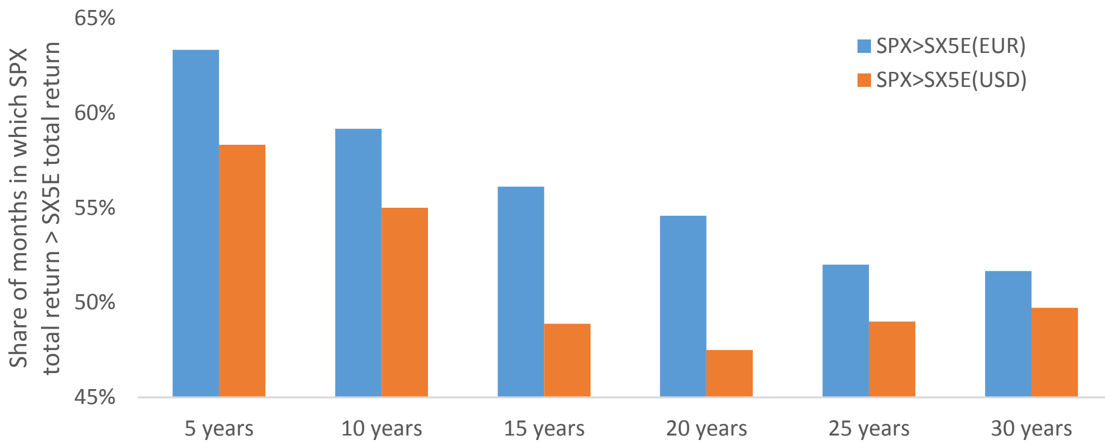

Figure 2: SPX outperformed SX5E 63% of the time recently, but only 50% historically
Source: Bloomberg, author calculations. Monthly data, January 1988-July 2020.

A slightly more formal way to quantify the benefits of rebalancing is to look at portfolio outcomes relative to the case where regional allocations are allowed to drift. We evaluate an array of different rebalancing strategies: monthly, annual, and a third one that puts bounds around the extent of cumulative portfolio drift by rebalancing only at certain thresholds. In order to bookend how large the potential benefits could have been, we set the threshold endogenously (in hindsight) to maximize historical portfolio return over the period. That strategy is referred to as 'optimal threshold' below.

Figure 3 reports the annualized returns and volatility of those portfolios (relative to the drift portfolios) for both the full period and the pre-GFC sample. The first thing that stands out is that, while rebalancing alpha indeed exists, it is completely swamped by the high persistence of U.S. outperformance post-GFC. This is illustrated by the fact that rebalancing was detrimental to returns for the full sample, but was a positive contribution pre-crisis. For the full period, annual rebalancing alpha ranged between -11bp and -52bp. It was zero in the optimal threshold case only because there was never a rebalance (i.e., there was no threshold in the backtest that yielded higher average returns than the drift portfolio). In contrast, pre-GFC annual and optimal threshold rebalancing added 15bp to annualized average returns.

		SX5E local currency			SX5E USD unhedged		
		Monthly	Annual	Optimal threshold	Monthly	Annual	Optimal threshold
Full Sample	Δ Return	-0.44%	-0.11%	0.00%	-0.52%	-0.22%	0.00%
	Δ Vol.	-0.06%	-0.08%	0.00%	-0.11%	-0.16%	0.00%
1988-2008	Δ Return	-0.23%	0.15%	0.15%	-0.38%	-0.10%	0.04%
	Δ Vol.	-0.15%	-0.16%	-0.13%	-0.13%	-0.14%	-0.07%

Figure 3: Rebalancing alpha is small (or negative), but volatility generally declines
Source: Bloomberg, author calculations. Monthly data, January 1988-July 2020.

A more general point emerging from this exercise is that both regional performance and the dollar tend to trend, and therefore the benefits of rebalancing need to be weighed against momentum. We see several indications that rebalancing between Europe and the U.S. should not be too frequent. For example, annual rebalancing alpha is always greater than at the monthly frequency, and the optimal thresholds – which ranged from 7-10% – are wide. Additionally, persistence in dollar momentum caused rebalancing alpha to be generally lower in the unhedged dollar portfolios relative to local currency.

Finally, and importantly, the long-run decline in returns due to rebalancing did not represent an unambiguous decline in portfolio efficiency, with each case that we investigated having lower portfolio volatility.

2. Tactical (6-12 month) scorecard

Having established that at least a modicum of portfolio rebalancing is useful for portfolio construction, we shift gears to more forward-looking indicators of relative Europe performance, beginning with a scorecard of regional equity screens. At the moment, at least in aggregate, standard measures of earnings, valuations, and technicals are not suggesting large relative value divergence between Eurostoxx and U.S. large cap, with factors in each market fighting roughly to a draw (**Figure 4**).

	SX5E	**SPX**
Earnings	-	0
Valuations	+	-
Technicals	0	0
Overall	0	0

Figure 4: Tactical scorecard roughly balanced, in aggregate
Source: Author assessments as of August 2020.

On the one hand, earnings momentum in Europe has lagged the U.S. market. SX5E forward sales and EPS growth estimates are both down over the month, albeit declining at slower rates than the last 3 months on average. This, relative to stabilization and slight increases for both measures in SPX. Weekly earnings revisions ratios corroborate this story with broad improvements across virtually all markets, but with the U.S. outpacing the group. Overall, 2020 and 2021 earnings growth expectations – with ~30% declines in Europe and ~20% in the U.S. looks consistent with the story emerging from macro data of a deeper crater in European GDP this year followed by more vigorous payback next year. A more sanguine interpretation of the European earnings data would be that relative momentum is poised to improve when that payback materializes in 2021.

On the other hand, even as U.S. earnings estimates improve, SPX valuations remain relatively elevated. U.S. forward PE and PB ratios are both several turns above their long-run average, whereas Europe is closer to home on PE and about fair on PB. As one might expect, cyclically-adjusted PE exacerbates these relative differences – with SPX still screening expensive but with Europe slightly cheap with reference to a longer trailing earnings period. Another valuation positive for Europe is that its dividend yield, at 3.2%, is almost twice as high as that of the S&P despite receding by about a percentage point over the past year.

Technical factors are providing little by way of incremental information on Europe vs. the U.S. at the moment. There is scant evidence that overall equity positioning is lopsided. Though retail sentiment still looks bearish, surveys geared more towards institutional investors have returned to pre-virus levels and CFTC net futures positions are back to neutral. Other evidence is more mixed; Europe has far fewer index constituents above their 200-day moving average, but has had a substantially higher beta to global equities in recent months.

Netting out the earnings, valuation and technical signals, there is still some information content in the benign overall scores in the regional scorecard. Although this configuration of pluses and minuses (i.e., better valuations and weaker fundamentals in Europe) is not particularly new, extreme differences in relative growth, valuation and positioning are notable in their absence. In other words, while the closeness of the scores is not an obvious sign to go overweight Europe, it is equally not obvious that Europe is the right funding market for S&P longs. Rather, *both* Europe and U.S. end up looking favorable to third markets with weaker combinations of fundamentals and valuations (e.g., U.S. small cap, Japan, UK). On this scorecard basis, the clearest Europe-U.S. trade is long Europe versus Russell 2000. They are both high beta markets but with the downshift in small cap EPS expectations underway bending valuations even further out of shape.

3. <u>What's priced in?</u>

A final perspective on the recent underperformance of Europe is the extent to which it has been driven by market expectations of growth versus market expectations of monetary policy. We use an econometric technique based on 'sign restrictions' to identify the relative price reactions of equities and government bond yields to underlying growth and policy shocks; growth shocks are those that push equities and bond yields in the same direction on a given day, and policy shocks are those that push them in opposite directions.[1] We then apply those estimates to recent market moves. The usefulness of this technique derives from the fact that it provides purely market-based measures of growth and policy, as opposed to those based on more direct observations of fundamentals or monetary policy stance, and hence it illustrates what is currently being priced.

For our purposes of understanding relative European equity performance, the estimates underscore the fact that monetary policy in the euro area is not nearly as supportive as that in the U.S. As illustrated in **Figure 5**, the part of SPX and SX5E price performance driven by growth is actually not that different across markets. At present, both indices have recovered roughly 50-60% of their respective pandemic drawdowns and, looking ahead, there is roughly similar scope for SPX and SX5E to rally on positive growth news. If anything, what appears to be more persistent fiscal policy innovations give the euro area a slight advantage in that regard.

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[1] We closely follow the methodology outlined in: Matheson, Troy and Emil Stavrev (2014). "News and Monetary Shocks at a High Frequency: A Simple Approach." IMF Working Paper WP/14/167.

Monetary policy-related pricing, in contrast, accounts for much of the recent European equity underperformance. The implied impulse from U.S. monetary easing has surged past its pre-pandemic levels, but in Europe it remains mired well below. In other words, the fact that European bond yields could not fall by nearly as much relative to the drawdown in equities implied a significant tightening of European monetary conditions that policymakers have been unable to undo, and will likely struggle to undo in the near future.

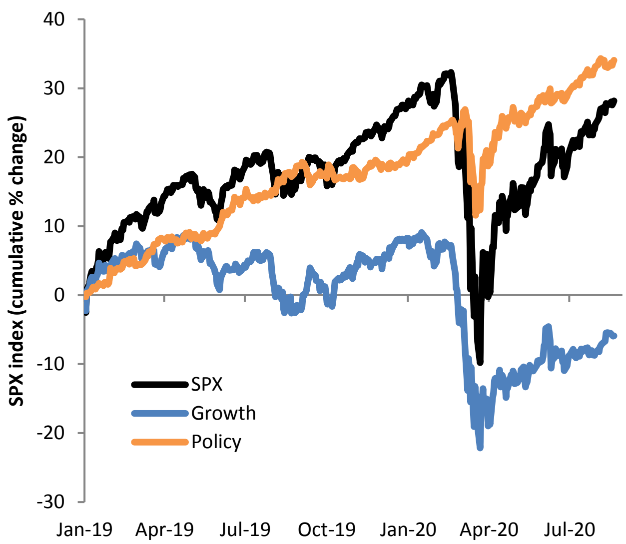

Figure 5: Growth pricing dynamics similar in U.S. and Europe, policy pricing very different
Source: Bloomberg, author calculations. Daily data, January 1, 2019 – August 20, 2020.

Policy, generally speaking, is yet another reason for European equities and the currency to trend in a correlated manner. Steps towards fiscal union and more integrated risk pooling in Europe are likely to erode the risk premium associated with a breakup of the bloc, which will in due course (but not necessarily at exactly the same time), generate tailwinds to Eurostoxx, the euro and peripheral spreads.

4. Concluding thoughts

In sum, the modest portfolio construction benefits of rebalancing, the roughly even tactical view on U.S. large cap equities versus Europe, and the fact that most of the year-to-date underperformance of Eurostoxx can be accounted for by structural impairment in monetary policy, all point to a moderate rebalance back into Europe. In our illustrative 50/50 equity portfolio in **Figure 1**, the 19ppt. year-to-date outperformance of SPX implied an incremental 4ppt. drift towards the U.S., which strikes us as far too large of an overweight in light of the considerations articulated above. Rebalancing about a third of that back into Europe seems an appropriate balance between portfolio benefits, current views, and momentum. Variations on this theme include taking EUR currency risk alongside SX5E, as a reflection of where relative monetary policy trends have been heading, and positioning European buys against parts of the U.S. equity complex with weaker current views support, like small cap.