Taking a hard look at asset allocation and manager selection

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A Few Taglines in our Industry

- “Markets are efficient”
- “Markets are not efficient””
- “Asset allocation determine 90% of investor returns”
- “Market timing is futile”
- “Be fearful when others are greedy, and be greedy when others are fearful”
- “Active management is dead”
- “Past performance is not indicative of future performance”

The Media Loves Headlines

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- "Glow in the dark cats may be vital in AIDS research," *the Daily Mirror*

The not so Modern Portfolio Theory

- Modern/Markowitz Portfolio Theory was first introduced by Harry Markowitz in 1952
- The theory is based on several assumptions including:
    - Asset returns are normally distributed and volatility is constant
    - Investors are rational (have a symmetrical view of downside risk and upside gain)

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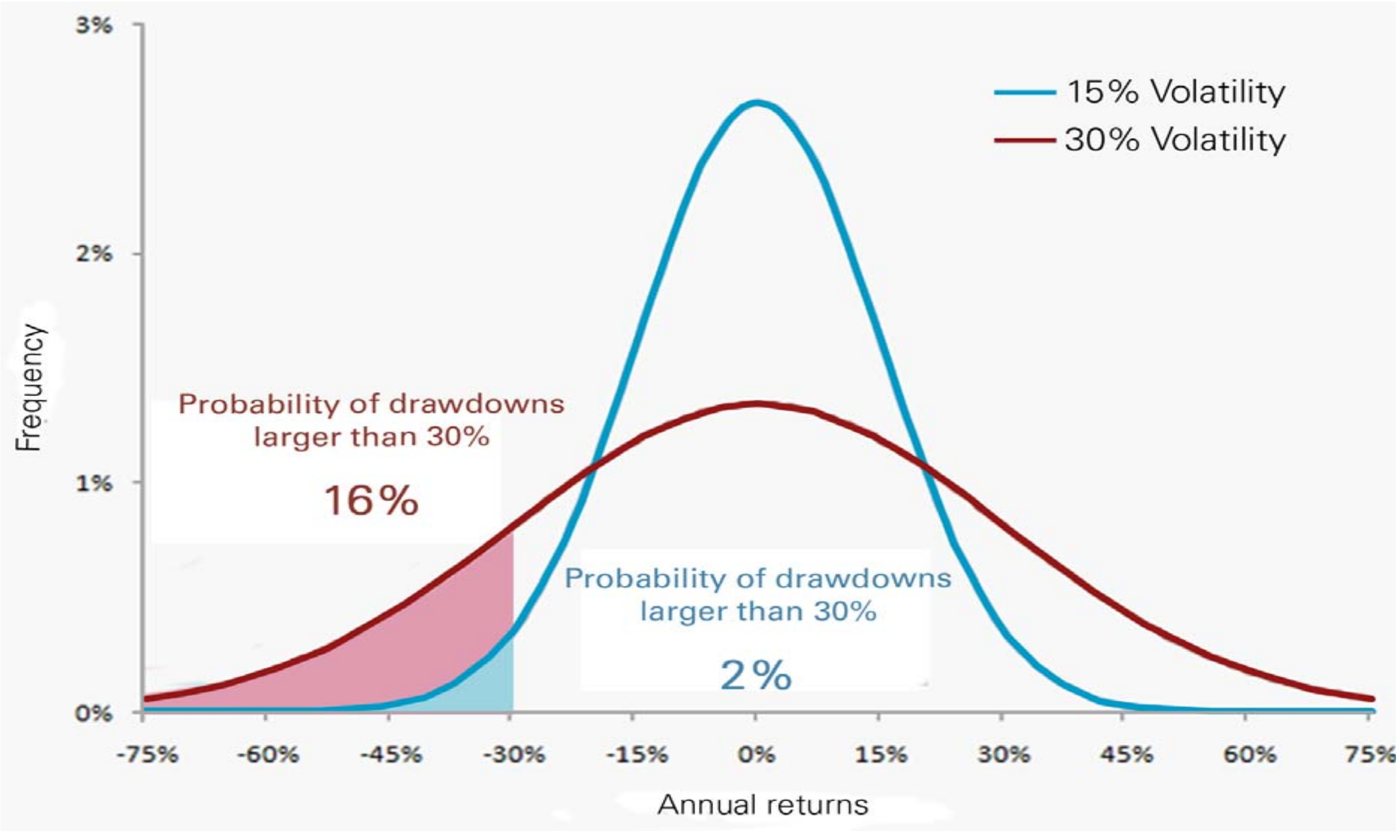
"I never—at any time!—assumed that return distributions are Gaussian."

"Nor did I ever assume that the investor's utility function is quadratic."

Portfolio Theory: As I Still See It, 2010, Harry Markowitz

What are the Implications of changing volatility on tail risk?



Does Asset Allocation determine 90% of Investor Returns?

- In a 1986 study published by Brinson, Hood, and Beebower, they contended that 90% of a portfolio's **variability of returns across time** is explained by the asset allocation policy
- This statistic is often misinterpreted and does not address the following:
  - How much **variation in returns among funds** is explained by the asset allocation policy?
  - What portion of the **return level** is explained by the asset allocation policy?

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- **40% of the variability in returns among funds** is explained by the asset allocation policy
- **100% of the return level is explained** by the asset allocation policy

Is Active Management Dead?

- On average actively managed fund underperform their benchmarks and index funds after fees
- Research from Vanguard shows that:

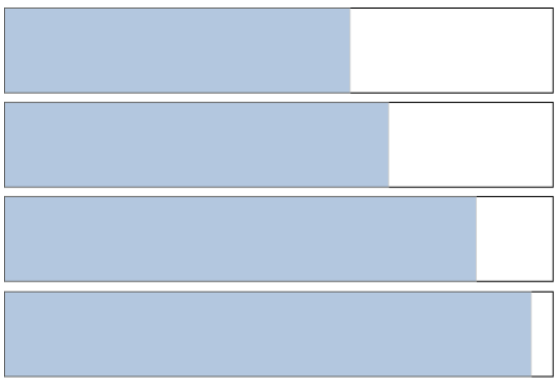
# Funds in the Portfolio	5 Years	10 Years	20 Years
1 Fund	33%	29%	15%
2 Funds	17%	9%	3%
5 Funds	14%	8%	2%
10 Funds	9%	6%	1%

Is Active Management Dead?

- Fund investors do a good job selecting funds if you look at the asset-weighted returns data:
  - Out of Morningstar's 81 categories of mutual funds**, active managers beat their benchmarks in 65 categories** if you asset-weight the return data
- Active management appears to work better in Small-cap and less developed markets

Does Qualitative Manager Selection Lead to Better Outcomes?

Fund Analyst Picks exceed 5-Year Category Average**:**



63% Equity Funds

70% Taxable Bond

86% Non-Taxable Bond

96% Balanced

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% of US Analyst Picks in the Top Quartile as of August 2011
(weighted average results of picks after they were added to the Picks list)

Asset Group	5 year	3 year	3 Month
Balanced	68.22	67.3	23.53
International Stock	43.33	36.83	8.82
Municipal Bond	38.31	38.08	22.73
Taxable Bond	44.1	36.31	31.76
U.S. Stock	32.76	37.58	36.36

Is Past Performance not Indicative of Future Performance?

- Morningstar's Risk-Adjusted Returns take's into account investor's utility function and does not assume normality
- Star Rating based on Morningstar's Risk-adjusted Returns:
  - Top10% (5 stars), next 22.5% (4 stars), next 35% (3-stars), (2 stars), next 22.5% (2 stars)and bottom 10% (1 star)

Aggregate results (ex-post):

- 5 star funds beat lower star funds
- 5 star funds beat their benchmarks

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- Markowitz was not wrong he was misinterpreted

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- “Eating chocolate is not exercise” *National Health Services*

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