The Paradoxical Linkage of Expectations and Risk

Antti Ilmanen's book, *Expected Returns*, has received rave reviews among the sophisticated investing cognoscenti. Larry Siegel, most recently director of research for the Ford Foundation, calls it in his endorsement on the back flap the "best book on investment management ever written."

That must have felt nice.

Ilmanen's important central premise is that understanding return expectations embedded in an asset is inextricably linked to understanding the risk of the asset. When asset valuations are very stretched after a sharp and/or long upward run, the future returns required to support the valuation approach impossibility, leaving the asset – be it an individual security, asset class or regional exposure – with very limited upside and significant downside vulnerability should investors reduce their expectations of future returns or fundamentals supporting those expected returns fail to materialize.

Conversely, for assets that are trashed and unloved, the future expected returns are likely quite low as implied by their compressed valuations. In this case, the reciprocal is true: there may be limited further downside in the asset, yet significant future upside should expectations be positively revised or fundamentals turn out less dismal than expected.

One of the key implications of this idea is that conventional price history-based risk measures may suggest the opposite about an asset's relative risk level. For instance, an asset that has been trending upwards without being punctuated with periods of downside would appear to have lower realized volatility, which, in turn, would make its volatility-based risk measures such as value-at-risk appear relatively low as well. An asset that has recently suffered an erratic and sharp decline may appear quite "risky" based on price movement-based risk measures.

This means that assets with elevated risk based on their valuation and implied future expected returns (say, equities in early 2000 after a one-way upward run), might appear far less risky than they actually are when pumped through traditional risk analytics used widely by asset managers. Or the reverse may be true in a “de-risked” asset based on valuation and implied future expected returns (say, high-yield bonds at 2,000 basis points over Treasuries in early 2009). The risk analytics flash a big red light due to recent haywire volatility, when, in reality, risk implied by expected future returns has been sharply reduced and upside potential has increased substantially.

This paradox is certainly one of the central causes of the destruction in 2008. Investors mistook benign levels of volatility in what, in fact, were extraordinarily risky assets based on their valuations and implied expected future returns, as comfort to hold or increase exposure to vulnerable positions. This was further exacerbated by how many assets appeared to trade with low correlation with one another during the placid 2003 to 2007 time frame. Optimizers found many assets to love based on their recent realized performance, volatility and correlation characteristics and many portfolios began to look increasingly like the lauded “endowment model” that performed so strongly during this period.

What was not appreciated was the increasing risk embedded in the valuations and implied expected future returns of each of these assets, the potential spike in volatility should expectations be revised and the potential convergence of correlations should future expected returns be revised simultaneously across risk assets. The systemic shock that occurred, along with the seizing up of liquidity and deleveraging, served as the catalyst to make this implied risk visibly apparent. But even before these events, using this valuation-based approach – versus a price history-based approach – suggested caution in many of the assets that were most impaired in 2008.

If you want to manage portfolio risk one must focus efforts on understanding the implied future expected returns built into how an asset is being valued at any point in time and avoid being lulled into complacency that might be suggested by standard risk models focusing solely on the asset’s recent price history.

The re-pricing of equities over the last six weeks has taken most markets outside of the US to par or thereabouts for the year, giving back most or more than the gains from the Q1 run-up. At the same time, long-term Treasuries have rallied back into the green for the year. On a 12 month basis, equity markets outside of the US are down 10-20%, while long Treasuries are showing gains of 30%. (The attached risk dash allows a quick eyeballing of recent dynamics across an array of asset classes and geographies.)

Trailing valuations in most equity markets show an earnings yield of 8-12%, against government bond yields in the risk-flight markets of the US, UK, Japan and Germany averaging less than 2%.

With all the event bogies on the risk radar – Euro-mayhem, Greek zero hour, China deceleration, fiscal cliff follies, upcoming fear-revving election rhetoric, etc. – this is not to suggest it is time to drop the hammer on equities or completely blacklist bonds. But valuations and recent market dynamics favoring apparent “safety” over growth make a statement about expectations, and therefore provide clues about the risk contained in various assets. Such an assessment suggests some dissonance between expected returns on various assets and those likely to be realized looking out over a time horizon transcending tomorrow’s trading session.

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LATTICE STRATEGIES GLOBAL RISK DASH: Time Window Total Returns (%) & Trends/Momentum
Friday, May 18, 2012

EQUITY REGIONS	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
United States	(4.54)	(7.48)	(5.15)	3.74	(2.65)	15.31
Europe	(4.99)	(6.41)	(8.43)	(0.56)	(10.52)	8.35
Japan	(4.23)	(9.80)	(10.58)	0.79	(11.80)	(4.88)
Developed Asia-Pacific	(5.87)	(10.53)	(10.90)	1.19	(16.43)	12.48
Emerging Markets	(6.50)	(11.37)	(13.93)	(0.14)	(18.44)	10.22

GLOBAL EQUITY SECTORS	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Consumer Discretionary	(5.46)	(8.84)	(5.81)	7.07	(4.11)	16.49
Consumer Staples	(2.67)	(4.40)	(0.15)	2.49	2.35	16.49
Energy	(5.17)	(10.82)	(14.54)	(7.94)	(13.66)	7.53
Financials	(7.04)	(11.48)	(11.77)	1.66	(20.56)	3.09
Healthcare	(3.02)	(4.67)	(0.88)	2.97	(0.53)	14.26
Industrials	(4.67)	(8.98)	(9.71)	0.21	(13.54)	13.23
Materials	(6.98)	(13.12)	(15.75)	(5.25)	(24.19)	8.77
Technology	(5.38)	(9.89)	(5.95)	6.48	0.77	15.72
Telecom	(2.63)	(2.97)	(0.93)	(0.47)	(4.28)	12.08
Utilities	(2.88)	(3.61)	(3.19)	(2.39)	(8.58)	5.09

EQUITY RISK FACTORS	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Large v. Small Cap	0.92	1.06	4.73	2.61	6.98	(1.01)
Growth v. Value	(0.42)	(0.84)	1.16	3.25	5.22	3.76
Domestic v. Intl Developed	1.64	2.76	6.39	5.80	16.17	8.45
Developed v. Emerging	1.47	2.77	6.44	1.14	8.87	0.73
Momentum v. Cap-Weight	(1.88)	(1.23)	2.21	3.27	(0.81)	7.47
Quality v. Cap-Weight	0.62	1.58	1.44	0.04	2.37	3.90
Fundamental v. Cap-Weight	(0.04)	(0.08)	(1.35)	(2.22)	(3.37)	1.09

FIXED INCOME/DURATION	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
US LT Treasuries	3.93	6.12	7.32	3.43	34.77	13.03
MBS	0.09	0.36	0.92	1.31	4.97	5.18
International Sovereign	(1.32)	(2.56)	(1.21)	0.67	0.42	5.38
Emerging Sovereign	(2.69)	(3.08)	0.10	2.12	6.34	11.36
US TIPS	0.95	1.27	2.49	3.93	12.95	9.72
International TIPS	(1.70)	(3.11)	(1.18)	3.63	0.20	8.33

FIXED INCOME/CREDIT	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
US IG Corporates	(1.18)	(0.53)	0.56	2.89	8.68	11.15
Intl IG Corporates	(2.04)	(3.67)	(0.66)	3.36	(2.63)	
US High-Yield	(3.55)	(3.43)	(1.59)	0.22	1.69	14.20
Floating Rate Loans	(0.51)	(0.24)	1.38	3.72	3.23	11.98
National Munis	(0.10)	0.55	0.81	2.46	7.22	

HYBRID YIELD	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Convertibles	(2.85)	(5.10)	(6.25)	2.92	(8.50)	
Preferred Stock	(3.57)	(3.96)	(2.73)	6.39	(1.29)	15.72
Carry Trade	(2.53)	(5.08)	(6.81)	(0.93)	(3.45)	4.01

REAL ASSETS	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
US Real Estate	(6.53)	(6.41)	(1.17)	6.38	1.49	26.87
Intl Real Estate	(4.75)	(7.84)	(4.53)	8.51	(10.26)	17.36
Natural Resources	0.93	(3.74)	(6.67)	(3.30)	(16.46)	4.41
Global Infrastructure	(4.51)	(6.87)	(5.46)	(0.36)	(7.91)	11.55
Energy Transport	(4.96)	(7.85)	(9.99)	(3.93)	10.62	29.20
Timber/Forest Products	(7.59)	(11.63)	(15.11)	(3.57)	(27.15)	6.61

COMMODITIES	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Broad-Based	0.93	(3.74)	(6.67)	(3.30)	(16.46)	4.41
Energy	(0.51)	(3.49)	(10.95)	(9.44)	(24.00)	(10.12)
Base Metals	(2.37)	(6.78)	(6.97)	(1.10)	(21.11)	10.06
Precious Metals	0.25	(5.05)	(9.32)	1.50	(0.63)	21.58
Agriculturals	4.26	(2.89)	(0.47)	(0.15)	(16.04)	7.44
Oil	(5.38)	(13.91)	(14.27)	(10.31)	(13.60)	1.62

CURRENCIES	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Gold	0.50	(4.34)	(7.89)	1.29	5.74	19.11
US Dollar	1.28	3.19	2.47	1.39	7.71	(0.56)
Yen	(1.14)	(1.00)	(0.67)	2.74	(3.26)	(6.38)
Yuan	0.28	0.78	0.46	0.53	(2.71)	(2.50)
Euro	(1.06)	(3.47)	(2.74)	(1.40)	(10.32)	(1.96)
GBP	(1.57)	(2.57)	(0.06)	1.76	(2.17)	1.01
Swiss Franc	1.05	3.55	2.14	0.17	6.66	(5.52)
Australia	(1.76)	(5.61)	(8.05)	(3.58)	(7.39)	8.73
Emerging	(2.50)	(4.69)	(5.10)	1.12	(8.79)	

LATTICE LIQUID ALTERNATIVE INDICES	Week 5/18/12	MTD	L3M	YTD	L12M	L36M
Arbitrage	(1.13)	(1.77)	(1.76)	(0.29)	(0.57)	5.48
GTAA/Relative Value	(0.59)	(0.71)	(2.02)	(0.88)	(3.69)	3.55
Equity Market-Neutral	(1.15)	(2.11)	(2.03)	(0.38)	(1.29)	2.57
Multi-Strategy	(1.40)	(2.06)	(1.94)	0.34	(3.57)	4.17
Fixed-Income Rel Value	(0.59)	(0.37)	0.54	3.33	(0.14)	6.51
Managed Futures	(0.29)	(1.20)	(2.70)	(4.66)	(10.28)	(5.22)
Long/Short Equity	(2.20)	(3.78)	(3.25)	0.77	(3.66)	6.39

LATTICE STRATEGIES GLOBAL RISK DASH: Risk & Yields
Friday, May 18, 2012

Lattice STRATEGIES

EQUITY REGIONS	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
United States	12.8%	10.7%	14.2%	-18.7%	2.1%
Europe	16.3%	14.3%	18.5%	-14.5%	4.2%
Japan	17.5%	10.0%	13.2%	-9.7%	2.7%
Developed Asia-Pacific	14.7%	13.5%	19.5%	-15.1%	3.3%
Emerging Markets	14.2%	14.0%	20.4%	-17.0%	3.0%

GLOBAL EQUITY SECTORS	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
Consumer Discretionary	16.8%	11.1%	13.9%	-21.4%	1.5%
Consumer Staples	9.9%	8.1%	12.0%	-4.9%	2.0%
Energy	16.4%	14.1%	19.0%	-1.7%	3.3%
Finanicals	17.3%	16.6%	21.9%	-20.5%	3.5%
Healthcare	10.1%	7.7%	10.5%	-8.8%	2.9%
Industrials	14.8%	13.2%	16.9%	-18.3%	2.9%
Materials	18.8%	15.9%	20.5%	-16.0%	3.0%
Technology	14.0%	10.9%	13.8%	-22.9%	1.4%
Telecom	10.8%	9.6%	13.5%	-11.4%	96.7%
Utilities	10.0%	9.5%	12.2%	-13.9%	4.9%

EQUITY RISK FACTORS	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
Large v. Small Cap	8.0%	4.9%	6.2%	2.0%	0.4%
Growth v. Value	5.2%	2.4%	3.2%	-2.4%	-1.1%
Domestic v. Intl Developed	9.6%	3.3%	4.3%	-4.6%	-1.7%
Developed v. Emerging	10.7%	4.9%	6.1%	-2.1%	-0.1%
Momentum v. Cap-Weight	6.8%	4.0%	5.3%	-2.3%	-2.0%
Quality v. Cap-Weight	3.5%	4.1%	5.1%	-3.6%	-0.4%
Fundamental v. Cap-Weight	2.1%	2.4%	3.2%	1.0%	-0.1%

FIXED INCOME/DURATION	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
US LT Treasuries	14.5%	6.7%	8.7%	2.8%	2.7%
MBS	1.7%	1.0%	1.4%	1.5%	1.9%
International Sovereign	6.0%	5.2%	7.0%	2.3%	1.9%
Emerging Sovereign	5.3%	5.0%	7.1%	-3.5%	4.7%
US TIPS	4.5%	3.0%	4.2%	-1.6%	4.2%
International TIPS	6.3%	6.8%	9.7%	-4.2%	0.0%

FIXED-INCOME/CREDIT	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
US IG Corporates	5.1%	3.5%	5.2%	-2.2%	4.0%
Intl IG Corporates	8.0%	5.2%	7.0%	-5.8%	0.0%
US High-Yield	7.0%	7.2%	10.8%	-7.6%	7.0%
Floating Rate Loans	1.3%	4.6%	7.1%	-5.1%	4.1%
National Munis	2.8%	1.9%	3.0%	-0.7%	2.2%

HYBRID YIELD	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
Convertibles	8.5%	7.9%	11.2%	-16.2%	2.9%
Preferred Stock	5.7%	12.7%	17.7%	-4.7%	5.7%
Carry Trade	8.1%	6.4%	8.4%	-6.3%	

REAL ASSETS	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event	Yield
US Real Estate	14.4%	16.5%	23.0%	-23.8%	3.3%
Intl Real Estate	12.6%	13.8%	19.1%	-14.4%	2.8%
Natural Resources	18.8%	15.0%	20.0%	-7.9%	1.0%
Global Infrastructure	11.9%	11.7%	15.8%	-16.6%	5.1%
Energy Transport	11.9%	11.7%	18.4%	-6.7%	6.2%
Timber/Forest Products	17.6%	16.5%	22.7%	-17.3%	2.4%

COMMODITIES	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event
Broad-Based	12.9%	11.5%	15.6%	1.3%
Energy	18.0%	14.1%	19.0%	-1.7%
Base Metals	19.1%	15.4%	20.7%	-9.3%
Precious Metals	22.7%	11.0%	15.2%	0.1%
Agriculturals	16.2%	12.3%	16.9%	-9.1%
Oil	21.6%	20.6%	28.8%	6.0%

CURRENCIES	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event
Gold	19.0%	9.2%	13.6%	1.8%
US Dollar	6.3%	4.7%	5.8%	0.5%
Yen	9.3%	4.8%	5.8%	-2.0%
Yuan	2.1%	0.9%	1.3%	-0.1%
Euro	7.8%	7.1%	8.9%	-0.3%
GBP	6.7%	6.1%	8.4%	-2.1%
Swiss Franc	8.3%	6.4%	7.9%	-0.7%
Australia	9.0%	9.0%	12.8%	-1.3%
Emerging	7.2%	5.3%	7.0%	-3.3%

LATTICE LIQUID ALTERNATIVE INDICES	L3M Volatility	1M VaR (95%)	1M ETL	Avg Stress Event
Arbitrage	2.3%	3.1%	4.8%	-4.4%
GTAA/Relative Value	3.4%	2.9%	4.0%	-1.1%
Equity Market-Neutral	2.7%	2.3%	3.2%	-3.0%
Multi-Strategy	3.0%	3.8%	5.2%	-4.1%
Fixed-Income Rel Value	1.2%	2.0%	3.3%	-2.0%
Managed Futures	5.0%	4.4%	6.3%	0.2%
Long/Short Equity	5.6%	3.7%	5.0%	-4.6%