

BUILDING GLOBAL EQUITY PORTFOLIOS I: CAPTURING GLOBAL AND LOCAL TOP-DOWN SOURCES OF RETURN

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QMA began managing multi-asset portfolios for institutional investors in 1975. Today, we manage systematic quantitative equity and global multi-asset strategies as part of PGIM, the global investment management businesses of Prudential Financial, Inc. Our investment processes, based on academic, economic and behavioral foundations, serve a global client base with \$127.2 billion in assets under management as of 12/31/2019.

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EXECUTIVE SUMMARY

Approximately 30%–40% of the variability in global individual equity securities can be explained by top-down country and industry memberships. Active management of global equity portfolios in the asset management industry, however, focuses almost exclusively on bottom-up security selection approaches, either minimizing or purposefully eliminating top-down exposures. The neutralization of top-down exposures is often rationalized by a lack of breadth in country and industry exposures. Without a decision-making framework, these top-down exposures are believed to constitute uncompensated risk factors. We believe that this approach ignores a significant opportunity to capture an important source of diversifying excess returns, both independently of and complementary to bottom-up approaches. In the process outlined in this paper, we show that a systematic factor-based cross-sectional top-down framework combining local country and global industry exposures can significantly increase the investable opportunity set in global equity portfolios and augment excess returns. Asset owners looking to diversify their active bottom-up global equity portfolios, either systematic or fundamental, can benefit by evaluating this top-down portfolio construction option.

Global equity portfolios contain multiple sources of risk and return. In their pursuit of higher risk-adjusted returns, active portfolio managers deal with a host of geographies, sectors, currencies, and regulatory environments, to name just a few of the challenges. Some use systematic approaches, while others stick to fundamental analysis. Some utilize industry and country rotation models, while others simply pick stocks that may or may not neutralize top-down allocations. In the end, all investors, whether they are quant or fundamental, put together portfolios which can be summarized as either taking exposures to risk premia or trying to exploit mispricing opportunities.

Not surprisingly, active investing developed alongside and consistently with the evolution of finance theory. Modern asset pricing posits that returns are driven by a set of systematic factors, common to all assets in the economy. Combine this premise with the original, strict definition of market efficiency¹ and portfolio management is pretty straightforward: expected returns are a function of exposure to systematic risk factors. The only true active decision is the desired combination of risky assets and risk-free assets.

¹ The strict definition of market efficiency states that all information, public as well as private, is already reflected in market prices. As a result, investors are not able to beat the market.

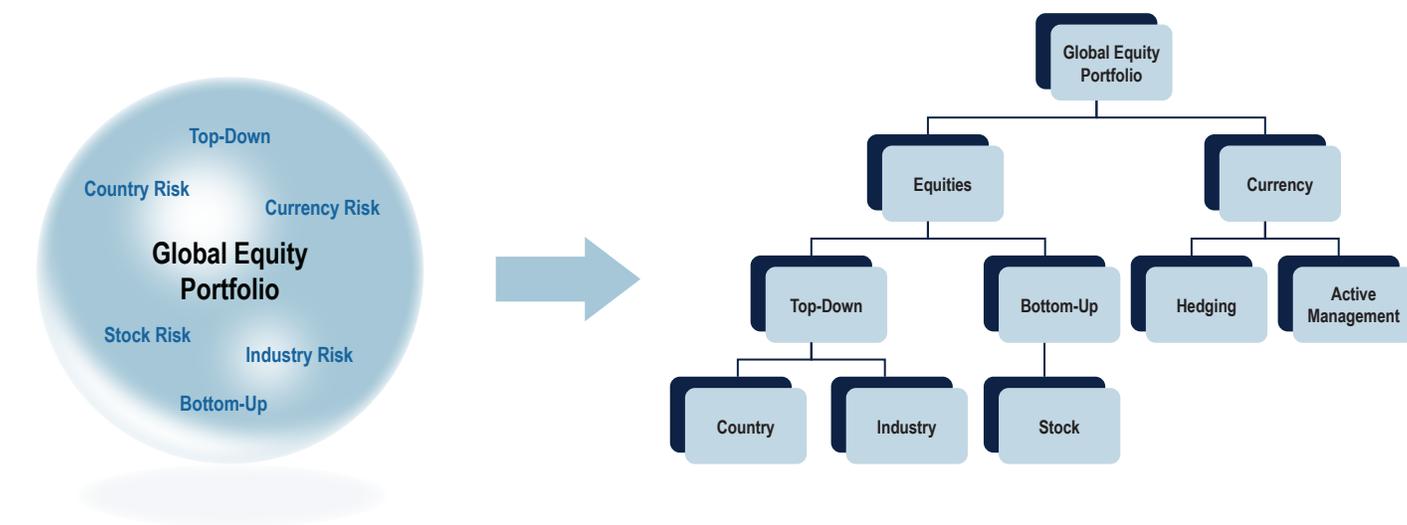
For professional investors only.

All investments involve risk, including the potential loss of capital.

Over time, the notion of market efficiency (or lack thereof) has evolved. An impressive body of literature now exists, investigating both time variation in expected returns and the existence of market inefficiencies. Time variation in the pricing of risk implies that asset sensitivities to systematic factors change through time, while the existence of price inefficiencies indicates mispricings—a departure from market efficiency. Both implications renew the importance of active management. There is scope for active allocations, both inter- and intra-asset classes, with the objective of achieving superior returns both on an absolute and relative basis.

We believe that even if markets are efficient in the long run, persistent deviations from equilibrium still exist. Active investors can potentially exploit these deviations in a way that is profitable for their clients. Arguably, this is a difficult task, but one worth pursuing. For the purpose of this paper, as Grinold and Kahn (2000) suggest, we will look to academia for structure and insight, but not for solutions. We claim that effective equity investment management warrants a structured approach. Investors should identify and separate out sources of return and their accompanying risks, understand their interactions, and design a portfolio that both reflects their philosophy and better captures their objectives.

Exhibit 1: A structured approach to building global equity portfolios



Source: QMA. As of 12/31/2019.

In this note, we limit ourselves to the discussion of top-down sources of equity returns. Those could be proxied more easily with a set of systematic factors or risk premia.³ While there is a very rich literature as to what this set of factors might be, there have been a number of competing modeling attempts trying to identify them. The well-known Capital Asset Pricing Model (CAPM), for example, identifies one such systematic factor: the market, while the Arbitrage Pricing Theory (APT) model uses factors that represent exposure to economic growth and expected inflation. As Aghassi et al. (2011) point out:

“A US-based investor investing in a Japanese car manufacturer not only gains exposure to that specific stock but also to the overall Japanese market.”

A structured approach helps identify and target sources of return consistent with one’s ability to forecast them, while accounting for and attributing the risks involved in a transparent manner. Exhibit 1 presents a natural decomposition of a global equity portfolio. There are top-down (or systematic), and bottom-up (or idiosyncratic), sources of equity returns. We can proxy the top-down sources of return by accounting for the stocks’ country and industry memberships. As we will discuss later in this paper, country and industry membership are significant components of equity returns. We define what is left after accounting for the top-down effects as the idiosyncratic component of returns.

There is also a currency component in every global equity portfolio. Here, we conduct our analysis from the point of view of a US-based investor that does not hedge the currency exposure. We do this for multiple reasons. Equity returns are, on average, much more volatile than currency returns, so we expect the results to not change qualitatively. Additionally, investors could choose to hedge their currency exposure and completely or partially eliminate the risk. In that sense, currency management is an important decision, the discussion of which goes beyond the scope of this note. We discuss the impact and management of currencies within the context of global equity portfolios in a separate paper.²

The basic assumption behind this statement sits at the center of our discussion. How do we model systematic exposure in a way that is actionable from a portfolio management perspective? It would be very natural to take the statement above even further. The US-based investor in Aghassi’s example is also subject to global effects through exposure to the transportation sector. Japanese car manufacturers are sensitive to global business cycle dynamics and a significant part of their revenues are earned outside of Japan. We will make use of a model that separates systematic sources of return into multiple local and global factors. This model could be seen as a multivariate version of the original CAPM model. In this strand of asset pricing literature, there is universal agreement that countries proxy for the “local” risk factor and sectors proxy for the “global” risk factor. Much of the debate has centered on the relative importance of industry and country risk. Conclusions have varied wildly, with

² “To Hedge or Not to Hedge: Assessing Currency Management Solutions for International Equity Portfolios”; Aiolfi, M., Sakoulis, G., QMA working paper.

³ Bottom-up sources of return are consistent with a mispricing view of the world.

earlier research suggesting at least partial segmentation across the country dimension, while later attempts showed the emergence of the sector/industry effect. The debate has persisted through time, because both country and industry factors are important determinants of equity prices, albeit to various degrees across time and the different regions of the world.

This discussion has important implications for active management, as it attempts to address three very important questions:

- Can a consistent top-down framework be used to price equity returns across regions?
- How much of the opportunity in equity returns is due to the top-down vs. the bottom-up decision?
- Is the top-down opportunity actionable?

These questions cannot and should not be answered independently of each other. First, we need to assess the top-down opportunity. A proper modeling framework has to be put in place. We need to identify a set of risk factors that price equity returns, therefore increasing the opportunity set. The factors also have to be consistent across regions around the world, i.e., not only should they price equity returns, but they should do so in a similar fashion globally.

It is worth noting that many systematic active equity managers choose to neutralize or limit exposure to top-down country and industry exposures. They do so for a number of reasons. First, at the security level, the efficacy of country and industry membership information used to differentiate between individual securities is limited and constitutes uncompensated risk. Second, the breadth of information available to systematic managers independently at the country or industry level is insufficient to deliver consistent results. As such, decisions to allocate regionally or by industry generally fall more to asset allocators, who blend model-based inputs along with qualitative judgement to assess opportunities in these lower-breadth opportunity sets.

In this paper, we will present the relative importance of these opportunities by decomposing individual stock returns in two different ways. We measure the relative importance of the top-down opportunity around the globe along two different dimensions, namely countries and industries. We will argue that, in order to maximize participation in the top-down opportunity, the framework has to consistently account for both local and global effects. We will introduce the intersection of countries and industries as an alternative dimension, and again measure the relative importance of bottom-up vs. top-down opportunities.

We will apply standard statistical methods from finance literature for decomposing returns and show that top-down sources of return are significant, accounting for between 30%–40% of stock returns. These should be directly targeted by a framework that explicitly models the top-down component. We will show that the traditional top-down sources of return are different in different parts of the world. Countries are more important variables in emerging markets, while industries matter more in developed markets. We will present a framework that accounts both for local and global effects, in a consistent manner, across regions. The proposed global framework delivers sizable capture of the top-down opportunity, lends itself to more effective modeling of expected returns, and uses investment capital more efficiently.

THE FRAMEWORK

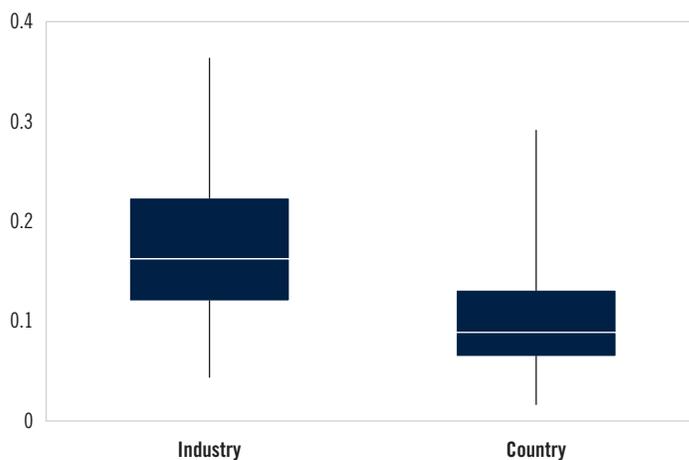
If we think of the cross-sectional dispersion of equity returns as the opportunity available to investors, we are prompted to ask the following question: How much of this dispersion can country and industry membership explain, if any? If, for example, countries explain most of the dispersion in equity returns, then the most important decision investors make would be to pick countries. The country, or local effect, would dominate stock pricing. The corollary is that investors who pick stocks and completely neutralize the country effect would deprive themselves of available opportunities in the equity space—their investment program would be ineffective. While such an example is arguably extreme, it demonstrates the importance of understanding the components of return.

One way to gauge the relative importance of country and industry memberships in pricing stock returns is to look at the R-squared from monthly cross-sectional regressions of stock returns on country and industry dummy variables separately.⁴ The higher this statistic is along a particular dimension, the more the top-down membership explains the cross-sectional variation of stock returns during a particular month. In other words, the R-squared is informing us if the top-down opportunity is actionable, i.e., if deviating from the benchmark along this dimension is being priced by the market.

Our universe consists of the MSCI All Country World Index of stocks. We use the GICS country and industry group definitions and monthly US dollar returns from January 1998 through June 2019. As mentioned previously, we conduct our analysis from the point of view of a US-based investor that does not hedge currency exposure. We do this for two reasons. First, equity returns are much more volatile than currency returns, on average, so we do not expect qualitative changes to our results. Second, hedging currency risk is a choice that a lot of investors choose not to exercise.

Exhibit 2A: Relative importance of countries vs. industries in Europe

EUROPE TOP-DOWN OPPORTUNITY*



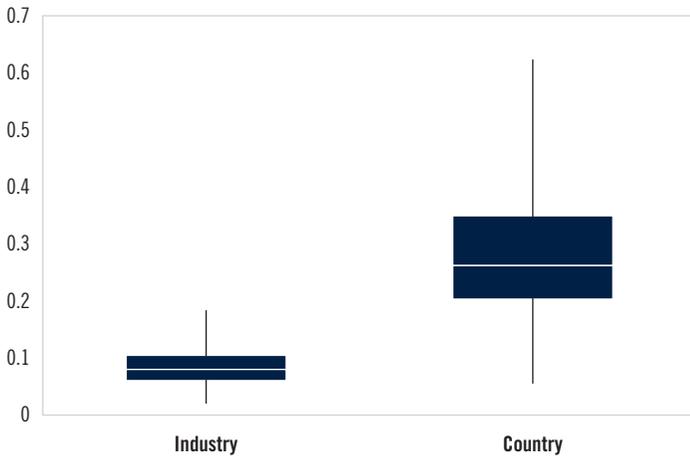
*Adjusted R-Squared from monthly regressions of stock returns on country and industry dummy variables. MSCI Europe Index 1/1998 through 6/2019.

Source: QMA, MSCI, FactSet. As of 6/30/2019.

⁴ Data is based on the MSCI Emerging Markets Index and the MSCI Europe Index from 1/1998–6/2019.

Exhibit 2B: Relative importance of countries vs. industries in emerging markets

EMERGING MARKETS TOP-DOWN OPPORTUNITY*



*Adjusted R-Squared from monthly regressions of stock returns on country and industry dummy variables. MSCI Emerging Markets Index 1/1998 through 6/2019.

Source: QMA, MSCI, FactSet. As of 6/30/2019.

Exhibits 2A and 2B summarize the results of the regressions. The box plots show adjusted R-squared statistics that have been run separately for country and industry dummies, both in the emerging markets and European universes. On average, country memberships explained close to 30% of the cross-sectional variation of stock returns in emerging markets. That number was closer to 8% in Europe. The relative importance was reversed in the case of industries. Industry memberships explained 14% in Europe and less than 10% in emerging markets. There is also a lot of variation in the explanatory power through time, as captured by the box plot whiskers. For example, in emerging markets, country memberships explained as much as 60% at one point in time, while industry memberships explained as much as 20% in Europe. It is easy to think of the case of the Russian default in 1998 or the Asian crisis of 1997, when country memberships would be the most important determinant of stock returns for emerging markets. During the Russian default, for example, it did not matter what sector the Russian companies belonged to, or what their income statements looked like relative to their peers. Returns were based solely on the fact that they were Russian companies, as their country defaulted. Here, the beta effect completely dominated any idiosyncratic effects.

These exhibits highlight the reason why equity returns in emerging markets have frequently been modeled differently than their counterparts in developed markets. The differentiation is primarily attributable to three factors: weak diversification in national markets, partial segmentation from world capital markets and episodically disruptive macroeconomic policies. From an asset pricing framework, market segmentation would imply that local risk factors are more important in explaining the variation in stock returns than global risk. If countries proxy for local effects and sectors proxy for global ones, fund managers would stand a better chance of outperforming passive emerging markets benchmarks by forecasting country returns

and deviating along the national dimension of the index. The opposite is true for developed markets. After the adoption of the euro, as well as the TMT⁵ bubble, fund managers considering a top-down model would be better served with an industry rotation model, as stocks in the developed world seem to be priced more effectively by global factors.

While this analysis sheds light on the different dynamics of risk factors around the globe, we are more interested in introducing a framework that could consistently capture both local and global effects in a global cross-section of returns, independent of regions. To help us do so, we think of exhibits 2A and 2B in terms of opportunities. A country-neutral process, which does not take any country bets in emerging markets, leaves about 30% of the opportunity on the table. In a world of low yields, this is a significant amount of return to choose not to participate in. If we are both country- and industry-neutral, we would be restricting the opportunity set further.

To capture these top-down opportunities, we could potentially build a forecasting model of country returns, as well as an industry rotation model. The next step would be to combine the models in a different proportion for different regions. Although this is a valid modeling approach, the last step is challenging. The model weights would, in effect, impose our ex-ante view of the relative importance of local versus global effects. Will emerging markets be more integrated with the rest of the world? Could a country crisis, e.g., as took place in Greece or Ireland following 2008, result in regions of the developed world becoming more segmented? Would either of these scenarios be temporary or permanent in nature? If we were to misjudge the relative weights of country and sector models, we risk underestimating the importance of either of these two dimensions, both relative to each other and relative to the true state of the world.

Is there a better way to incorporate the two effects? Ideally, we would like to let the model dynamically adjust to the source of top-down information without exogenously imposing relative weights. Cavaglia and Moroz (2002), and Bekaert et al. (2011) seem to have the right idea. In different settings, they both discuss the intersection of countries and industries as the means of developing a top-down framework that is more flexible than that of countries or industries alone.

Cavaglia and Moroz study the resulting allocation matrix in terms of an implementable asset management strategy in developed markets, while Bekaert et al. employ a similar model to study the regional segmentation across developed and emerging markets. We follow their lead. Instead of developing separate country and industry rotation models and imposing ex-ante fixed weights, we use the intersection of countries and industries, or “country/industry” as the main top-down factor. In this model, we see a country not as a monolithic block, but as a collection of local industries. Exhibit 3 shows our proposed structural thematic approach to top-down investing.

⁵ Technology, Media and Telecommunications

Exhibit 3: Top-down framework: country/industry matrix

Industry		Consumer Services	Materials	Banks	Insurance	Software Services	Media	Utilities
Country	P/E	24.5x	13.9x	10.0x	14.3x	33.3x	23.8x	17.8x
United States	19.8x							
Canada	16.2x							
Germany	15.1							
Italy	10.7x							
Japan	13.2x	50.5x	9.6x	7.7x	10.7x	20.5x	22.5x	10.1x
Brazil	16.1x							
Turkey	7.4x							

Build forecasting models at the country/industry level:

- Consistent framework for both country AND industry decisions
- Increased breadth and opportunity at the top down level
- Efficient use of capital with targeted top down allocations

This chart shows the trailing 12 month Price to Earnings as of 6/30/2019.

Source: QMA, MSCI, FactSet. Shown for illustrative purposes only. Please see 'Notes to Disclosure' page for important information and other disclosures. MSCI has not approved, reviewed or produced this report, makes no express or implied warranties or representations and is not liable whatsoever for any data in the report. You may not redistribute the MSCI data or use it as basis for other indices or investment products. Please see 'Notes to Disclosure' page for additional MSCI disclosures. An investment cannot be made directly in an index.

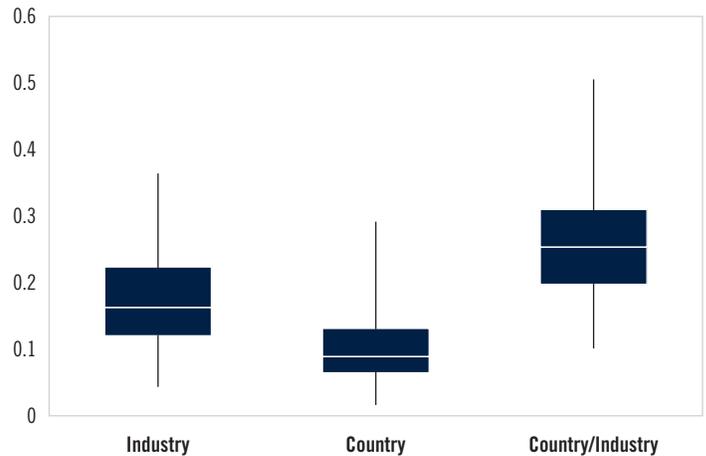
As a collection of local industries, each country is subject to both country and industry dynamics. Stocks within a country/industry basket are subject to local effects, global effects and idiosyncratic effects. If global effects dominate, most of the pricing power should come from the industry dimension, while the opposite would be true if local effects were stronger. An example: our top-down lens increases in scope when we represent Japan by industries. Such granularity allows us to examine the different dynamics of local industries. If local factors determine pricing, most industries will have very similar expected returns and should, on aggregate, reflect the expected return of Japan. But if global factors are more important, we will start seeing deviations along this dimension. It could be that Japanese utilities, given the regulatory environment, are driven more by what is going on in Japan, while energy prices are set globally, so their forecasts deviate substantially from the country forecast. In other words, both country-selection and industry-rotation models are special cases of the proposed framework.

This example of the framework based on trailing price to trailing earnings ratios presents a subsample of both countries and industries. Japan looks very attractive from a relative valuation standpoint on this P/E valuation metric. A portfolio

manager that employs a bottom-up-only process would likely be country-neutral on Japan. This portfolio manager would not be making an active bet on Japan, in essence giving up on trying to capitalize on the relative cheapness of the country. On the other hand, a portfolio manager that only picks countries would find Japan attractive and allocate capital to the country basket, irrespective of the relative valuation of different industries in the country. In this case, banks and utilities look cheap in Japan, but consumer and software services are very expensive. An investor that looks at the intersection of countries and industries would identify the cheap segments of Japan, and only deploy capital in those segments. They would then have more capital to invest elsewhere in the world. In this sense, capital allocation is much more efficient under our proposed framework.

We now repeat the previous exercise of trying to gauge the importance of top-down dynamics in a cross-section of stock returns, while simultaneously incorporating both local and global dynamics in our regression. The results are presented in exhibits 4A and 4B. The adjusted R-squared from the country/industry top-down framework is consistently 5%–10% higher through time. One might dismiss this result as just an artifact of the increased breadth. After all, the use of more instruments in a regression setting can explain more of the variance. We bypass this criticism by reporting R-squared after adjusting for the extra degrees of freedom. Under this specification, about 40% of the variation in emerging markets equity returns and 30% of European equity returns can be explained by their exposure to top-down risk factors.

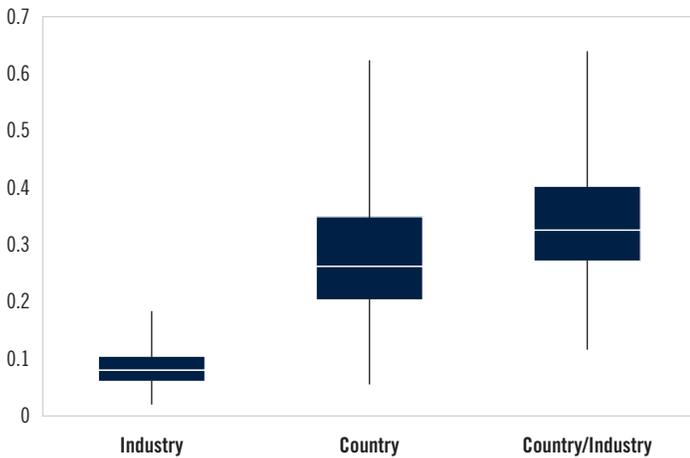
Exhibit 4A: Relative opportunity of countries and industries vs. country/industry in Europe



*Adjusted R-Squared from monthly regressions of global stock returns on country, industry, and country/industry dummy variables. MSCI Europe 1/1998 through 6/2019.

Source: QMA, MSCI, FactSet. As of 6/30/2019.

Exhibit 4B: Relative opportunity of countries and industries vs. country/industry in emerging markets



*Adjusted R-squared from monthly regressions of global stock returns on country, industry, and country/industry dummy variables. MSCI Emerging Markets Index 1/1998 through 6/2019.

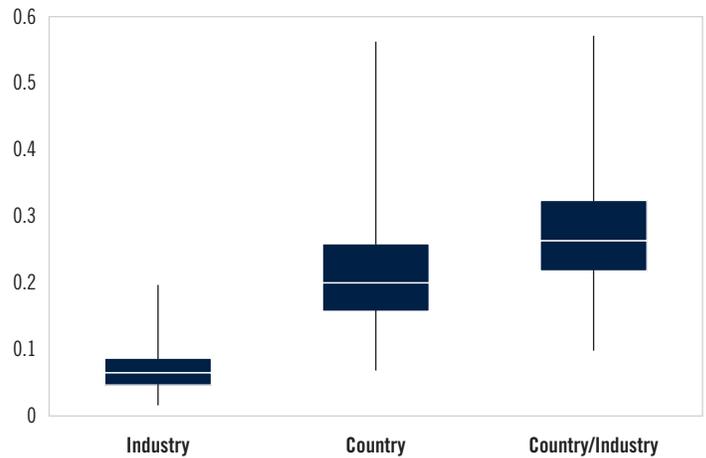
Source: QMA, MSCI, FactSet. As of 12/31/2019.

The additional breadth created by focusing at the country/industry level is also sufficiently rich for a systematic approach that would be more challenged in lower-breadth country or industry approaches alone. Within the MSCI ACWI universe there are 49 countries and 24 industry groups which, independently, could present challenges for systematic investors at such limited breadth. Within the intersection of country and industry, however, there are over 400 investable country/industry blocks⁶ created from simple screening criteria (each block consists of at least three securities or that the country/industry block constitutes at least 5% of a country's market capitalization).

GLOBAL EQUITIES

Since we are interested in building global portfolios, we repeat the exercise for global equities. The results, presented in exhibit 5, are broadly consistent and arguably better: we see more cross-sectional dispersion along the country/industry dimension in the pricing of global equities, and the information is critical. The adjusted R-squared from the country/industry top-down framework is consistently 8%–15% higher through time, after adjusting for the extra degrees of freedom. Under this specification, about 40% of the variation in global equity returns can be explained by their exposure to top-down risk factors. The implications for global portfolio construction are significant, especially because the asset management industry tends to ignore or under-utilize top-down information due to the notion that macroeconomic mispricing does not exist or does not last very long.

Exhibit 5: Relative opportunity of countries and industries vs. country/industry in the MSCI ACWI universe



*Adjusted R-squared from monthly regressions of global stock returns on country, industry, and country/industry dummy variables. MSCI ACWI 1/1998 through 6/2019.

Source: QMA, MSCI, FactSet. As of 6/30/2019.

We have established that the country/industry framework is consistent and can be applied across regions, generates more opportunity for investors if they choose to deviate from the benchmark, and is more effective than either independent country or industry models in the pricing of global equities. A natural question then arises: can we forecast equity returns based on this framework?

We conduct the following study for exposition purposes. Using the MSCI ACWI as our universe, we build country, industry and country/industry returns. We also build valuation and momentum models at each level of aggregation. We proxy valuation by the 12-month trailing earnings yield and momentum by the 12-month trailing price return, where we exclude the most recent month. We calculate and report quintile spreads to measure performance and we report annualized numbers. In the case of country valuation, for example, we group countries into five groups based on how cheap they are, and calculate the return spread between the cheapest group of countries (quintile 1) and the most expensive group of countries (quintile 5) through time. The study uses data from 1998 through June 2019.

The results along the country and industry dimensions are presented in exhibit 6; they are as expected. Valuation works better when picking countries to add to the portfolios. We observe similar relative efficacy with momentum, although it is better at a country/industry level. In fact, both signals are very effective in picking country/industry baskets. They are both equally strong and consistent over the long period of the study, albeit with the caveat that momentum is a higher turnover signal. The country/industry framework utilizes information pertaining to the formation of expected returns in a much more effective way than country or industry rotation alone.

⁶ As of 9/30/2019

Exhibit 6: Performance of top-down valuation and momentum under alternative frameworks in the MSCI ACWI universe

	ACWI Forward Earnings Yield		Momentum	
	Return	IR	Return	IR
Country	3.51	0.46	2.22	0.17
Industry Group	2.55	0.29	0.86	0.15
Country/Industry Group	6.61	0.84	5.06	0.35

Source: QMA, MSCI, FactSet. From 1/2000 – 6/30/2019.

Beyond value and momentum, investing at the top-down country/industry level also opens up other factors for consideration that may not be effective for bottom-up security selection investors. In particular, macroeconomic information such as future country economic growth and inflation can yield important information for forecasting country and industry returns that is not easily captured at the idiosyncratic security level.

COMBINING TOP-DOWN AND BOTTOM-UP INFORMATION

A natural question: to what extent does this top-down opportunity complement traditional bottom-up systematic investment strategies? If top-down factor returns from traditional value and momentum factors were highly correlated to those same factors from bottom-up security selection, potential gains in combining the two approaches might be limited, or else unattractive. This might restrict us to non-common top-down factors, such as macroeconomic information, when choosing to complement a bottom-up process.

We answer this question by looking at the correlation of the information content of these factors and the correlation of the resulting returns. The results are presented in exhibits 7A and 7B.

Exhibit 7A: Correlation of top-down and bottom-up factor scores for the MSCI ACWI universe

	Top-Down Value	Top-Down Sentiment	Top-Down Macro	Value	Sentiment
Top-Down Value	1.00	-	-	-	-
Top-Down Sentiment	-0.02	1.00	-	-	-
Top-Down Macro	-0.04	0.28	1.00	-	-
Value	0.24	-0.02	-0.02	1.00	-
Sentiment	0.02	0.20	0.06	-0.08	1.00

Average factor correlation: 0.06

Source: QMA, MSCI, FactSet. From 1/2000 – 6/30/2019.

In exhibit 7A we measure the cross-sectional correlation of the factor scores and look at the average through time. It is evident from the table that top-down and bottom-up signals

show little correlation, as they model different expected returns. It is interesting to note the value proposition of aggregation. For example, as we aggregate valuation signals at the country/industry level, the idiosyncratic information cancels out and what remains is an aggregate view, above and beyond the bottom-up idiosyncratic view. This is demonstrated in the correlation between top-down and bottom-up value, which turns out to be only 17%. In essence, given our framework, we have decomposed our factors, and increased our breadth in terms of independent decisions.

Exhibit 7B: Correlation of top-down and bottom-up factor returns for the MSCI ACWI universe

	12/31/2000 to 6/30/2019	Country/Industry Selection			Stock Selection	
		Value	Sentiment	Macro	Value	Sentiment
Country/Industry Selection	Value	1				
	Sentiment	-0.15	1			
	Macro	-0.11	0.55	1		
Stock Selection	Value	0.40	-0.35	-0.27	1	
	Sentiment	-0.27	0.56	0.45	-0.58	1

Equal-weighted geometric gross quintile return spreads for Top Down (country/industry group baskets) and Bottom Up (individual stock) return for all stocks in MSCI ACWI.

Source: QMA, MSCI FactSet. As of 6/30/2019.

The factor returns to common value and momentum factors are also minimally correlated at the top-down and bottom-up levels. As presented in Exhibit 7B, the correlation of top-down and bottom-up simulated value factor returns are just 0.4, and the correlation of top-down and bottom-up momentum returns are 0.56. Macroeconomic factor returns are also diversifying, with absolute correlations lower than 0.5 to bottom-up value and momentum factor returns.

CONCLUSION

Global portfolio managers use a multitude of approaches to build equity portfolios. We argue for a structured approach, one which separates out sources of return and their accompanying risks, understands their interactions, and designs a portfolio that both reflects their philosophy and better captures their objective.

The decision to use a separate top-down process is dependent on the available opportunity and the ability to maximize participation in that opportunity. We show that a modeling approach combining country selection with industry rotation in a unified country/industry framework achieves this goal. The top-down opportunity under this framework is consistent across regions, is always higher than using country and industry selection models separately, and accounts for 30–40% of the total opportunity in global equities, as measured by the amount of dispersion along the top-down dimension. This framework allows for a more efficient use of capital, so investors can better target their intended expected returns. Most importantly, this opportunity is minimally assessed and acted upon by traditional asset managers, leaving what we believe is considerable alpha on the table.

The top-down opportunity set is also materially different, in terms of return outcome and factor exposure, than security-level exposure to the same conceptual value and momentum factors. It provides scope for additional factor exposures that lack efficacy at the security level. As such, combining top-down exposures with traditional bottom-up security selection can significantly broaden the opportunity set of diversifying exposures for systematic global equity managers.

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Notes to Disclosure

Sources: QMA, FactSet, Thomson Reuters.

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