GTAA Framework Review

DISCLOSURE: I am long on U.S. and European equities, including but not limited to the following ETF's:

GREK (Greece)
EIRL (Ireland)
EWO (Austria)
EWP (Spain)
VGK (Europe)
SCZ (EAFE Small Cap)
PIZ (DWA Developed Market Momentum)
IWO (U.S. Small Cap Growth)
MDY (U.S. Mid Cap)
SPY (U.S. Large Cap)
XLI (U.S. Industrial)
XLV (U.S. Health Care)

CC Lin March/2014

Fama-French Three-Factor Formula

CAPM – Capital Asset Pricing Model

$$r = R_f + \beta_3(K_m - R_f) + b_s \cdot SMB + b_v \cdot HML + \alpha$$

Here,

r: portfolio's expected return.

R_f: risk-free return rate.

β_3: "beta", a measurement of the volatility to the market. The beta for the entire stock market is 1.

K_m: return of the whole stock market.

b_s: the slope of small minus big (SMB).

b_v: the slope of value [high (book value) minus low book value, HML].

α: active excess return.

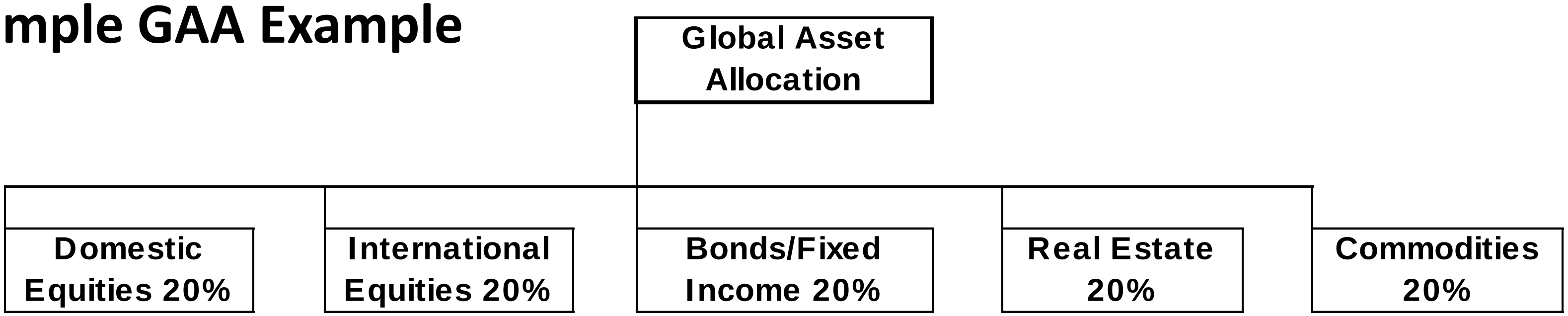
- **The formula explains 90%+ of the diversified domestic stock portfolio returns.**
- **Most active managers are unable to produce positive alpha on a consistent basis.**
- **What can we do to gain higher return or reduce volatility?**

Global Asset Allocation (GAA)

Drivers:

- Capture opportunities offered by other asset classes, such as bonds, international stocks, commercial real estate and commodities.
- By combining lowly correlated or uncorrelated asset classes together, the GAA portfolio will likely have lower volatility and could even have higher risk-adjusted return.

A Simple GAA Example



Correlation of Annual Return (1973 – 2008)

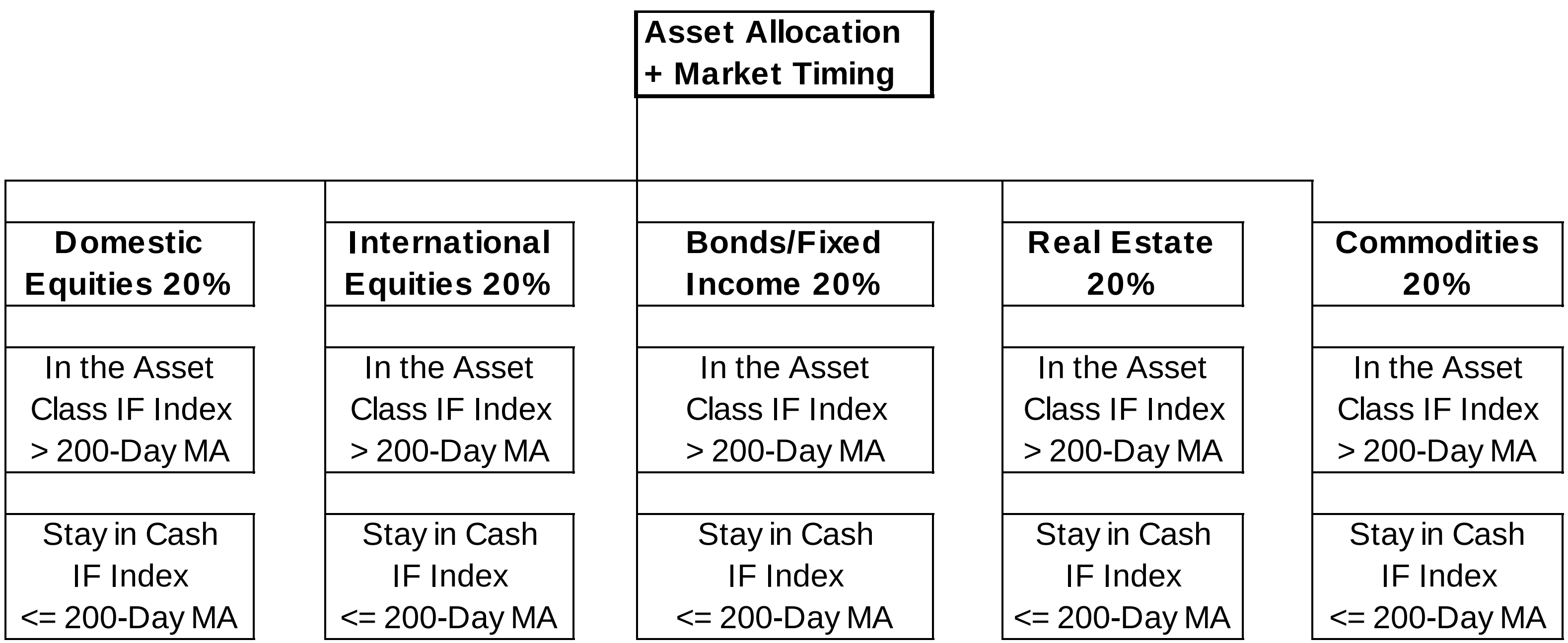
	U.S. Stocks	Foreign Stocks	U.S. Bonds	Commodities	Real Estate
U.S. Stocks	1.00				
Foreign Stocks	0.66	1.00			
U.S. Bonds	0.15	-0.04	1.00		
Commodities	-0.09	-0.01	-0.21	1.00	
Real Estate	0.59	0.38	0.08	-0.17	1.00

GTAA (Global Tactical Asset Allocation)

Drivers:

- Equities, commercial real estate and commodities could experience very high drawdown percents, sometimes simultaneously, causing the return of the portfolio to become unacceptable.
- While trying to benefit from GAA, GTAA uses various tactics in determining allocation to specific asset classes for a given point in time so as to achieve higher return or lower risk or both.

Mebane Faber’s Original GTAA Framework



GTAA – Potential Pitfalls

Issues with the Framework:

- When some asset classes suffer from negative momentum, the strategy will only investments partially, causing the strategy to under-perform against the rising indices. The risk may have been lowered, but could be at the expense of return.
- For example, for most of 2013, bonds and commodities were under 200-day moving average. Thus, only 60% of funds were invested. The resulted GTAA strategy would under-perform against the domestic equities, international equities and real estate indices.

Potential Counter-Measures

- Concentrate on winners to ensure fuller investment most of the time. The winner could be cash when all other asset classes perform poorly.
- How to determine winners and how much to allocate to winners?
  - Momentum
  - Valuation
  - Other criteria
  - Combined.

Momentum-Based GTAA Framework: I

Mebane Faber's AGG3 and AGG6 Framework[1]

- AGG3 only invests in the top 3 global asset classes out of 13 available, but only when they are above 200-day moving average. Otherwise, stay in cash.
- AGG6 only invests in the top 6 global asset classes out of 13 available, but only when they are above 200-day moving average. Otherwise, stay in cash.
- Selection is based on the average of 1, 3, 6 and 12 month return.

Historical Performance: 1973 - 2012

13 Asset Classes	Buy & Hold (GAA)	GTAA Conservative (more bonds)	GTAA 13	AGG Top 3	AGG Top 6
Annual Return	11.5%	12.9%	12.0%	19.1%	17.8%
Volatility	10.7%	7.4%	7.1%	14.8%	11.6%
Sharpe Ratio	0.57	1.01	0.94	0.92	1.06
Max Drawdown	- 42.7%	- 10.7%	- 10.7%	- 20.3%	- 23.4%

Observations

- AGG3 and AGG6 produced higher historical annual return, though with higher volatility and higher maximum drawdown. The Sharpe ratios were in line with the original GTAA.
- The selected asset classes in AGG3 and AGG6 were likely to have higher correlations, thus giving up the diversification benefit of GAA and GTAA 13.

Momentum-Based GTAA Framework: II

(12 Global Asset Classes Feb/1986 – Sep/2007)

David Blitz and Pim van Vliet's Framework[2]

Selection Criteria	Performance Characteristics	Top Quartile	Middle Half	Bottom Quartile
1 Month Momentum* (Short Term)	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	9.9% 10.7% 0.93	1.6%	3.0% 11.1% 0.27
12-1 Month Momentum** (Intermediate ex. short)	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	8.1% 11.6% 0.70	4.0%	0.2% 10.7% 0.02

Observations

- Momentum works on GTAA framework whether it is 1 month momentum or 12-1 month momentum.

* 1 month momentum: based on return over the most recent 30 days. No timing rule.

** 12-1 month momentum: based on 12 month return excluding the most recent month. No timing rule.

Valuation Matters in the Intermediate Term[3]

USA 1881 - 2011

10-Y Avg CAPE	% Occurrence	1-Y Fwd Real CAGR	3-Y Fwd Real CAGR
< 5	0.8%	25.4%	18.9%
5 ~ 10	17.1%	14.5%	12.6%
10 ~ 15	26.4%	10.6%	8.3%
15 ~ 20	31.0%	6.4%	4.7%
20 ~ 25	15.5%	1.6%	5.4%
25 ~ 30	5.4%	1.3%	-1.0%
30 ~ 40	3.1%	1.9%	0.3%
40 ~ 50	0.8%	- 12.5%	- 17.0%

32 Countries 1980-2011

10-Y Avg CAPE	% Occurrence	1-Y Fwd Real CAGR	3-Y Fwd Real CAGR
< 10	10.2%	25.9%	17.0%
10 ~ 15	20.5%	22.8%	13.8%
15 ~ 20	25.2%	11.2%	10.8%
20 ~ 25	18.3%	4.4%	6.8%
25 ~ 30	11.0%	- 1.3%	0.7%
30 ~ 40	7.5%	3.0%	- 1.1%
40 ~ 50	4.4%	- 3.3%	- 3.4%
50+	2.0%	- 4.5%	- 12.3%

Observations:

- CAPE (cyclically adjusted P/E, or Shiller P/E). It first adjusts earnings for inflation and then averages the figures over 10 years.
- CAPE worked well for both U.S. and international equities in aggregate.
- Variations of CAPE include
  - Vincent Deluard's 2-year P/E plus inflation plus unemployment rate (empirical evidence on U.S. market)[4].
  - NIPA CAPE proposed by Jeremy Siegel[5]. NIPA stands for U.S. National Income Product Accounts. It removes the impact of huge write-offs by financial institutions (think AIG, Citi and Fannie) during global financial crisis. The NIPA CAPE had higher correlation with long term return than Shiller P/E.
  - Doug Ramsey of the Leuthold Group indicates that S&P Industrials price to cash flow ratio and five-year "normalized" average P/E worked very well in predicting five year forward total return for the U.S. market[6].

Comparing Valuation of Different Asset Classes

David Blitz and Pim van Vliet's Framework [2]

- Only stocks, bonds, REIT's and cash are included in the available asset classes. No commodities.
- Use earnings yield of stocks (E/P) and dividend yield of REIT's (D/P) to compare with interest yield of cash and bonds.
- Various adjustments (called extra hurdles) were made to account for the structural differences of asset classes. For example, junk bond yield was reduced by 6% to account for its structurally higher yield than risk-free return. U.S. REIT's yield was reduced by 2% to account for its structurally higher dividend yield versus common stocks.
- The net impact of the adjustments is that the average excess returns of all examined asset classes over the risk-free return were between -1% and +1%.
- The selection and allocation are made monthly. It basically ranks the asset classes by the adjusted yield and picks the ones with highest relative yield.

Selection Criteria	Performance Characteristics	Top Quartile	Middle Half	Bottom Quartile
Adjusted Valuation with Extra Hurdle	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	8.9% 9.1% 0.98	3.1%	1.0% 12.5% 0.08

Combining Momentum and Valuation

Blitz and van Vliet's Method of Combination [2]

- Assign 25% weight to the ranking of 1 month momentum by asset classes.
- Assign 25% weight to the ranking of 12-1 month momentum by asset classes.
- Assign 50% weight to the ranking of adjusted valuation with extra hurdle.
- Sum up the weighted rankings and sort the asset classes.

Selection Criteria	Performance Characteristics	Top Quartile	Middle Half	Bottom Quartile
1 Month Momentum	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	9.9% 10.7% 0.93	1.6%	3.0% 11.1% 0.27
12-1 Month Momentum	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	8.1% 11.6% 0.70	4.0%	0.2% 10.7% 0.02
Adjusted Valuation with Extra Hurdle	Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio	8.9% 9.1% 0.98	3.1%	1.0% 12.5% 0.08
Combined Value + Momentum	**Log Mean Ann. Excess Return Standard Deviation Sharpe Ratio**	**10.4% 8.7% 1.19**	**3.8%**	**- 1.6% 9.9% - 0.16**

Momentum works. Valuation works. Combining momentum and valuation work even better.

The real world product, Robeco GTAA D Euro (based in the Netherlands) was ranked #1 for Europe-based "Multi Strategy" fund over the last 3 years.

Value + Momentum Ranking As of Month-End Dec/2012

		Dec/2012					Dec/2012		Dec/2012		
Seq No.	Asset Class	Val Meas	Ref Point	Extra Hurdl	After ExH	Ranking	1M Return	1M Ranki	12-1 Return	12-1 Ranking	Sum Rank
1	US Large Cap SPY	5.87%	0.20%	0	5.67%	4	0.9%	8	15.0%	2	4.50
2	US Mid Cap IJH	5.05%	0.20%	0	4.85%	5	2.2%	6	15.3%	1	4.25
3	US REIT VNQ D/P	2.55%	0.20%	2%	0.35%	11	3.7%	3	13.4%	3	7.00
4	UK Equity EWU	8.26%	0.49%	0	7.77%	1	2.9%	5	12.0%	4	2.75
5	Japan Equity EWJ	5.88%	0.11%	0	5.77%	3	7.3%	1	-1.7%	12	4.75
6	US T Bonds 30Y TLT	2.95%	0.20%	1%	1.75%	6	-2.5%	12	5.0%	8	8.00
7	US Corp Invst LQD	3.34%	0.20%	2%	1.14%	8	-0.3%	10	10.6%	6	8.00
8	Cash 1M LIBOR	0.20%	0.20%	0	0.00%	12	0.0%	9	0.2%	11	11.00
9	EEM Stocks VWO	7.69%	0.20%	1%	6.49%	2	7.1%	2	11.3%	5	2.75
10	US High Yield HYG	6.77%	0.20%	6%	0.57%	10	1.4%	7	9.5%	7	8.50
11	German Bund 30Y	2.22%	0.05%	1%	1.17%	7	3.5%	4	2.8%	9	6.75
12	JGB 30Y	2.00%	0.13%	1%	0.87%	9	-1.0%	11	0.9%	10	9.75

Selected asset classes are all equities. Thus, likely have high correlation.

12 Month Performance of **Frozen** Dec/2012 Allocations

	Top Quartile	Middle Half	Bottom Quartile
12M Performance	+ 16.1%	+ 7.1%	+ 4.7%

Value + Momentum Ranking As of Month-End Jun/2013

		Jun/2013					Jun/2013		Jun/2013		
Seq No.	Asset Class	Val Meas	Ref Point	Extra Hurdl	After ExH	Ranking	1M Return	1M Ranki	12-1 Return	12-1 Ranking	Sum Rank
1	US Large Cap SPY	5.52%	0.19%	0	5.32%	4	-1.3%	3	22.1%	3	3.50
2	US Mid Cap IJH	4.50%	0.19%	0	4.31%	5	-2.0%	6	27.2%	1	4.25
3	US REIT VNQ D/P	4.16%	0.19%	2%	1.96%	7	-2.0%	5	11.2%	5	6.00
4	UK Equity EWU	7.69%	0.49%	0	7.20%	1	-4.5%	10	16.9%	4	4.00
5	Japan Equity EWJ	5.88%	0.11%	0	5.77%	3	-6.6%	12	24.9%	2	5.00
6	US T Bonds 30Y TLT	3.52%	0.19%	1%	2.33%	6	-3.3%	7	-6.6%	12	7.75
7	US Corp Invst LQD	3.95%	0.19%	2%	1.76%	8	-3.3%	8	3.4%	8	8.00
8	Cash 1M LIBOR	0.19%	0.19%	0	0.00%	12	0.0%	1	0.2%	11	9.00
9	EEM Stocks VWO	8.33%	0.19%	1%	7.14%	2	-5.4%	11	6.6%	7	5.50
10	US High Yield HYG	6.60%	0.19%	6%	0.41%	11	-1.7%	4	7.4%	6	8.00
11	German Bund 30Y	2.50%	0.07%	1%	1.43%	9	-4.4%	9	1.4%	10	9.25
12	JGB 30Y	1.88%	0.12%	1%	0.76%	10	-0.9%	2	2.8%	9	7.75

6 Month Performance of **Frozen** June/2013 Allocations

	Top Quartile	Middle Half	Bottom Quartile
6M Performance	+ 17.6%	+ 1.8%	+ 0.2%

Blitz and van Vliet's GTAA framework did allow full investment in segments that performed well.

Recent Value + Momentum Month-End Rankings

		Dec/2013					Dec/2013		Dec/2013		
Seq No.	Asset Class	Val Meas	Ref Point	Extra Hurdl	After ExH	Ranking	1M Return	1M Ranki	12-1 Return	12-1 Ranking	Sum Rank
1	US Large Cap SPY	5.16%	0.17%	0	4.99%	4	2.6%	3	29.0%	2	3.25
2	US Mid Cap IJH	3.95%	0.17%	0	3.78%	5	3.0%	2	29.6%	1	3.25
3	US REIT VNQ D/P	4.32%	0.17%	2%	2.15%	7	0.1%	7	2.2%	7	7.00
4	UK Equity EWU	6.90%	0.49%	0	6.41%	3	3.0%	4	16.0%	4	3.50
5	Japan Equity EWJ	6.67%	0.11%	0	6.56%	2	4.1%	1	26.7%	3	2.00
6	US T Bonds 30Y TLT	3.89%	0.17%	1%	2.72%	6	-1.9%	12	-11.7%	12	9.00
7	US Corp Invst LQD	3.85%	0.17%	2%	1.68%	8	0.2%	6	-2.2%	9	7.75
8	Cash 1M LIBOR	0.17%	0.17%	0	0.00%	11	0.0%	8	0.2%	8	9.50
9	EEM Stocks VWO	8.33%	0.17%	1%	7.16%	1	-0.1%	9	-4.7%	10	5.25
10	US High Yield HYG	5.95%	0.17%	6%	-0.22%	12	0.4%	5	5.3%	6	8.75
11	German Bund 30Y	2.75%	0.20%	1%	1.55%	9	-1.2%	11	-7.4%	11	10.00
12	JGB 30Y	1.73%	0.11%	1%	0.62%	10	-0.3%	10	8.6%	5	8.75

The emerging market turmoil and flight to safety at start of 2014 have narrowed the dispersion of rankings. However, no major shift in top quartile allocations ***yet***.

		Jan/2014					Jan/2014		Jan/2014		
Seq No.	Asset Class	Val Meas	Ref Point	Extra Hurdl	After ExH	Ranking	1M Return	1M Ranki	12-1 Return	12-1 Ranking	Sum Rank
1	US Large Cap SPY	5.29%	0.16%	0	5.13%	4	-3.5%	9	25.9%	1	4.50
2	US Mid Cap IJH	4.00%	0.16%	0	3.84%	5	-2.2%	8	24.4%	2	5.00
3	US REIT VNQ D/P	4.14%	0.16%	2%	1.98%	7	4.3%	4	-1.4%	9	6.75
4	UK Equity EWU	6.72%	0.48%	0	6.24%	3	-4.6%	10	16.1%	4	5.00
5	Japan Equity EWJ	6.67%	0.11%	0	6.56%	2	-6.7%	11	23.2%	3	4.50
6	US T Bonds 30Y TLT	3.60%	0.16%	1%	2.44%	6	6.3%	2	-10.5%	12	6.50
7	US Corp Invst LQD	3.75%	0.16%	2%	1.59%	8	1.9%	5	-0.7%	8	7.25
8	Cash 1M LIBOR	0.16%	0.16%	0	0.00%	11	0.0%	7	0.2%	7	9.00
9	EEM Stocks VWO	8.33%	0.16%	1%	7.17%	1	-8.4%	12	-5.0%	10	6.00
10	US High Yield HYG	5.99%	0.16%	6%	-0.17%	12	0.4%	5	5.4%	5	8.50
11	German Bund 30Y	2.48%	0.20%	1%	1.28%	9	5.9%	3	-5.3%	11	8.00
12	JGB 30Y	1.62%	0.11%	1%	0.51%	10	7.6%	1	2.5%	6	6.75

Jan/2014 Allocation	Top Quartile	Middle Half	Bottom Quartile
1M Performance	+ 4.3%	+ 2.6%	+0.8 %

Potentially Effective Equities Investment Rules

- **BUY** segments of the global markets when their valuations are cheap AND the prices are going up, ideally.

- **SELL** segments of the global markets when the prices are going down **OR** (their valuations are becoming expensive AND there are better investment opportunities elsewhere).

Operationalizing the Rules

- Valuation: CAPE of the segment or other substitute.

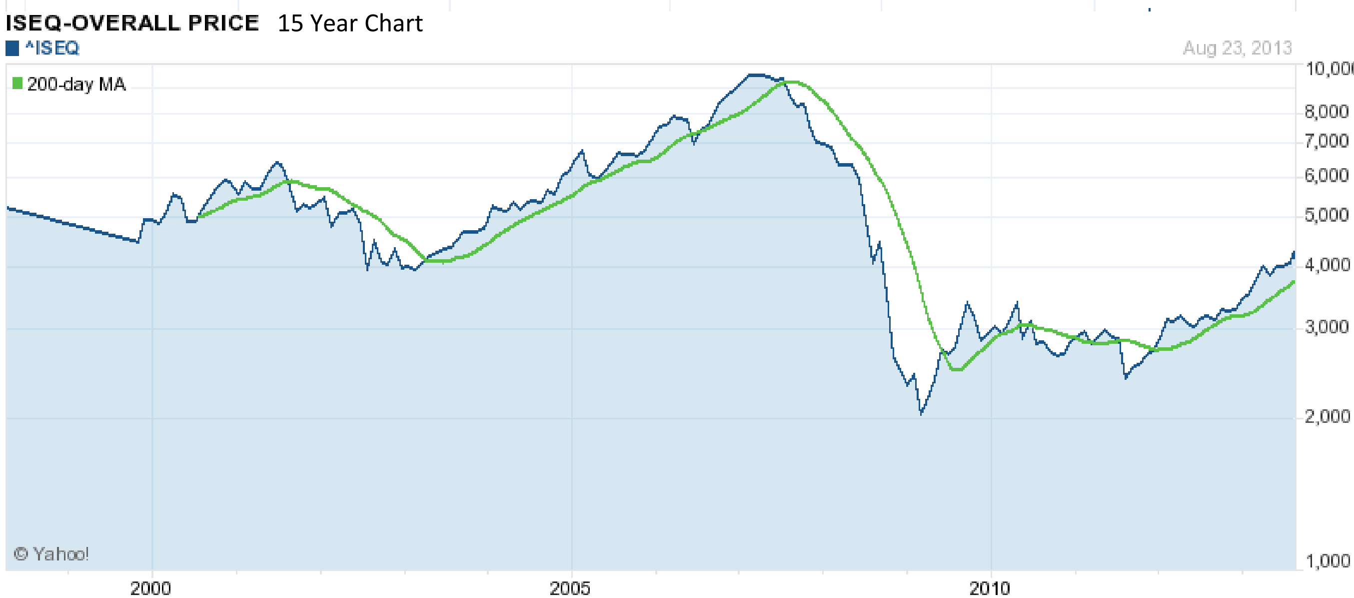
- Prices are going up
  - Index value above 50 / 75 /200 day moving average, and/or
  - IBD ETF relative strength > 65 / 70.

- Prices are going down
  - Index value drawdown of 7% or more (William O'Neil's rule), or
  - Index value below 50 / 75 /200 day moving average, and/or
  - IBD ETF relative strength < 55 / 60.
  - Use tighter stops when valuations are high. For example, when CAPE > 20, use 50 day moving average to sell. When CAPE < 15, use 200 day moving average.

- New buy list: constantly scan the global market for segments with low valuations and good price momentum.

Ireland* Stock Exchange Index

*Ireland is the first "I" in European "PIIGS" financial crisis.



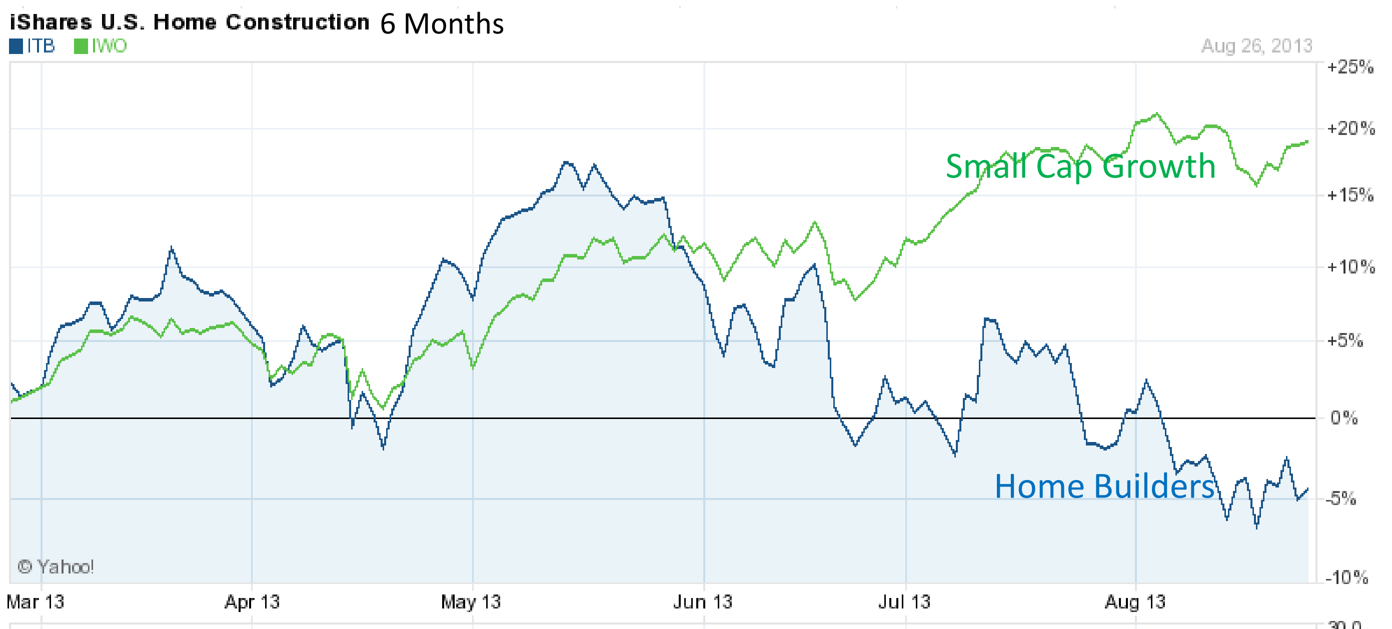
- From the high of 9,963 in late May 2007, ISEQ lost 80% of the value by early March 2009.
- Valuation today is cheap by CAPE standard.
- 200-day moving average appeared to be a good tool to navigate the entry / exit for the Irish market.

Ireland vs. S&P 500

- **S&P 500 (SPY)** has done very well lately. However, its valuation is getting expensive in terms of CAPE.

- **Irish stocks** have done better than S&P 500 and their valuations are still much cheaper in terms of CAPE. Current Irish trailing 12-month P/E is high due to depressed earnings. If you expect the eventual recovery of Irish economy and company earnings, then Irish stocks may be a good buy.

Home Builders vs. Small Cap Growth



- **Buy** home builder stocks after evidence of housing rebound.
- **Sell** home builders to buy into small cap growth stocks in mid 2013, after home builders lost the price momentum.

Global Stock Market Valuation: CAPE

Country	CAPE Dec/2013		Country	CAPE Dec/2013
Greece	**3.8**		France	14.0
Russia	**7.0**		Egypt	14.8
Ireland	**7.3**		Nigeria	15.0
Argentina	**7.4**		Taiwan	15.3
Italy	**8.6**		Thailand	15.3
Hungary	8.7		Australia	15.4
Jordan	9.0		**SouthKorea**	**15.5**
Austria	**9.0**		HongKong	16.3
Lebanon	9.7		Germany	16.4
CzechRep	10.1		Sweden	16.7
Portugal	10.2		Chile	16.9
Spain	**10.3**		Mauritius	17.5
Israel	10.3		India	17.9
Croatia	10.3		Switzerland	18.9
Pakistan	10.5		Canada	19.1
Brazil	10.6		Mexico	19.4
Turkey	11.6		SouthAfrica	19.7
Singapore	11.8		Peru	19.7
Belgium	**12.3**		Kenya	20.0
Poland	12.3		**Indonesia**	**20.1**
Norway	13.1		Malaysia	20.7
China	13.1		Japan	21.1
Finland	**13.3**		**Philippines**	**22.6**
Slovenia	13.4		Colombia	23.9
Holland	13.4		Denmark	24.9
U.K.	**13.6**		**U.S.A.**	**25.4**
NewZealand	13.9		SriLanka	28.4

CHEAP

- Greece: volatile*. Will it ever recover to its former shape?
- Russia: domestic dynamics at work. Historical median CAPE (1996 – 2013) is low at 8.5X.
- Ireland: Graduated from IMF program. Moody's now places its debt as investment grade with positive outlook.
- Argentina: currency and transparency are major issues. IMF censured the country over under-reporting of inflation rate.
- Austria: sovereign risk with Hypo Alpe.
- Italy and Spain: start showing some price strength.

MODERATE

- North Europe and North Asia. Some places are more stable than other in terms of politics and economy.
- Japan: no longer cheap in terms of CAPE. Corporate earnings rising, though.
- China: pattern of excess capacity and reduced profitability. Credit uncertainty. Little upward price momentum.

EXPENSIVE

- USA: current trailing 12-month P/E is 19. CAPE is higher due to poor earnings in 2008.
- Philippines and Indonesia: after reaching some high peaks, both have fallen.

* Standard deviation of weekly return for Athens Composite Index for the last 52 weeks was 4.8%, or equivalent to 760 Dow points, versus 1.7% for Ireland ISEQ Overall.

Source Documents

1. Mebane T. Faber, "A Quantitative Approach to Tactical Asset Allocation" February 2013 Update. Originally published in The Journal of Wealth Management Spring 2007. The article can be downloaded from http://ssrn.com/abstract=962461.

2. David Blitz and Pim van Vliet, "Global Tactical Cross-Asset Allocation: Applying Value and Momentum Across Asset Classes", Journal of Portfolio Management, Fall 2008. The article can be downloaded from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1079975.

3. Mebane T. Faber, "Global Value: Building Trading Models with the 10-Year CAPE", Cambria Quantitative Research, August 2012. The article can be downloaded from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2129474

4. Vincent Deluard, "The Best Indicator You Have Never Heard Of", Ned Davis Research Group, *Global Strategy*, August 14, 2013 issue. Available from the presenter.

5. Jeremy Siegel, "The Shiller CAPE Ratio: A New Look", Presentation to Q Group, October 2013. Available from the presenter.

6. Doug Ramsey, "Stock Market Valuation: What Works and What Doesn't", *Of Special Interest*, The Leuthold Group, June 2011. Available from the presenter.

Supplemental Information

Country	Ticker Symbol	Asset Size ($Mil.)	Avg Daily Volume (3 Months)	IBD Relative Strength		Comment
				2/28/2014	11/29/2013	
Greece	GREK	150	180 K	81	75 (Feb/7/2014)	Thin. Coca Cola Hellenic Bottling AG is #2 holding.
Russia	RSX	900	3,900 K	10	39	
Ireland	EIRL	135	46 K	84	75	Very Thin. Eaton plc and Actavis plc are NOT in the top 10 holdings of EIRL. Both are included in S&P 500.
Italy	EWI	900	1,600 K	74	63	
Austria	EWO	100	150 K	63	55	Thin.
Portugal	PGAL	14	20 K	66	66 (Feb/7/2014)	New. Extremely thin.
Spain	EWP	1,100	740 K	76	72	
Developed Momentum	PIZ	640	215 K	71	69	Thin.

Blitz & van Vliet Value + Momentum Allocations as of Month-End Feb/2014

		Feb/2014					Feb/2014		Feb/2014		
Seq No.	Asset Class	Val Meas	Ref Point	Extra Hurdl	After ExH	Ranking	1M Return	1M Rankii	12-1 Return	12-1 Ranking	Sum Rank
1	US Large Cap SPY	5.08%	0.15%	0	4.93%	4	4.6%	4	19.9%	2	3.50
2	US Mid Cap IJH	4.00%	0.15%	0	3.85%	5	5.0%	2	20.7%	1	3.25
3	US REIT VNQ D/P	3.94%	0.15%	2%	1.79%	7	5.1%	3	1.6%	7	6.00
4	UK Equity EWU	6.97%	0.48%	0	6.49%	3	6.8%	1	13.8%	3	2.50
5	Japan Equity EWJ	7.14%	0.11%	0	7.03%	2	2.5%	6	12.3%	4	3.50
6	US T Bonds 30Y TLT	3.62%	0.15%	1%	2.47%	6	0.5%	9	-6.1%	11	8.00
7	US Corp Invst LQD	3.60%	0.15%	2%	1.45%	8	1.1%	8	0.1%	9	8.25
8	Cash 1M LIBOR	0.15%	0.15%	0	0.00%	11	0.01%	11	0.15%	8	10.25
9	EEM Stocks VWO	9.09%	0.15%	1%	7.94%	1	3.2%	5	-10.9%	12	4.75
10	US High Yield HYG	5.60%	0.15%	6%	-0.55%	12	2.3%	7	4.8%	6	9.25
11	German Bund 30Y	2.49%	0.20%	1%	1.29%	9	0.2%	10	-1.7%	10	9.50
12	JGB 30Y	1.64%	0.10%	1%	0.54%	10	-0.1%	12	6.2%	5	9.25