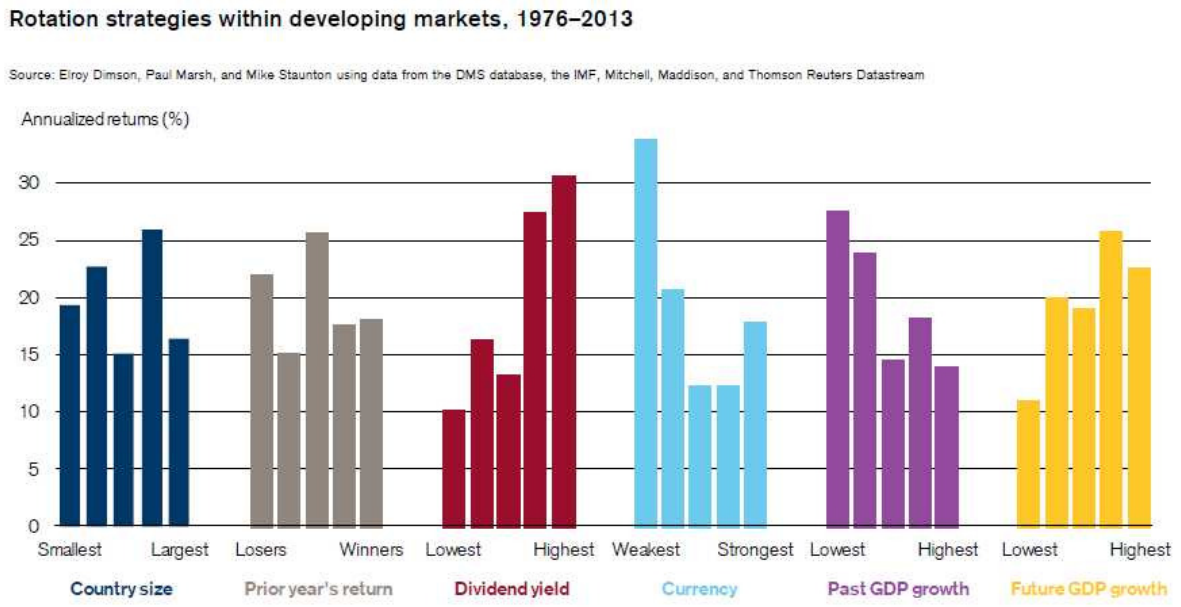
Emerging Markets Country Selection: Dimson and Marsh Revisited

What D&M Did:

Dimson and Marsh did an updated version of their study for the Credit Suisse Yearbook. There did a number of interesting studies, but I want to focus on their study of country picking strategies for EM, from 1976-2013.

Figure 1 shows their results for equal weighted portfolios.

Figure 1



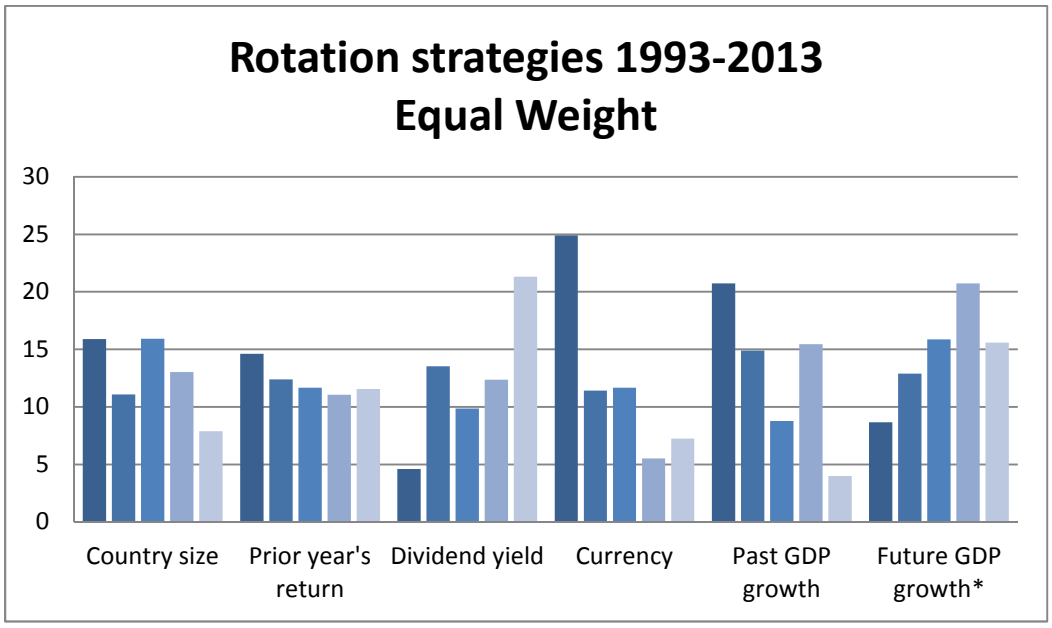
There are a few interesting conclusions to be drawn – first, that value works (they use Div Yield as the proxy for value) to predict one year return. Second, that reversion strategies work – countries with the biggest drop in currency over the past year did best over the next one year as did countries that had the poorest GDP growth over the past 5 years. Country size and momentum (defined as trailing 12 month local real return) don't appear to have any predictability. Most interesting is the result that if one could predict the next 5 years GDP growth it would do really well to predict the next 1 year return.

What We Did:

First of all, we decided to replicate what they did, subject to limitations of our database. The reason we wanted to do this was to be able to see what would happen if one used cap weighting or something in between that would be a closer proxy for how we manage money.

Figure 2 shows our results using exactly the same methodology but with a time period limited to 1993-2013.

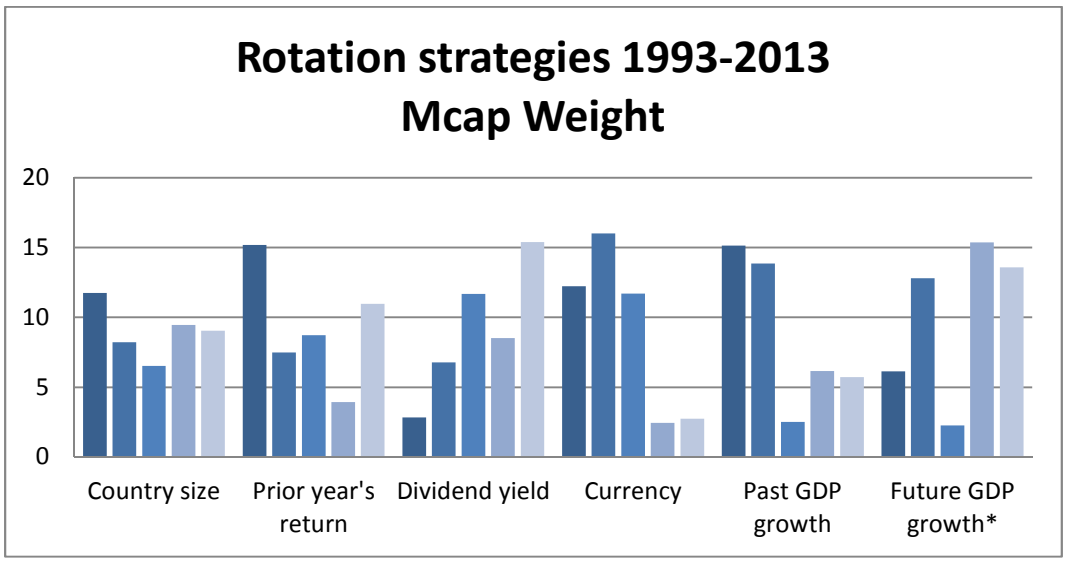
Figure 2



The good news is that despite the shorter time period, the results look very much the same and so we are confident that we can now compare mangoes with mangoes.

Figure 3 shows the same study, but now using square root mcap to define the quintiles and mcap weighting within each quintile.

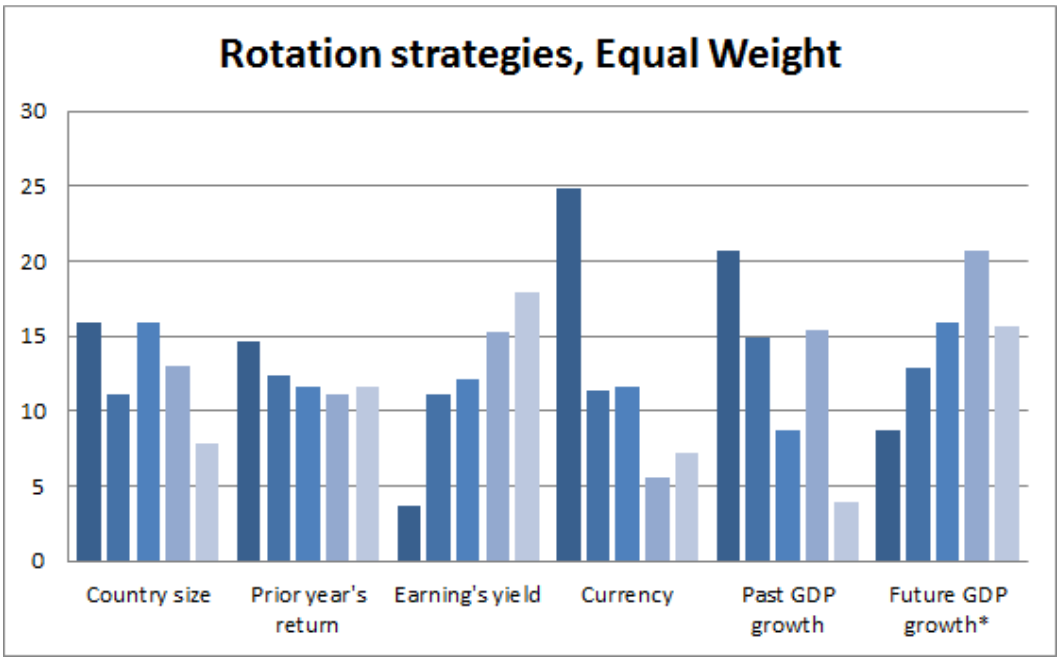
Figure 3



Again the results don't show much change, with the main difference being that the spread between Q1 and Q5 shrinks (look at the scale of the two charts).

Since we think of value is being something different from Div Yield, we re-ran the equal weighted analysis replacing Div Yield with Earnings Yield (using PE sliced 12). Figure 4 shows the results – clearly earnings yield works even better than Div Yield (and the quintile run is monotonic), which should not surprise anyone.

Figure 4



Disentangling the effects:

Looking at these results, we wondered whether the currency and past GDP growth variables were just simply a proxy for value – after all if a country had stumbled from a growth or currency point of view, they were likely to be cheap.

In order to disentangle these effects we ran multiple regressions on these variables.

We ran a pooled regression using each of these individually as the independent variable along with value and the forward 12 month return as the dependent variable to see if the effect of this variable would diminish or disappear when paired with value.

Table 1 shows the T-stats for each variable in these regressions. The numbers are all large because this is a pooled regression (but with non-overlapping periods).

Table 1

T-Stat	DivYld	CtrySize	Ret_1yrReal	FXreturn	GDP5yr	GDPnext5yr	Adjusted R^2
Just Yield	4.57						4.8%
Yield and Country Size	4.71	1.38					5.0%
Yield and Trailing 12 Month Return	4.31		-3.28				7.0%
Yield and Currency Return	4.54			-2.34			5.8%
Yield and Past 5Yr GDP Growth	4.47				-0.96		4.7%
Yield and Future 5Yr GDP Growth	5.06					3.78	7.8%

The one clear conclusion is that Past 5Yr GDP growth is a proxy for value – adding it to the regression does not change the explanatory power and the variable itself has an insignificant T-stat.

Also, knowing future GDP with certainty adds a huge amount of power over and above value. This leads to the conclusion that while past and contemporaneous GDP growth don't have any ability to forecast return, the ability to accurately forecast high vs low GDP growth (country vs country, NOT relative to your own history) in the future is VERY valuable. Nuanced, but important conclusion and should change how we think about the link between GDP growth and return.

How Does Our Macro Model Do In This Framework?

Last year we introduced a new macro model that we combine with value for the top down part of our process. The macro model consists of five variables – our homemade leading indicator (which represents economic momentum in normal periods but mean reverts at cycle peaks and troughs) along with four more traditional metrics that operate over a longer horizon – Currency Reversal (similar to D&M 12 month currency factor we saw earlier), Current Account /GDP (which we've used since 1993), Debt/GDP and Excess Liquidity (defined as real money supply growth less industrial production). One caveat: We do not think of this model as being something that should outperform independently, but should be an enhancement to value.

Figure 5 shows how our overall macro model would have done from 1999-2013 (our model data only goes back to 1999), and how each subcomponent would have worked. Keep in mind that the leading indicator has a shorter horizon and these are all 12 month forward returns.

Figure 5

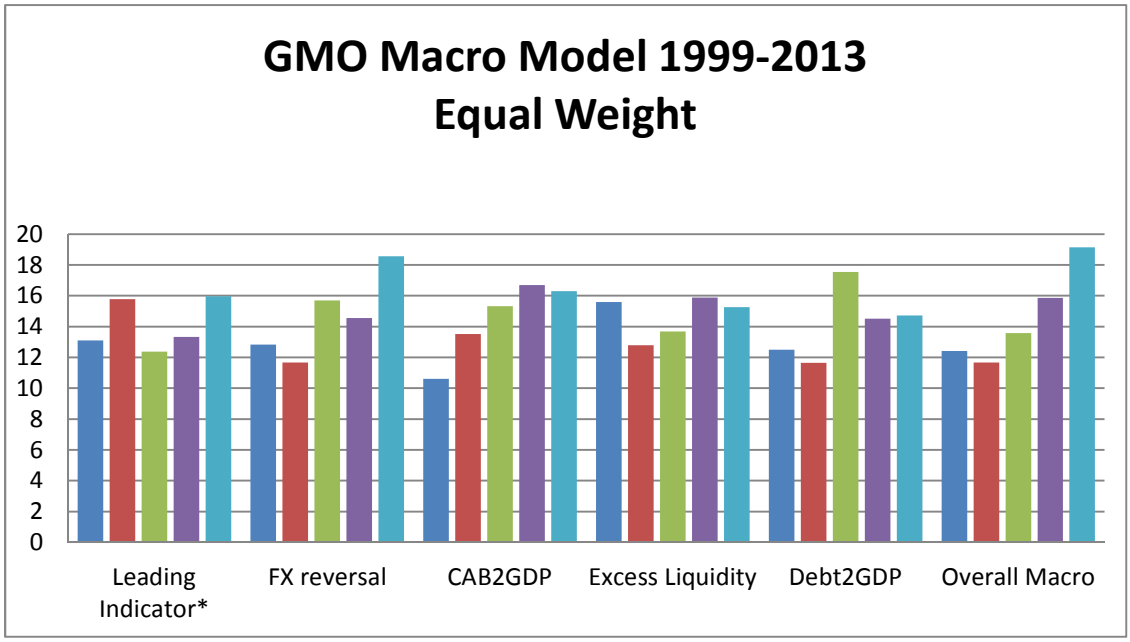
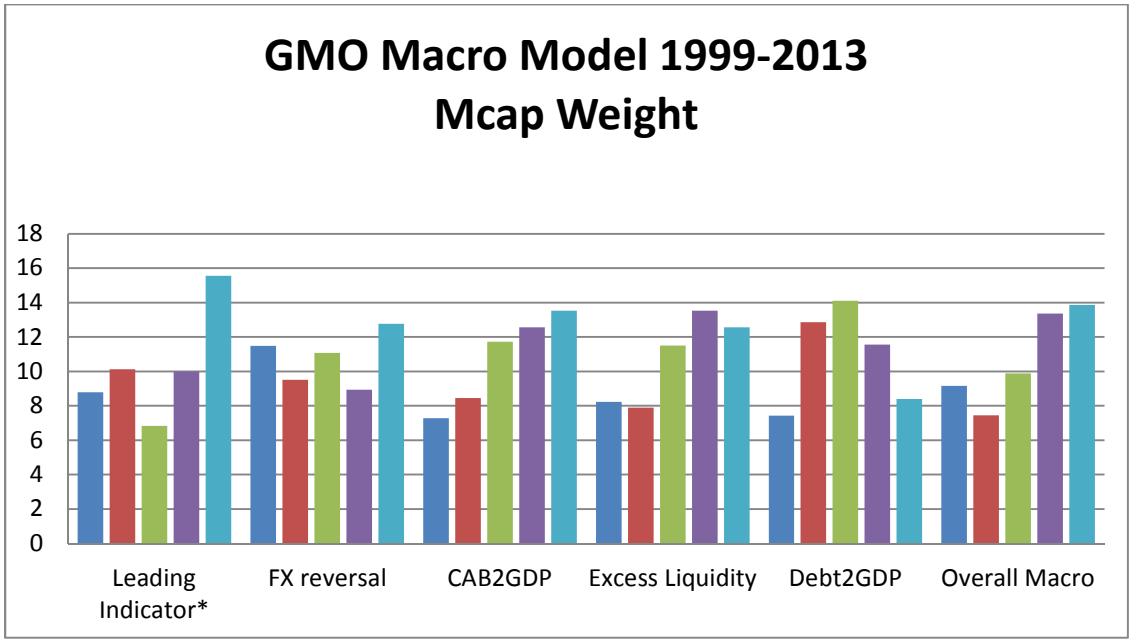


Figure 6 shows the same mcap weighted

Figure 6



Overall, the macro model does a pretty good job on a stand-alone basis, but the acid test for us is whether this model truly enhances value.

We ran regressions to test this theory, looking at value by itself, macro by itself and the two together. Since we have a limited dataset (only going back to 1999) but we have monthly scores for value and macro, we ran pooled regressions with overlapping data, which show some truly frightening T-stats. In order to deal with the overlapping data we used Newey-West T-stats, which (I'm told) correct for the serial correlation.

Table 2 shows the regression for Earnings Yield by itself, which shows that for one extra unit of earnings yield; historically you got an extra 3.75% return.

Table 2

	Earnings Yield	Adjusted R-Squared
Beta	3.75	7.0%
T-Stat	12.01	

Table 3 shows the same for Macro, with an additional unit exposure to this factor (its a normalized variable for one unit is one sigma) adding 10.47% return. As a point of reference, our portfolio has a 0.15 exposure to this factor

Table 3

	Macro	Adjusted R-Squared
Beta	10.47	1.1%
T-Stat	6.37	

Finally, when we combine both, we see that Macro adds value orthogonally without detracting from Earnings Yield and enhances the explanatory power. In short, it improves upon what we get from value alone.

Table 4

	Earnings Yield	Macro	Adjusted R-Squared
Beta	3.71	9.74	8.0%
T-Stat	11.86	6.27	

Conclusions:

D&M's results show that buying cheap countries with fallen currencies outperform along with countries with high future GDP growth.

We replicated their study and found very similar results over the more recent past. In addition we found that one of D&M's results, countries that had poor GDP growth over the past 5 years outperform, was simply an artifact of the fact those countries were cheaper. However, the fallen currency effect and the future GDP effects remain strong even after adjusting for value.

We found that using sliced PE performed better than Div yield.

Finally we looked at how our new Macro model would have done using this framework and concluded that it worked on a standalone basis, but more importantly did indeed represent an enhancement to our value models for picking countries.

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