J.P. Morgan
Asset Management
Global Insurance Solutions

Asset Allocation – Lessons from America

September 13, 2013

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Agenda

- US Investment Trends and Lessons Learnt
- US Industry Peer Analysis: Stock vs. Mutual Insurers
- US Industry Comparison: Stock vs. Mutual Insurers
- UK Mutual Market and Where Insurers are Investing

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Executive Summary

US Investment Trends and Lessons Learnt

- Lessons learnt by US insurers during the credit crisis
- Current economic issues affect US insurers
- Philosophy for Investment Risk
- Prolonged low interest rate environment impacting insurers profitability, growth, capital needs and asset allocation
- Bank deleveraging creating opportunities for insurers to step into long-term lending

US Mutual Peer Analysis

- Detailed peer analysis of largest US life mutuals and stock companies
- Trends in investment behaviour and the link between asset allocation and capitalisation
- Breakdown of asset allocation trends between company size
- Preferences of mutuals versus stock companies for return generating assets

UK Mutual Market and Where Insurers are Investing

- Overview of UK mutual asset allocation
- Market dynamics forcing insurers to evaluate new sources of risk / return
- A great rotation from bonds into equities is unlikely in 2013, however, allocations to real / risk assets can provide attractive opportunities in the prolonged market recovery
- Liabilities of insurers continue to provide a structural advantage in providing credit:
  - Opportunities exist across corporate credit, emerging markets and liquid loans

Opinions, estimates, forecasts, projections and statements of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. There can be no guarantee they will be met.

US Investment Trends and Lessons Learnt

US Investment Trends - Lessons Learnt From The Credit Crisis

- Some insurers faired badly during the crisis, e.g. some variable annuity writers participated in the TARP program bailout
    - Insurers are now taking greater care of variable annuity hedging programmes, and interest rate guarantees are now being set at lower levels
- During and after the crisis, some sophisticated investors understood the mechanics of distressed assets such as non-agency mortgage backed securities (MBS)
    - This provided opportunities to buy these securities at depressed prices, when understanding the underlying risk and credit enhancements
- Some investors sold non-agency MBS in a falling market at substantial discount. Most of these securities recovered in subsequent years

  Don’t sell in a falling market when you don’t have to
- Insurers can use their appetite for less liquid assets to purchase underpriced securities during market dislocations
- Is CIO empowered to make tactical decisions to buy e.g. MBS without going to the board? These types of opportunities can only be exploited if the investment function is nimble enough to make decisions and take opportunities when the time is right
- Correlations increase significantly in a tail event - modelled diversification is usually overstated
    - Stress testing is a key component of strategic asset allocation

US Investment Trends – Current Issues

Current Economic Issues

- US Fed tapering is a key economic issue
  - Recovery in US has been quicker than Europe
  - Forward guidance approach utilised to prescribe monetary policy based on unemployment data (> 6.5% unemployment = no change in federal fund rate)
  - However, recovery has reached level where Quantitative Easing (QE) measures may be slowly reduced
  - Bernanke will announce on 18th September after FOMC meeting whether tapering will commence
    - Tapering would mean a gradual reduction in asset purchases (MBS, treasuries) under QE programme
    - The markets have tended to be very sensitive to central bank announcements in recent years
- While we expect interest rates to rise in the short-term, we don't anticipate that rates will return to historical norms any time soon
  - In our view, a 'new normal' rate environment characterised by low interest rates is likely to persist in developed markets for years to come the result of structural trends including declining developed market growth and demographic shifts

US Investment Trends

Philosophy to Investment Risk

- Dichotomy in US industry between firms who want to take risk as yields decline, and others are highly conservative and are reluctant to alter investment strategy to improve yield and will simply take what they can get
- Philosophically are firms hard and fast to the rule that "we are insurers and this is how we make our money“? Versus those who are prepared to alter their strategy to improve yield?
- If you start to see the clouds can you get out the way fast enough?

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The Volatile Economic Environment

- Insurers have an advantage over many investors in that their accounting regime and business model is supportive of buy and hold investing for fixed income assets
    - If credit selection is good, then it is not necessary to react to market volatility (noise) – managing book yield is key
    - Requires strong conviction to avoid the trap of myopic loss aversion
- Key difference between mutuals and stock companies is that mutuals do not have an extra stakeholder - no shareholders, just debt holders and policyholders
    - This is a competitive advantage in the current volatile market compared to listed insurers
    - Less concern about accounting volatility to impact decisions about investment strategy offers greater flexibility and opportunity set
- Related to this, rather than focussing on market volatility, instead look for opportunities to maximise the liquidity premium (e.g. ratio of spread to default risk) in investments

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US Investment Trends

The Low Yield Environment - How Should Insurers Position Their Portfolios?

- Insurers have a structural advantage due to their funding profile, and therefore could provide liquidity to the market
  - Recent example is the activity of insurers as the provider of loans to SME's and infrastructure projects
    - Traditional banking lenders are not able to meet demand due to higher capital requirements under Basel III and their reduced capitalisation post-criss
  - Another opportunity is driven by an unintended consequence of Dodd-Frank
    - Banks were forced to reduce the size of their balance sheets, and hence inventories of dealers are now below half their levels from 2007
    - Dealers do not have the capacity to purchase outflows of high yield bonds, this could be an opportunity for insurers to step in to buy assets when liquidity is low
    - When retail bonds get sold back to dealers, insurers can step in and buy at advantageous price - using capacity for illiquidity or being a liquidity provider when there is a market disruption

US Investment Trends

The Low Yield Environment - How Should Insurers Position Their Portfolios?

- Over past 5 years, many insurers have experienced realised and unrealised gains on their bond portfolios as the yield curve has compressed
- One concern is as QE tapering begins, and eventually QE is suspended or unwound, that the yield curve will increase and gains will be reverse
- US insurers are not crystallising their gains and wont give up the book yield on their bonds, even if it means a market to market loss
  - Prefer to keep existing income levels, and happy to reinvest at a higher yield

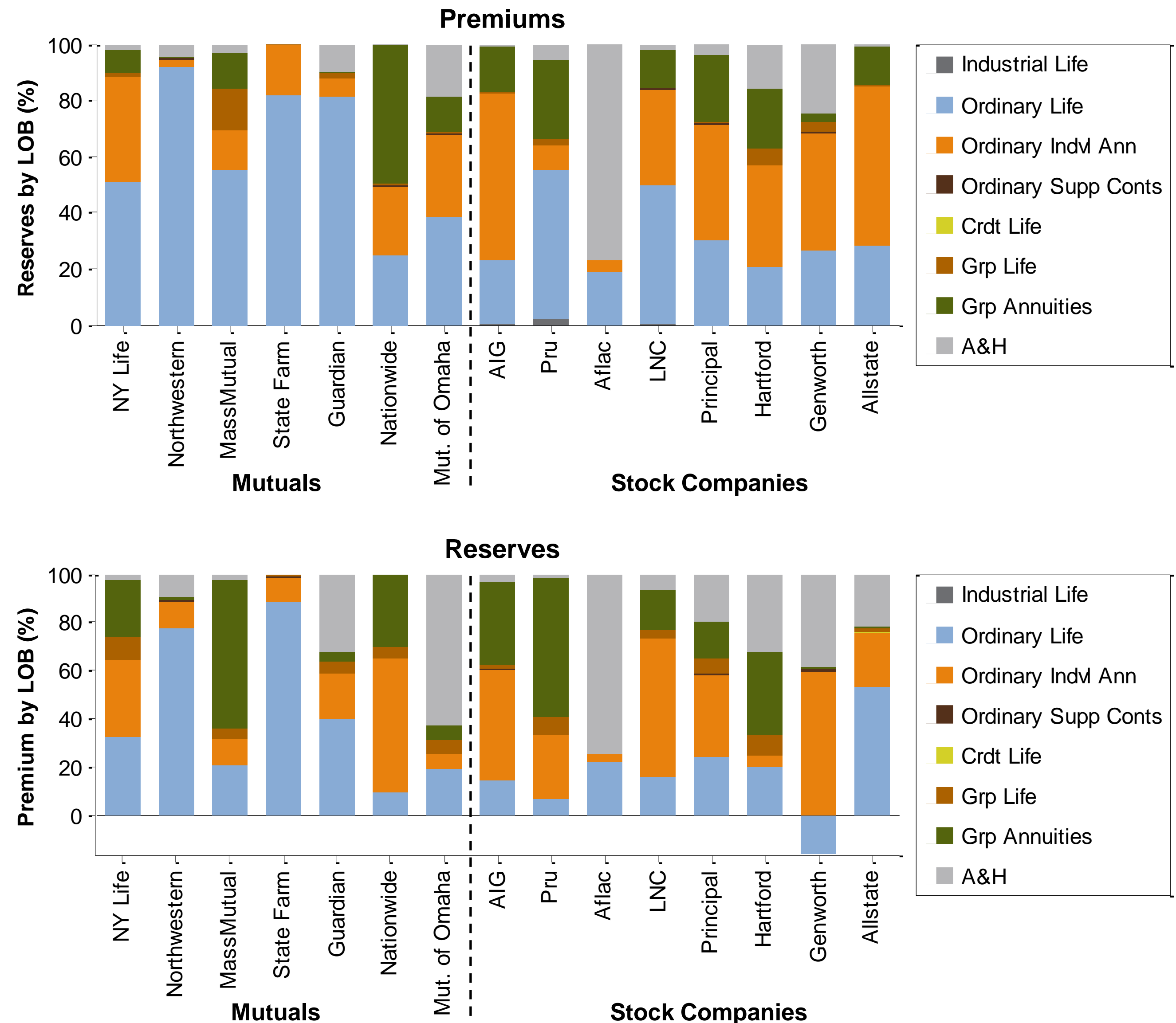
US Industry Peer Analysis: Stock vs Mutual Insurers

Peer Analysis

- Using the National Association of Insurance Commissioners (NAIC) data in the US it is possible to build up a detailed picture of how US mutual investment strategies compare to stock companies
- In this section we compare the largest mutual life insurers to their listed counterparts

Reserves and Premiums by LOB

- US mutuals differ from their UK counterparties in types of business written
- Majority of premiums support life and annuity business
- Whereas UK business is much more focussed on saving products
- US mutuals tend to write more ordinary life business than the life stock companies

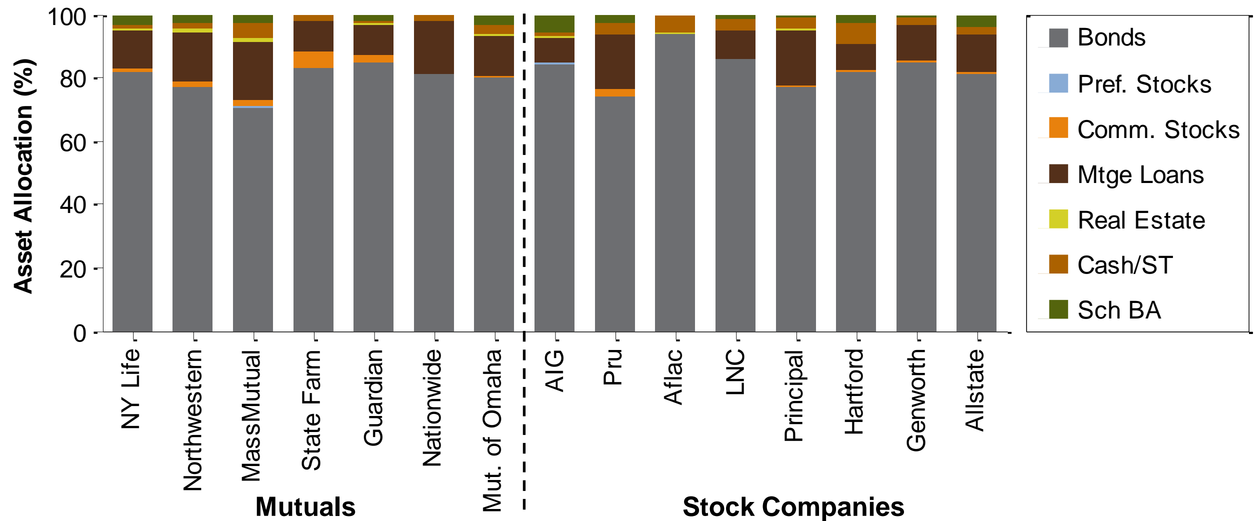


Source: SNL Financial. All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Investment Details as of YE2012

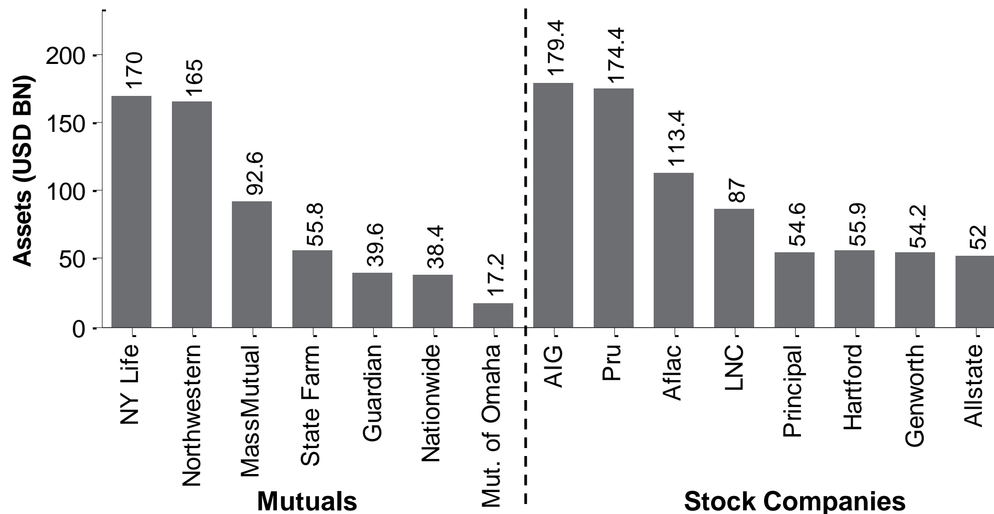
Asset Allocation

- Largely fixed income products held by US life insurers
  - Due to limited business in savings products
- Return generating assets feature significant diversification
- Schedule BA are the NAIC classification for alternative investments



Unaffiliated Investment

- Peer comparison only considers unaffiliated investments
  - It excludes policy loans, all affiliated assets, and derivatives
- AUM of largest US life mutuals and stock companies considered in the peer analysis is comparable



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

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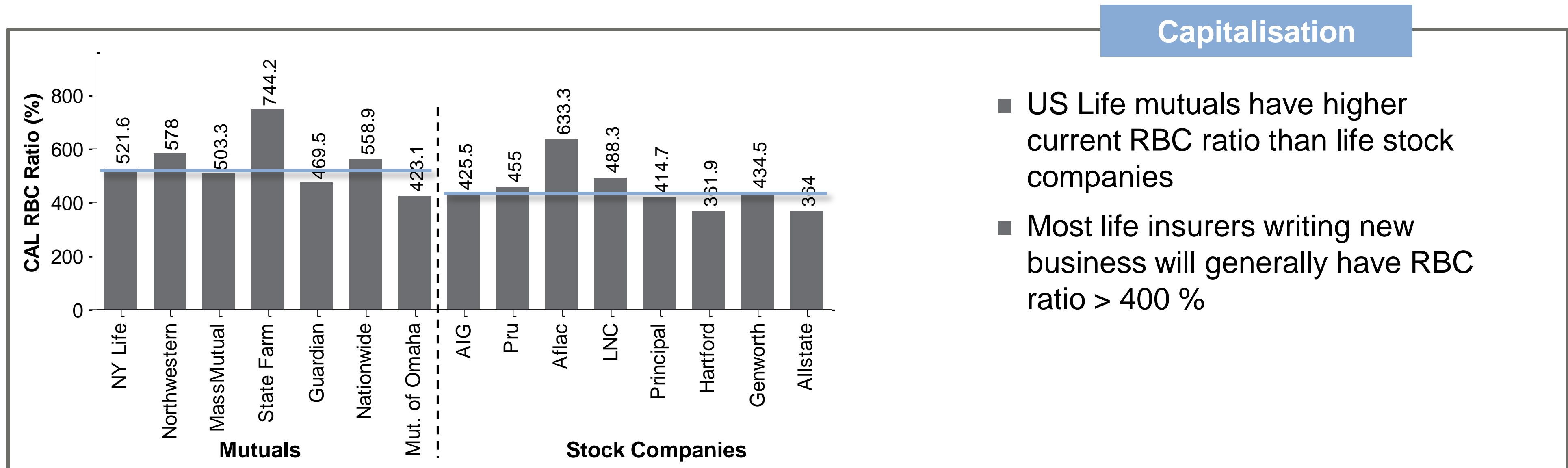
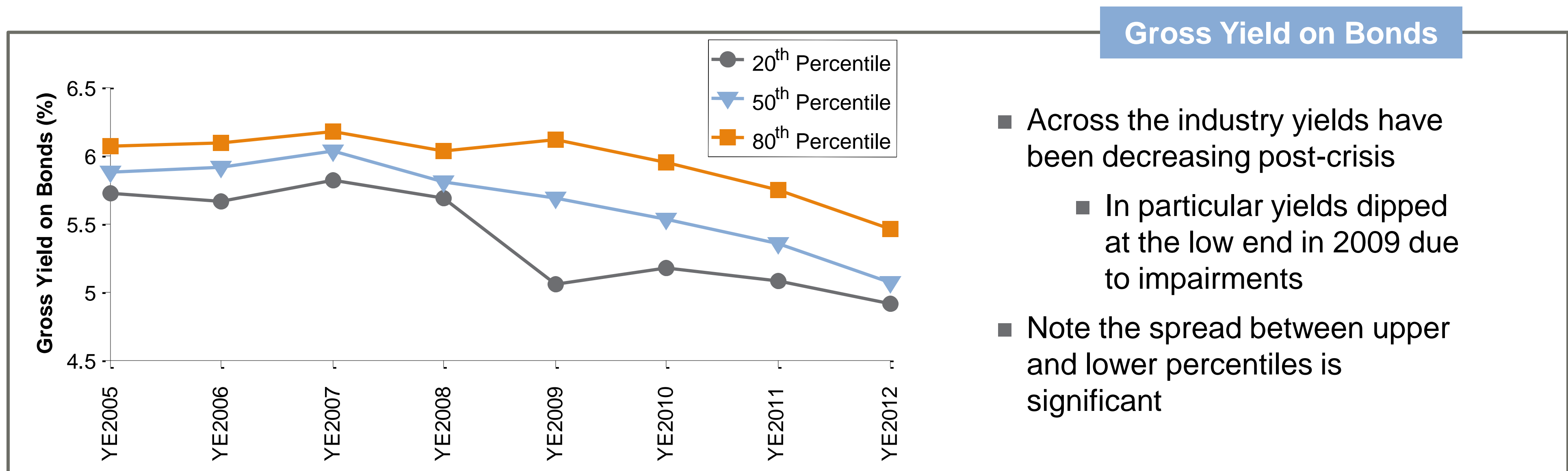
Risk Based Capital (RBC) ratio as of YE2012 and Gross Yield on Bonds Over Time



- US Life mutuals have higher current RBC ratio than life stock companies
- Most life insurers writing new business will generally have RBC ratio > 400 %

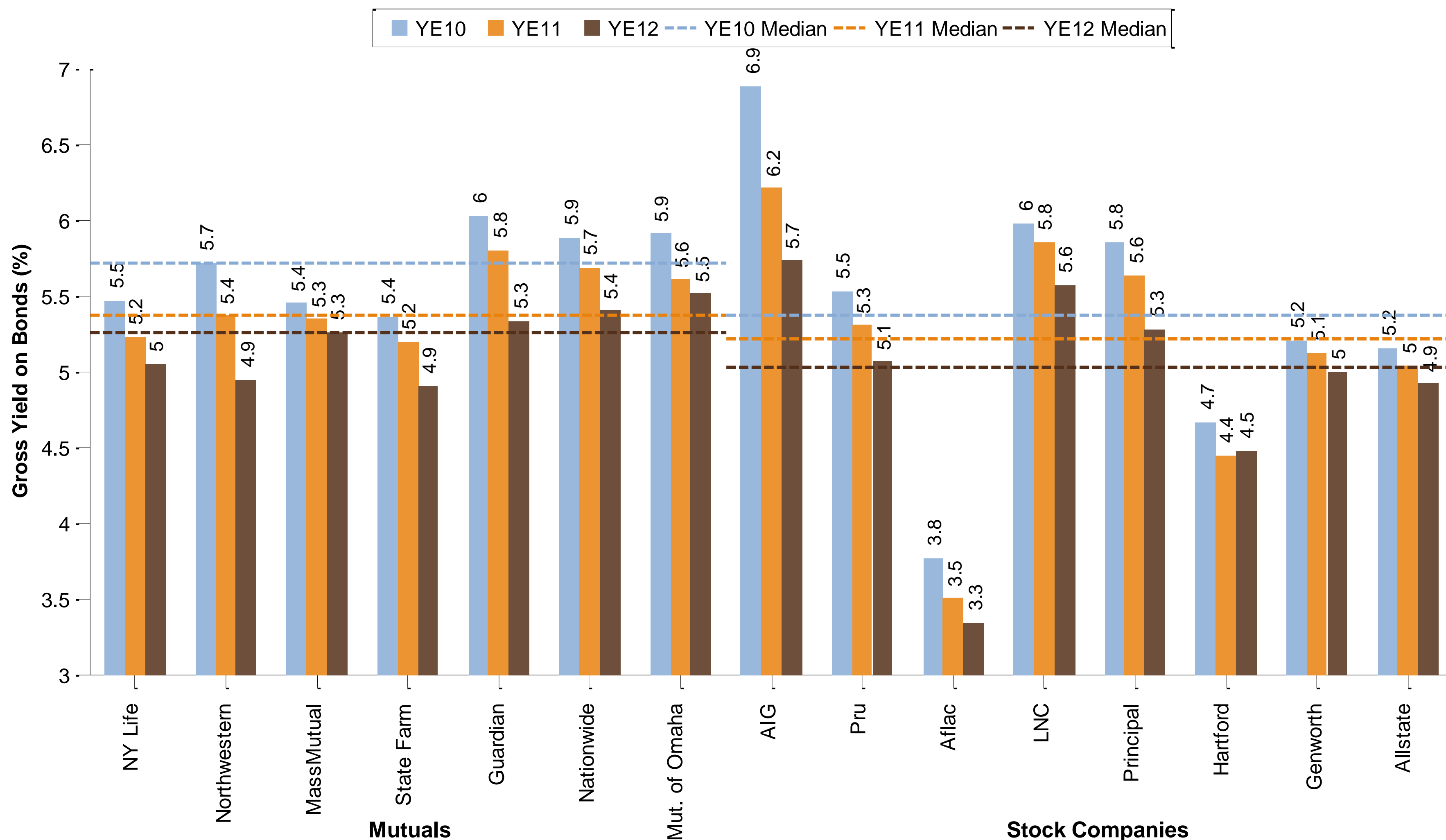


- Across the industry yields have been decreasing post-crisis
  - In particular yields dipped at the low end in 2009 due to impairments
- Note the spread between upper and lower percentiles is significant

Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Gross Yield on Bonds

- Mutuals historically have achieved higher bond yield than stock companies
  - Many factors drive this trend including risk budget, duration, and portfolio turnover (less preserves book yield)

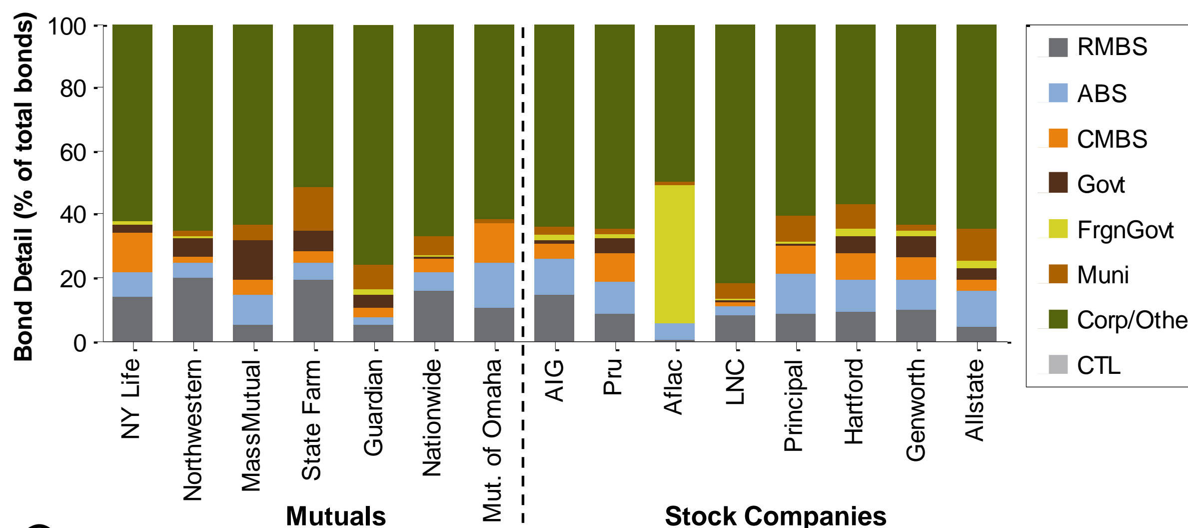


Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

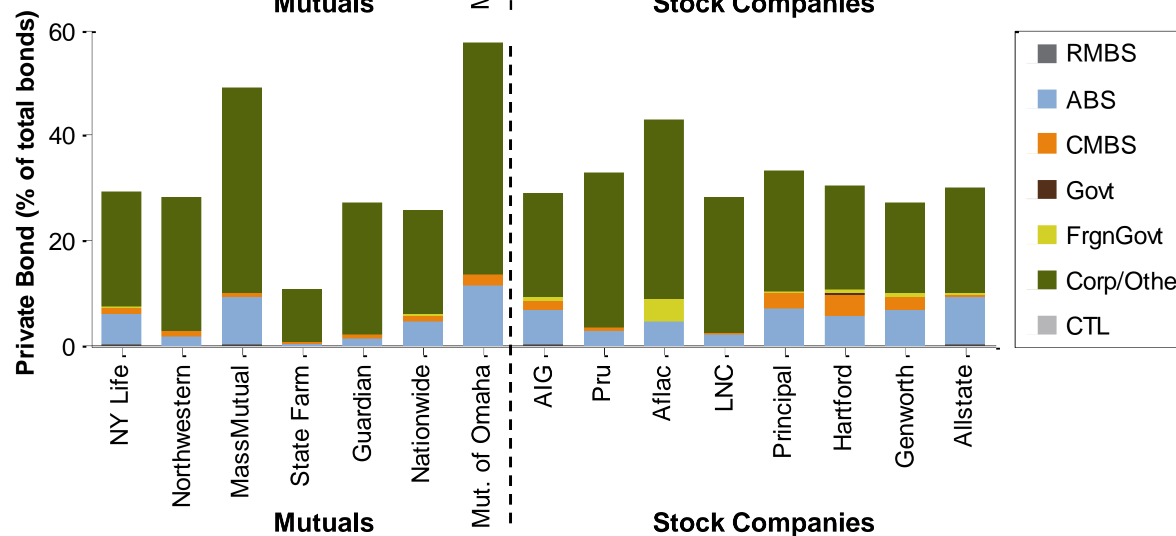
Bond Allocation (Total and Private Only) as of YE2012

- Similar bond allocation, although mutuals hold more RMBS than ABS and vice versa
- US life companies hold significant proportion of portfolio in private bonds

Bond Allocation as % of Total Bonds



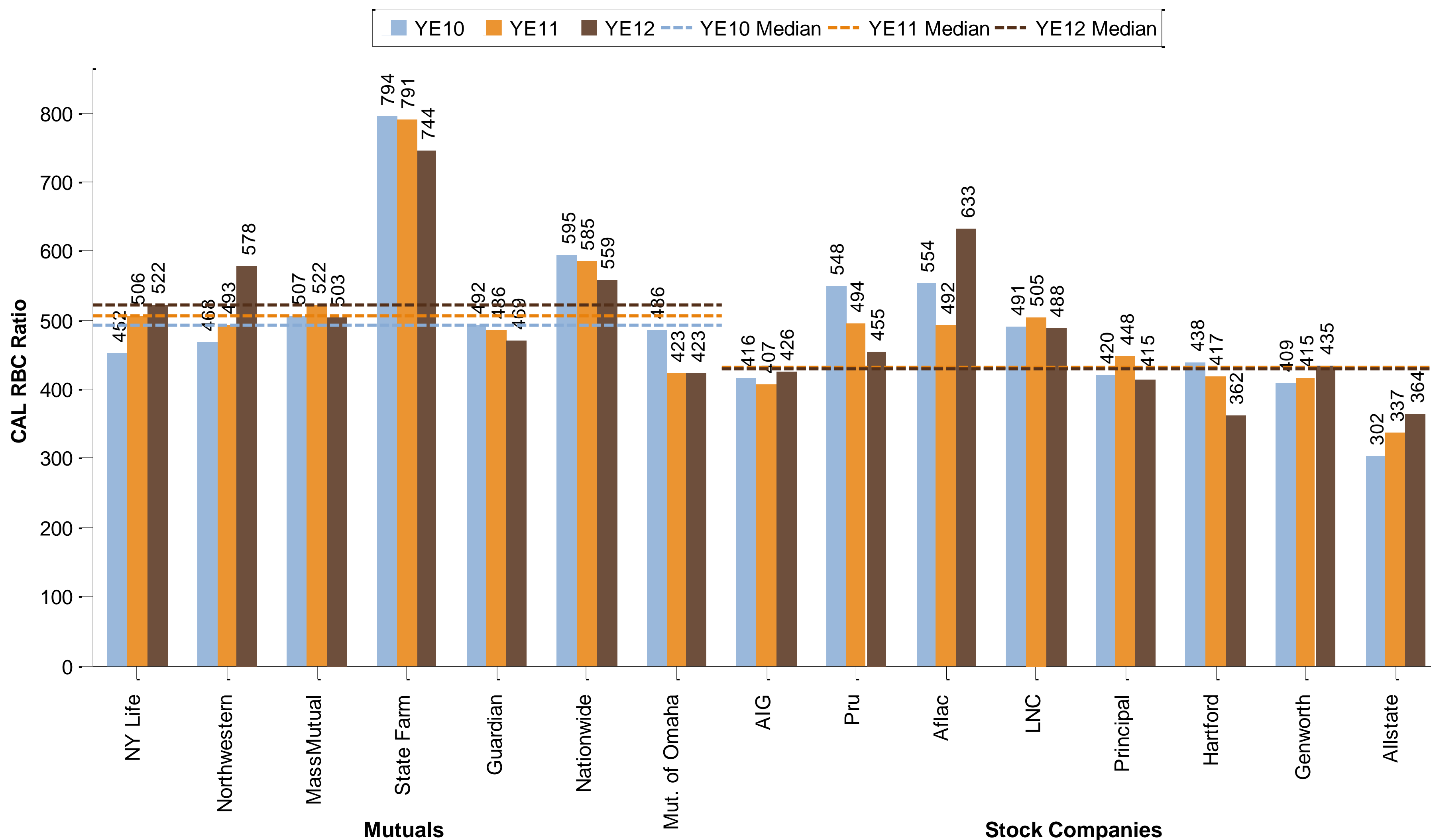
Private Bond Allocation as % of Total Bonds



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

RBC Ratio Over Time

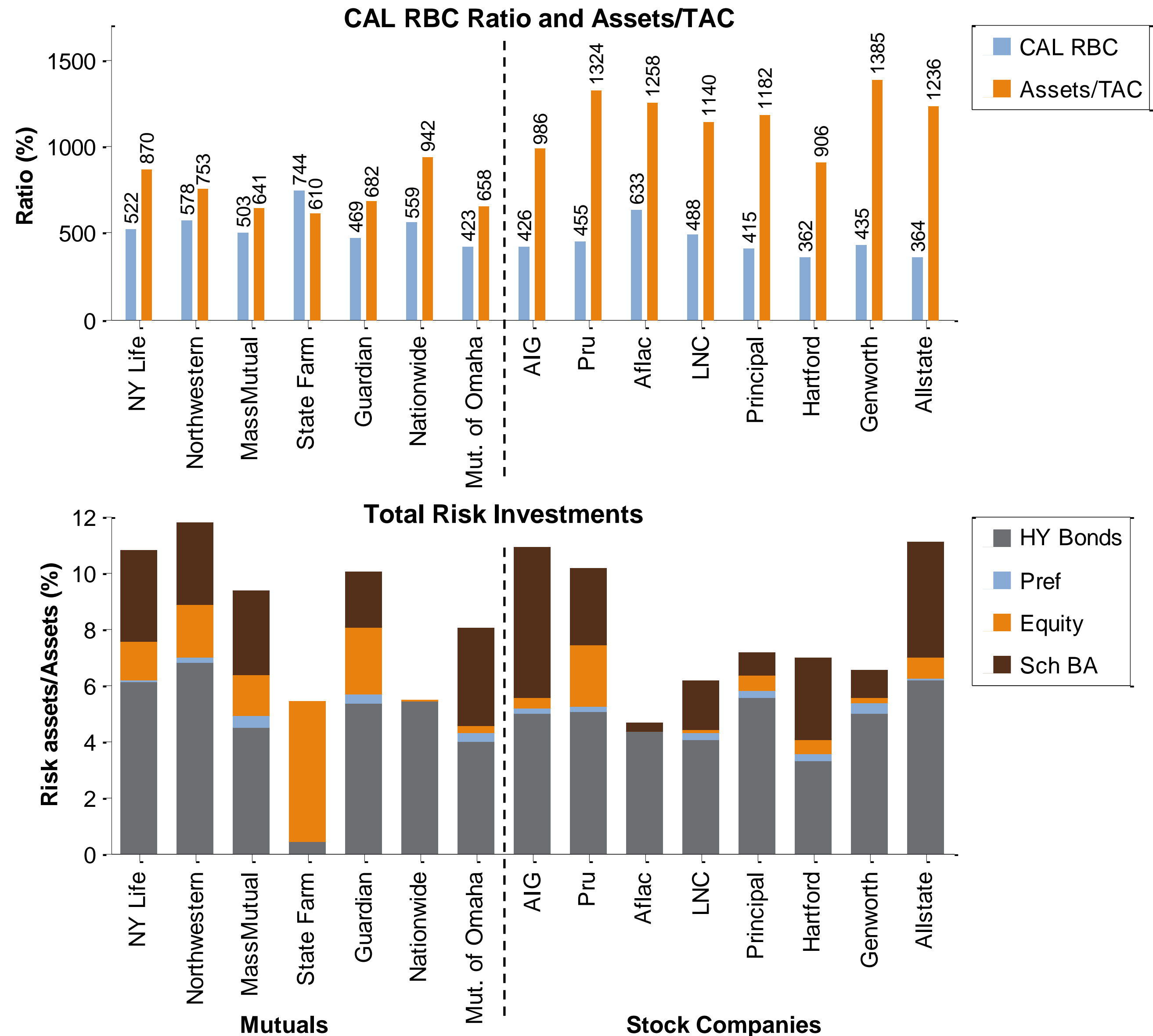
- Mutuals have higher capitalisation than stock companies
- Note that stock companies capital levels stable over last 3 years, mutuals have been strengthening (post-crisis)



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

RBC vs. Total Adjusted Capital (TAC) and Risk Asset Breakdown as of YE2012

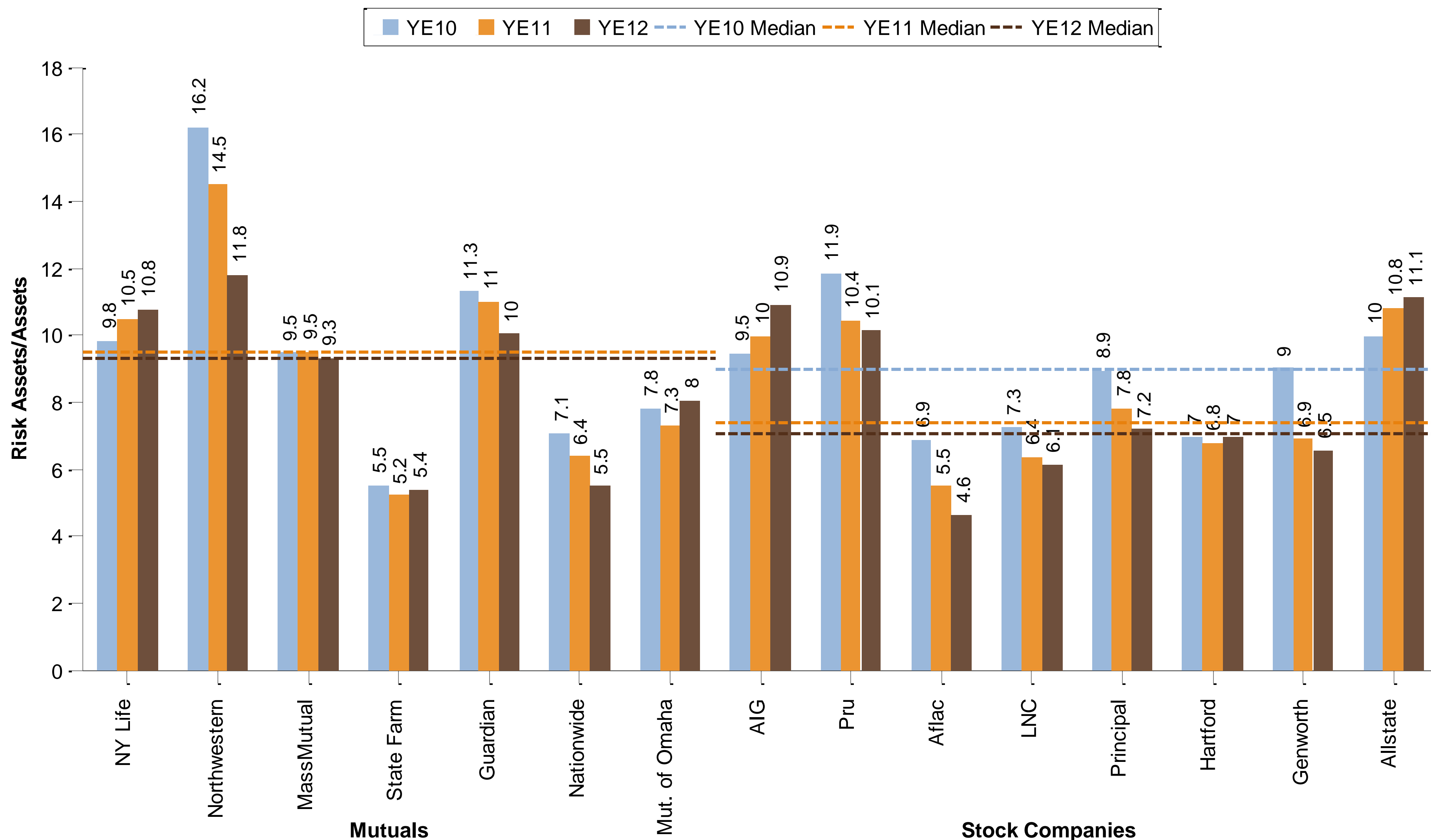
- Assets / TAC is measure of leverage
- Relationship between allocation of risky assets and capital position is mixed:
  - Lower levered mutuals take high risky allocation
  - Not as clear from RBC ratios since risky allocations results in reduced RBC ratio
- Risky assets mainly HY bonds and schedule BA
- Equities are more popular with mutuals than stock companies



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Risk Assets as a Percentage of Invested Assets

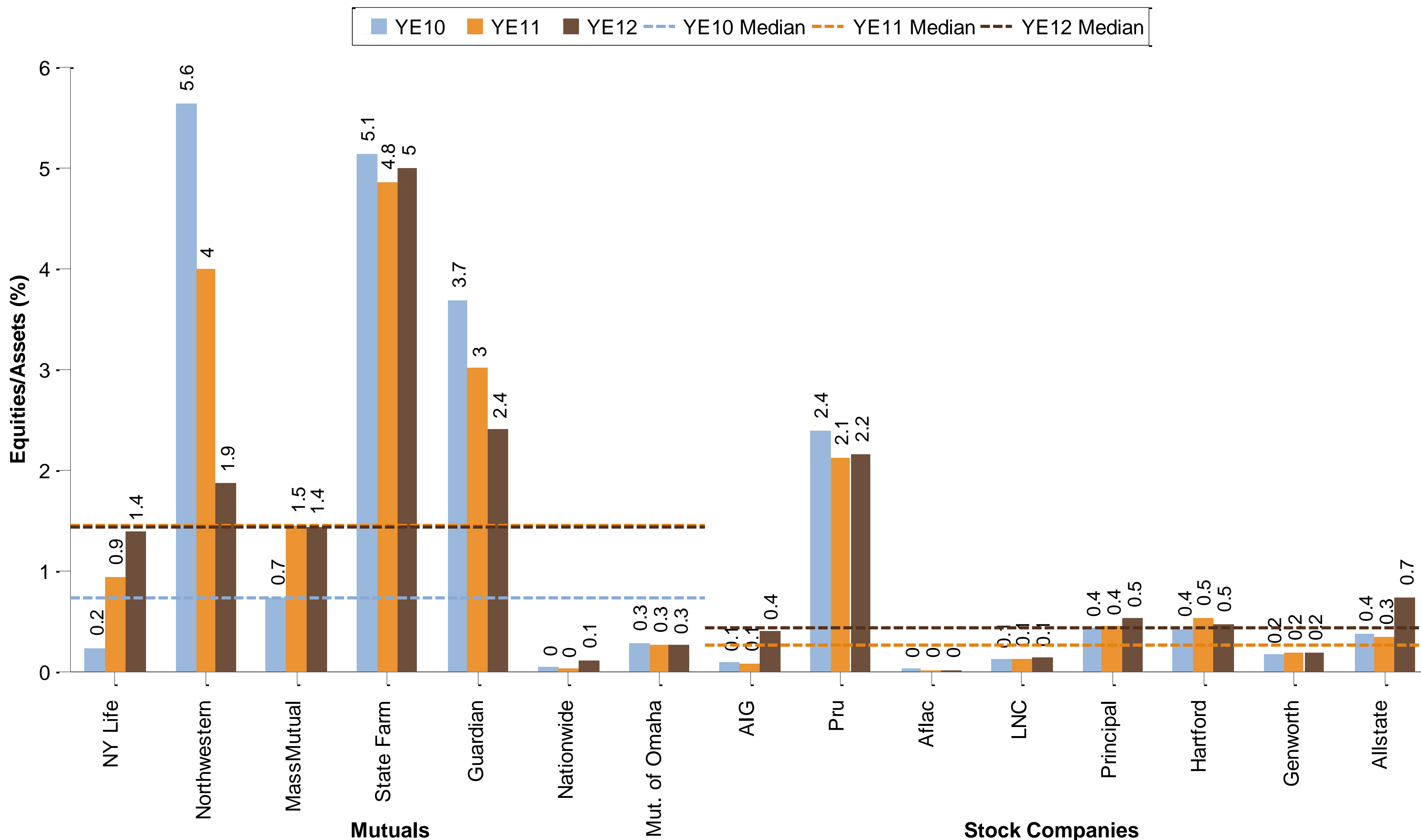
- Stock companies de-risking, whereas mutual companies maintaining risk asset allocation



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Common Stock as a Percentage of Invested Assets

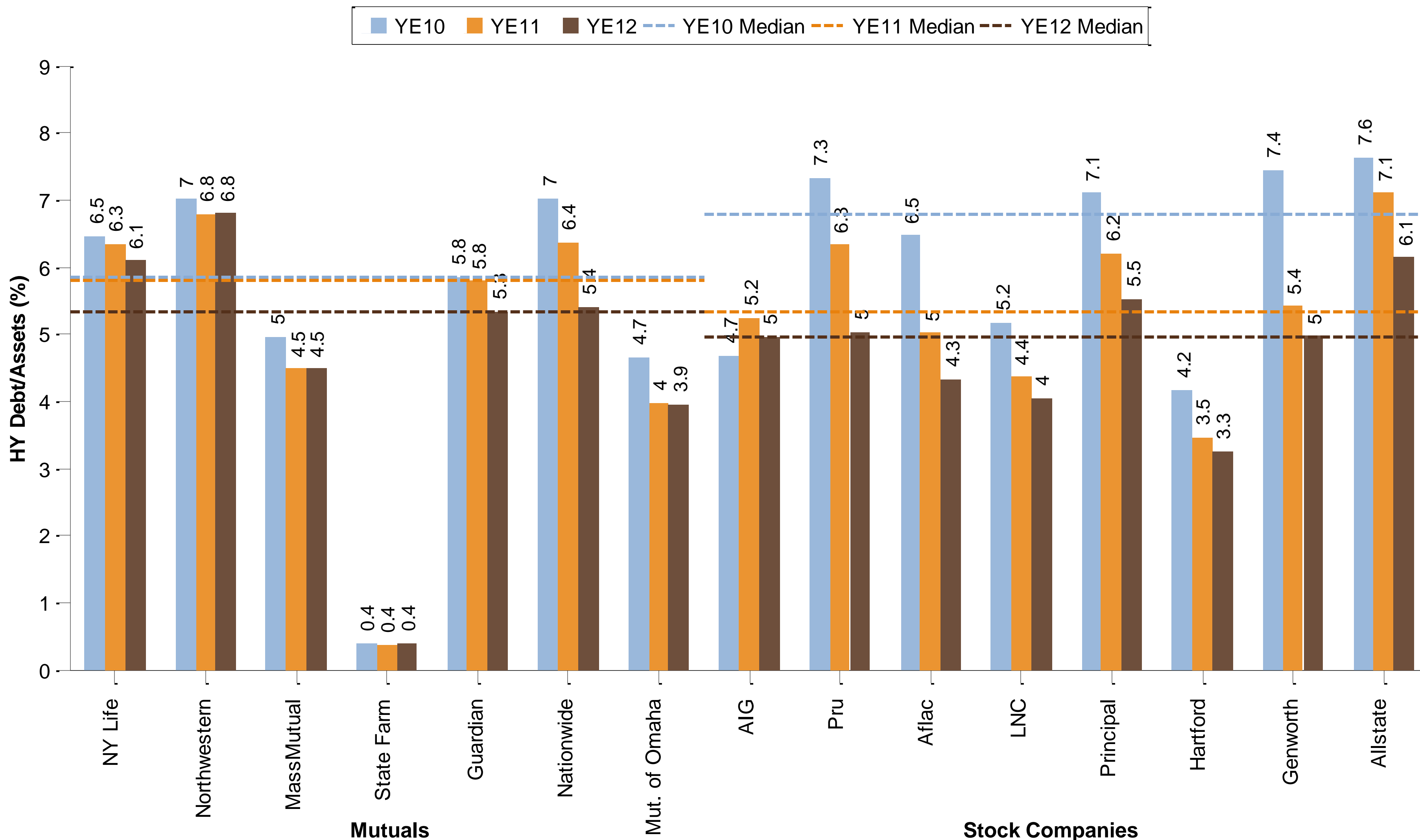
- Equity allocations increasing since 2010 and equities are more popular with mutuals



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

HY Debt (NAIC 3-6) as a Percentage of Invested Assets

- HY debt allocation reduced by stock companies to level similar to mutuals



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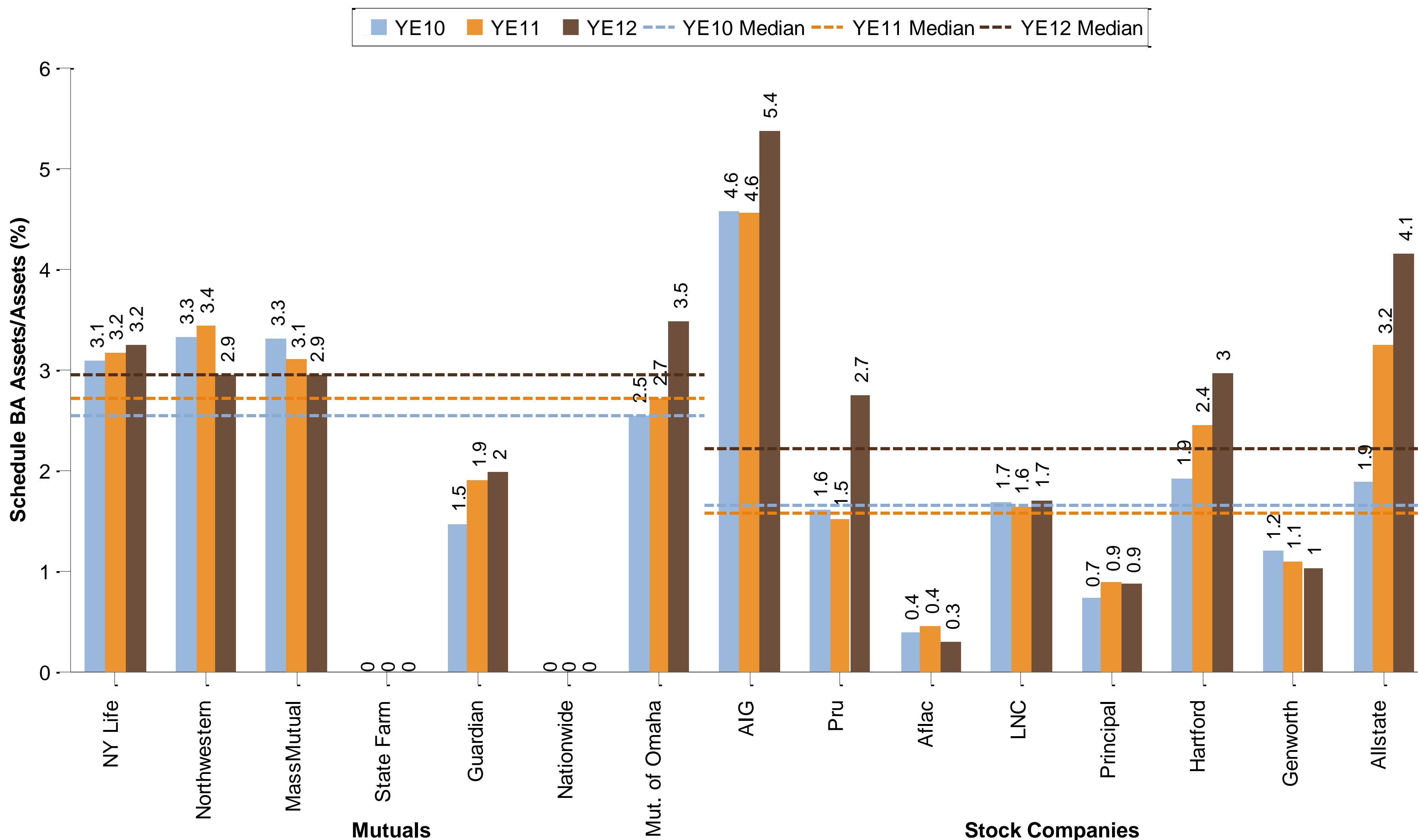
Schedule BA as a Percentage of Invested Assets

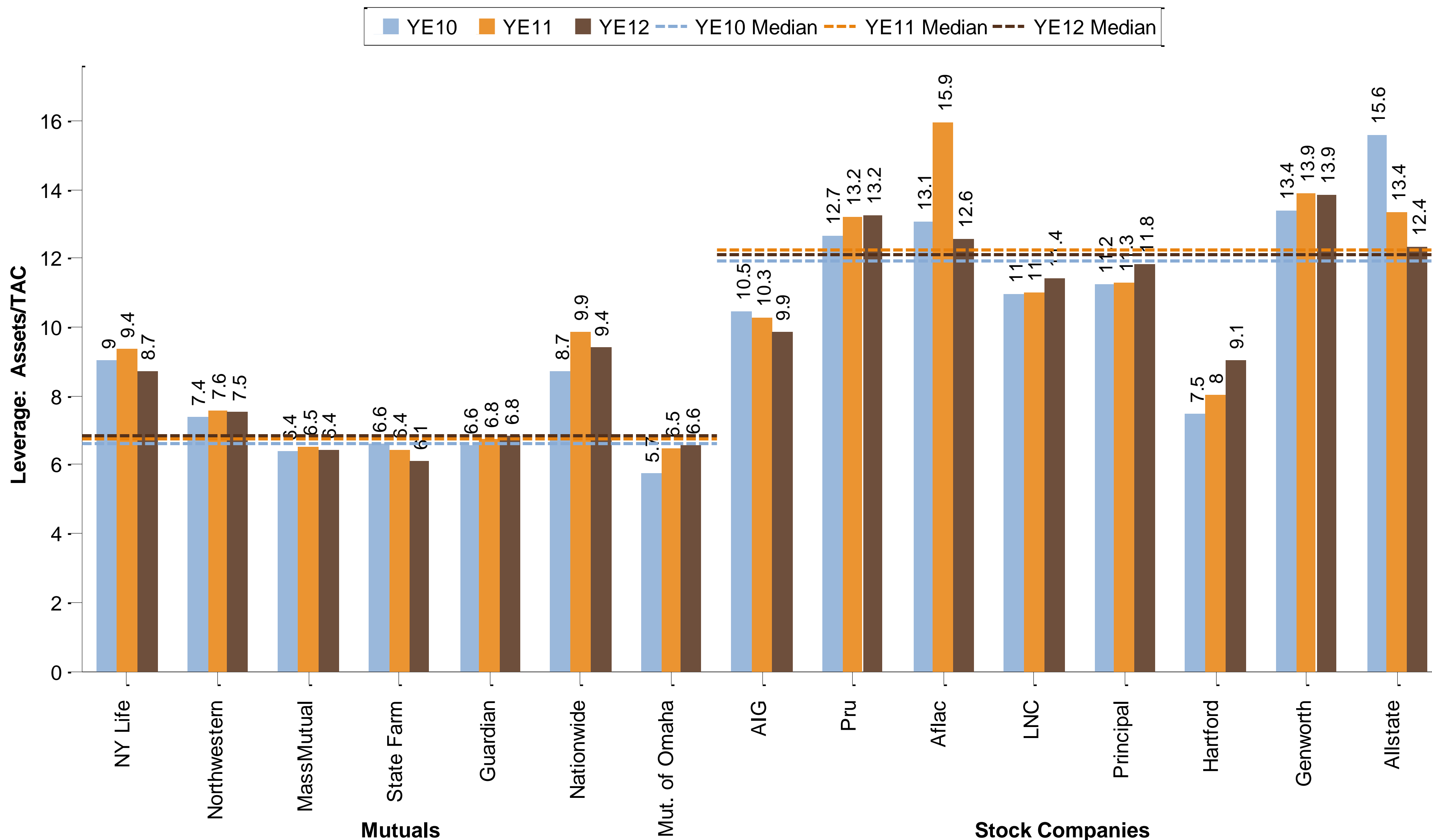
- Schedule BA (alternatives) allocation increasing since 2010 and higher allocation among mutuals



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Leverage Ratio

- Mutual life insurers are substantially less leveraged than stock companies



Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Full SNL Names for Peers

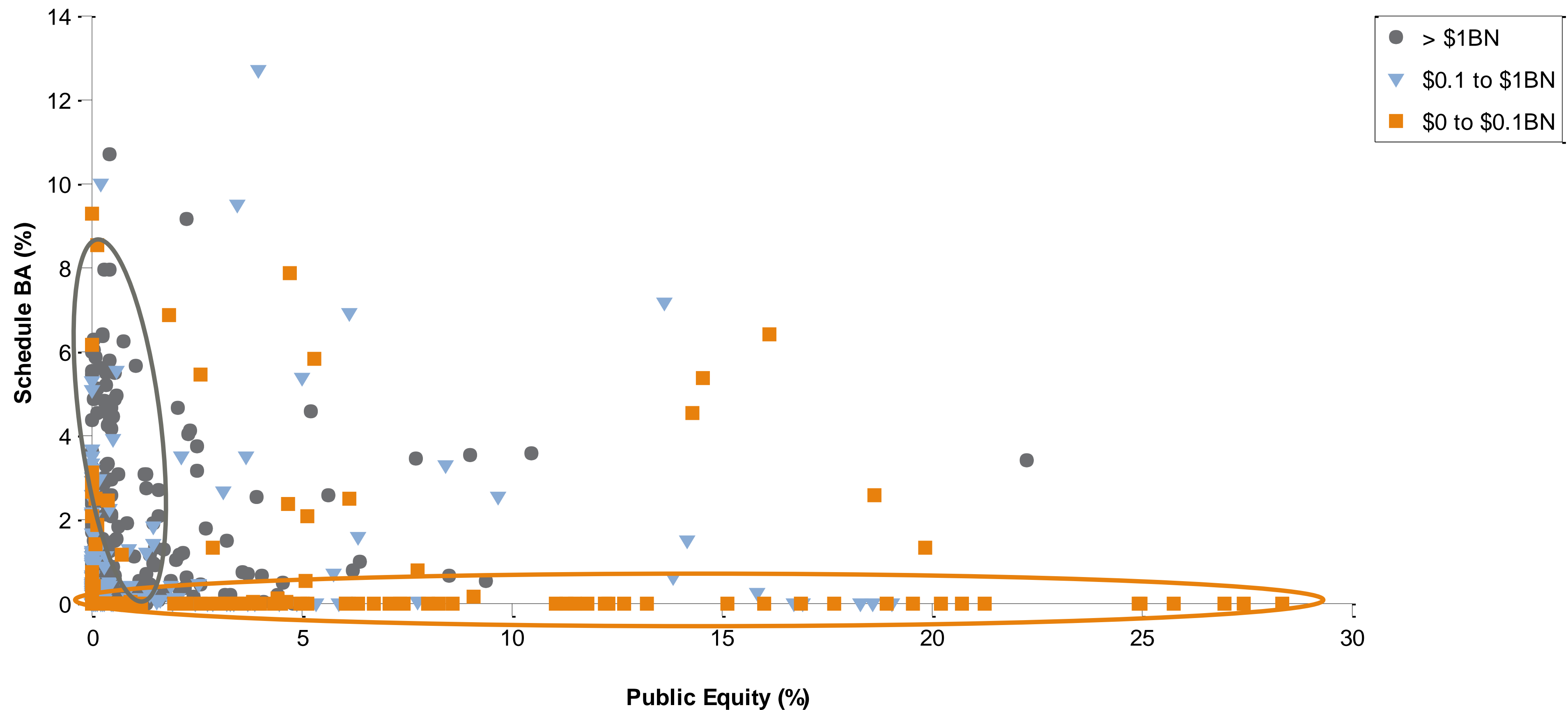
Company Name	Display Name
New York Life Insurance Group (SNL Life Group)	NY Life
Northwestern Mutl Life Ins Co. (SNL Life Group)	Northwestern
Massachusetts Mutl Life Ins Co (SNL Life Group)	MassMutual
State Farm Mutl Automobile Ins (SNL Life Group)	State Farm
Guardian Life Ins Co. of Am (SNL Life Group)	Guardian
Nationwide Financial Services (SNL Life Group)	Nationwide
Mutual of Omaha Insurance Co. (SNL Life Group)	Mut. of Omaha
American International Group (SNL Life Group)	AIG
Prudential Financial Inc. (SNL Life Group)	Pru
Aflac Inc. (SNL Life Group)	Aflac
Lincoln National Corp. (SNL Life Group)	LNC
Principal Financial Group Inc. (SNL Life Group)	Principal
Hartford Financial Services (SNL Life Group)	Hartford
Genworth Financial Inc. (SNL Life Group)	Genworth
Allstate Corp. (SNL Life Group)	Allstate

Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

US Industry Comparison: Stock vs Mutual Insurers

Schedule BA vs. Public Equity

- Breakdown of life mutual and stock company market into small / medium / large classifications (by AUM)
- Comparison of public equity with schedule BA allocation shows that:
  - Smaller firms prefer taking risk through equities
  - Larger firms prefer alternative assets

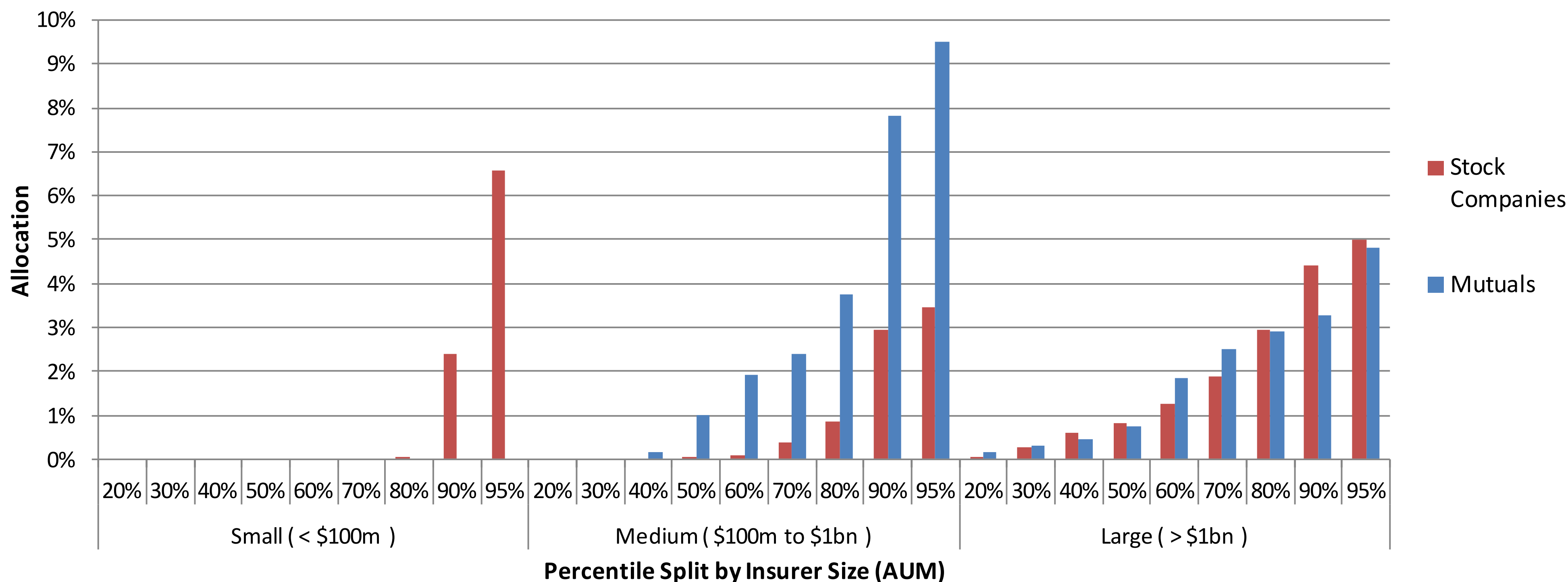


Source: SNL Financial (as at September 2013). All data is based on U.S. statutory filings and excludes insurance companies and assets domiciled outside of the US.

Industry Wide: Stock vs. Mutual Insurers – Schedule BA Allocation

- Allocation to schedule BA investments are higher than stock companies, for medium sized mutuals, and similar for large mutuals

	Stock Company			Mutual		
	$0 to $0.1BN	$0.1 to $1BN	> $1BN	$0 to $0.1BN	$0.1 to $1BN	> $1BN
Total Assets ($bn)	3.559	33.449	2518.44	0.228	2.515	579.781
# Companies	143	78	96	8	8	19
Avg Assets ($bn)	0.025	0.429	26.234	0.028	0.314	30.515



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Industry Wide: Stock vs. Mutual Insurers – Equity Allocation

- Allocation to equity investments are generally higher for mutuals across small, medium, and large firms

	Stock Company			Mutual		
	$0 to $0.1BN	$0.1 to $1BN	> $1BN	$0 to $0.1BN	$0.1 to $1BN	> $1BN
Total Assets ($bn)	3.559	33.449	2518.44	0.228	2.515	579.781
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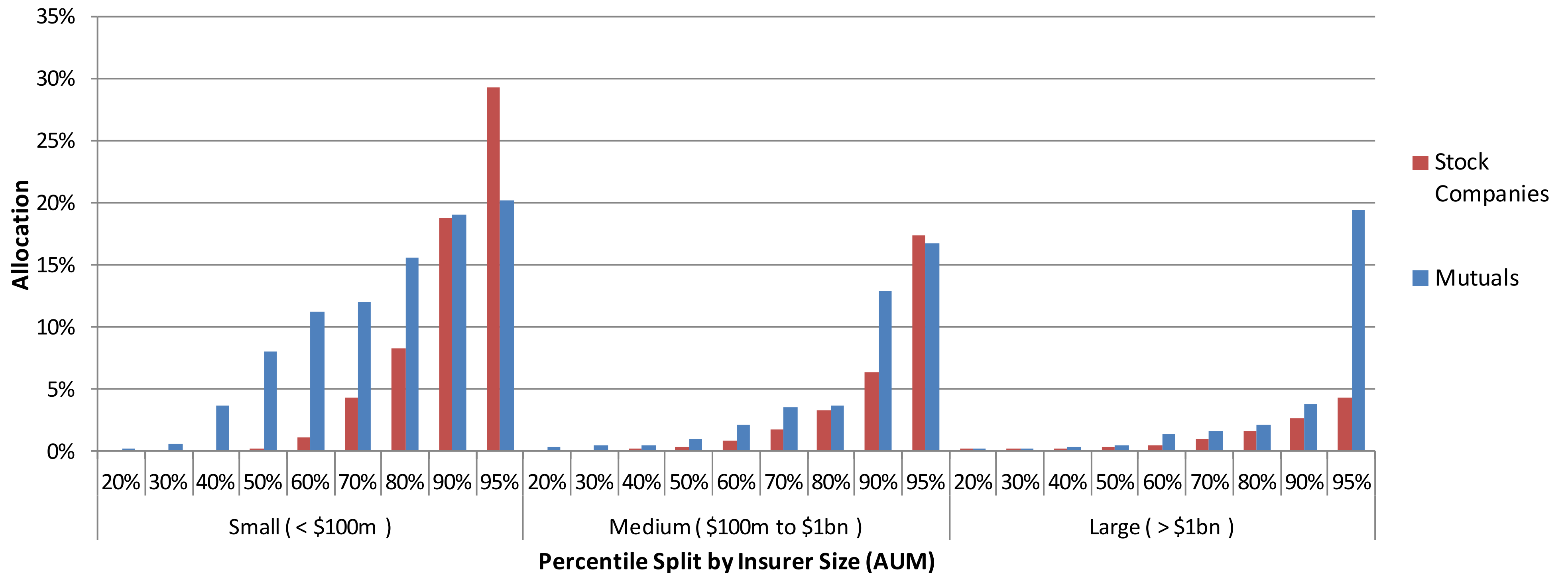

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Industry Wide: Stock vs. Mutual Insurers – High Yield Allocation

- Allocation to high yield investments more popular for large stock companies than mutuals

	Stock Company			Mutual		
	$0 to $0.1BN	$0.1 to $1BN	> $1BN	$0 to $0.1BN	$0.1 to $1BN	> $1BN
Total Assets ($bn)	3.559	33.449	2518.44	0.228	2.515	579.781
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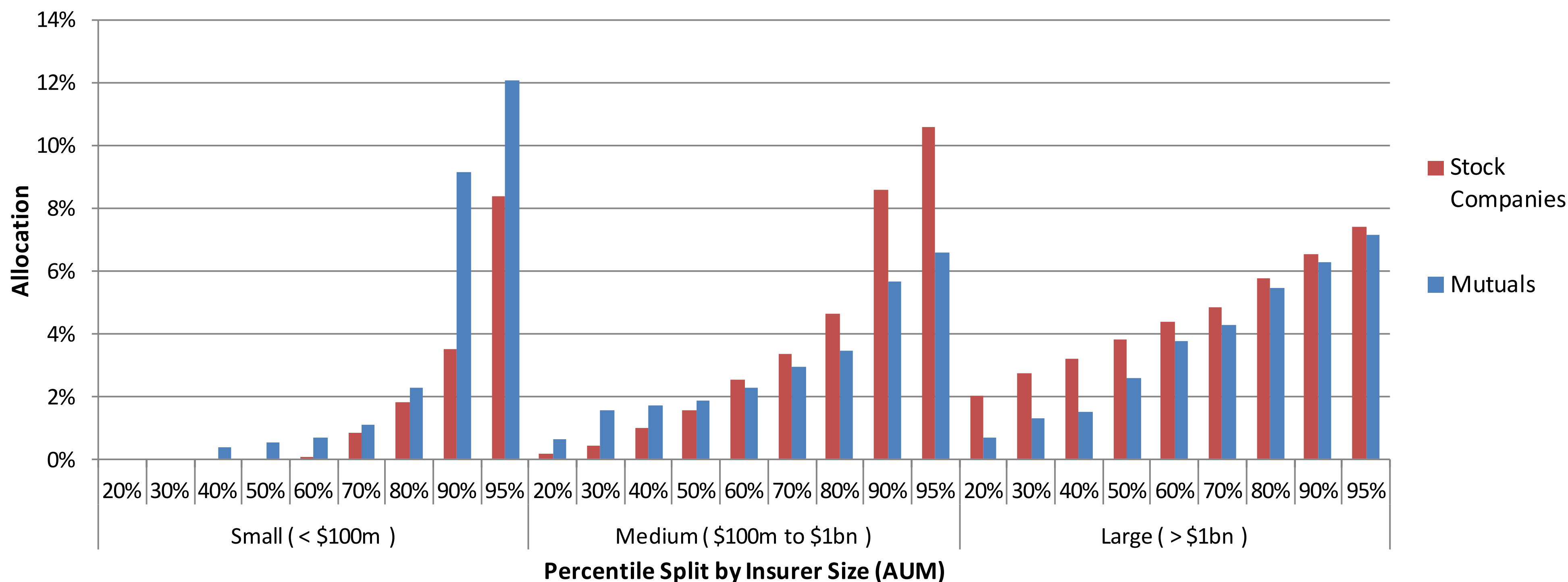

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Industry Wide: Stock vs. Mutual Insurers – Total Risk Allocation

- Small and medium sized mutuals have higher risk allocation than stock companies
- Similar risky allocation for large mutual and stock insurers

	Stock Company			Mutual		
	$0 to $0.1BN	$0.1 to $1BN	> $1BN	$0 to $0.1BN	$0.1 to $1BN	> $1BN
Total Assets ($bn)	3.559	33.449	2518.44	0.228	2.515	579.781
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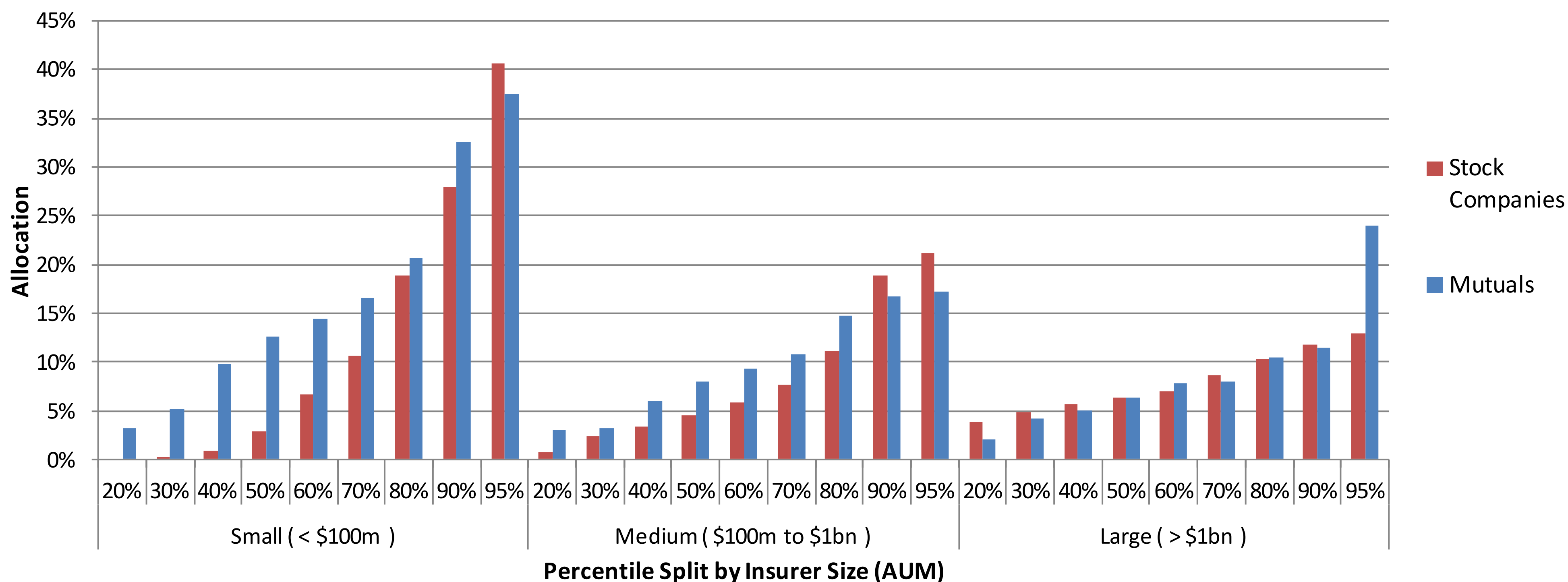

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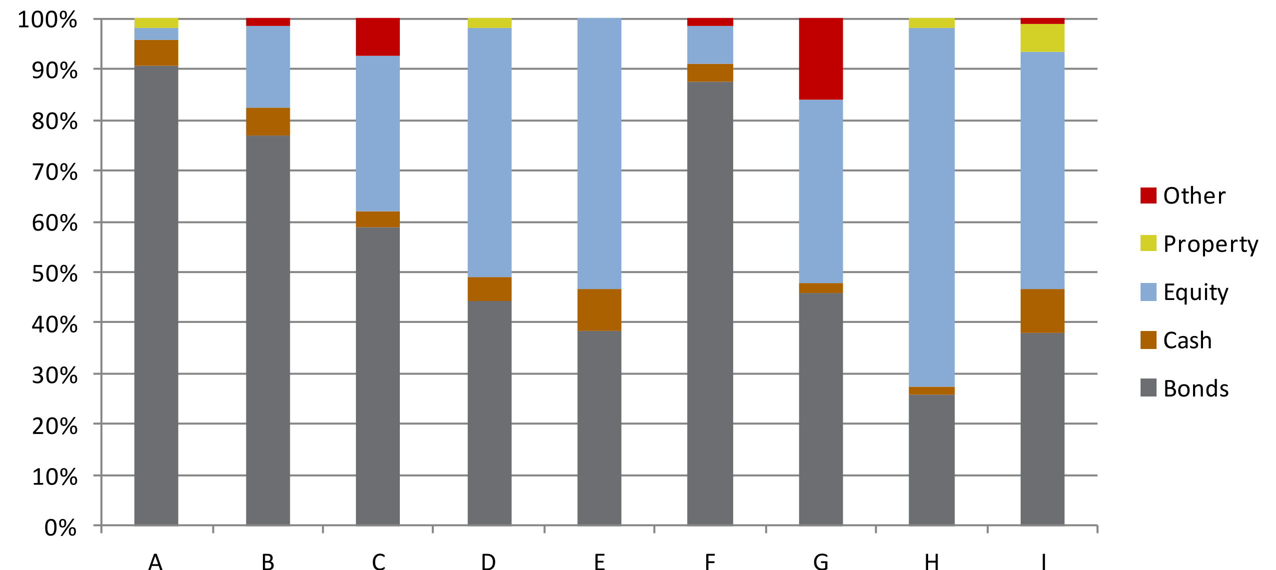
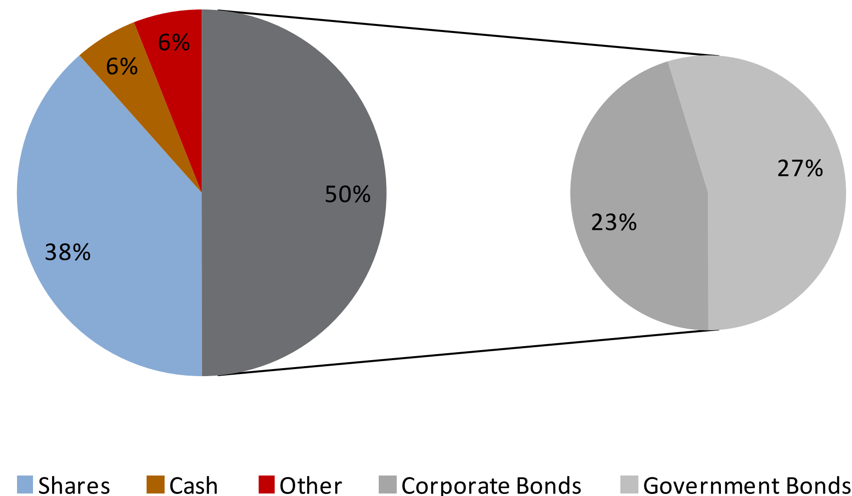
UK Mutual Market and Where Insurers are Investing

UK Life Mutual – Asset Allocation

- Using published accounting data from largest nine UK life mutuals
  - Less detail available than from NAIC on US insurers, but useful nonetheless
- Range of investment strategies are quite diverse, with significant allocation to equities in many cases
  - It should be noted that US life insurers exclude separate account assets which are largely equities
  - If US insurers kept these assets on balance sheet the US and UK allocations would look quite similar
- Limited allocation to alternative investments
- What other asset classes could complement mutual insurers investment strategies?





Source: Published accounts (YE 2012) of nine largest UK mutual insurance companies

Where Insurers are Investing: Lending Opportunities

Strategy	Implied Yield	Estimated Duration	Solvency II Capital Charges	Highlights
Direct Lending	9.0% - 13.0% (Secured Loans)	3 - 5 Yrs	~15%	– Large addressable universe of issuers/ borrowers not able to secure reasonable terms from banks – Reduced supply of private credit and bank financing; underwritten financing less available and at higher cost – Overhang of required middle market financing; companies with $300mm or less in bonds and loans outstanding have a greater need – Attractive spread difference, ~ 110bps versus large corporate
Mezzanine Debt	12.0% - 14.0%	3 - 5 Yrs	~30%	– Reduced supply of mezzanine; financial crisis has rationalized the competitive landscape (hedge funds, CLOs, BDCs, bank HY underwriting) – Substantial demand for “buy and hold” subordinated debt capital; $380 billion of private equity “dry powder” – Many companies prefer a more customized/ confidential/ privately negotiated solution – Typical coupon of 11-13% for private mezzanine vs 8-11% for public high yield; attractive illiquidity premium
Liquid Loans	L+400 - 650	3 - 5 Yrs	~20%	– Given a low rate environment, the stability of senior secured credit affords the opportunity for relatively steady but high current income – Floating-rate pricing acts as a hedge to inflation and rising interest rates – Loan spreads appear to offer considerable excess value over default expectations
Commercial Mortgage Loans	3.0% - 4.5%	5 - 10 Yrs	~15%	– Risk-adjusted returns compare favorably to other sectors (Corporate, ABS, CMBS) – Loan spreads widened to attractive levels due to reduced lending and uncertain market conditions – Loan terms substantially improved from pre-crisis levels – Lending levels recovering as (US) insurance companies increase activity
Infrastructure Debt	L+200 - 300bps	8 - 10 Yrs	~10%	– Banks facing increasingly stringent capital requirements for long-dated loans – Senior secured infrastructure loans with A rated credit characteristics offer attractive yields at BBB/BB spread levels – Credit spreads have risen and are sustainable around 200-300bps – Sourcing loans in secondary market has advantages vs originating new loans

Source: J.P. Morgan Asset Management; Data as of December 31, 2012., Capital charges are based on a best estimates basis and is J.P. Morgan’s interpretation of the Technical Specifications of Solvency II published on October 18, 2012. Section SCR.5.5. Mkt_int interest rate risk is not considered in this number as it depends on the insurers individual liability duration.

Where Insurers are Investing: Other Considerations

Strategy	Implied Yield	Estimated Duration	Solvency II Capital Charges	Highlights
Investment Grade Credit	2.0% - 3.0% (Non-Financials) 2.5% - 3.5% (Financials)	5 - 7.5 Yrs	~7%	– Diversification for holders of aggregate bond strategies tilted towards MBS – Yield advantage with investment grade credit quality – Strong market technicals show little sign of abating – Plenty of room credit spreads to tighten
Emerging Market Debt	4.0% - 6.0% (USD) 5.5% - 7.0% (LC) 4.0% - 6.0% (Corp)	7 - 8 Yrs 4 - 5 Yrs 5 - 6 Yrs	~20% ~27% ~17%	– Strong fiscal position of emerging market countries has improved the credit quality of debt issued by these economies – Last agencies rating actions highlighted the divergence between Developed (downgrades) and Emerging Economies (mostly upgrades) – Emerging market companies generally have stronger balance sheets – JPM EMBI Global avg. credit rating: BBB-; JPM GBI-EM Global: BBB+; JPM CEMBI Broad: BBB
Infrastructure Equity	6.0% - 8.0%	10 - 15 Yrs (Closed) N/A (Open)	49%	– Ageing populations and deferred maintenance driving growth of infrastructure in developed markets; worldwide, the OECD estimates infrastructure investment will range from USD30 to 50 trillion in developed markets through 2030 – Infrastructure cash flows grow faster than inflation in the long run, regardless of economic cycle
US Real Estate	8.0% - 10.0% gross of taxes	5 - 10 Yrs	25%	– Participates in bull market capital appreciation and offers downside protection with stable income – Valuations are significantly below peak levels
REITS	4.0% - 5.0%	3-7 Yrs	39%	– Approximates a core real estate portfolio of well leased, high-quality properties with stable returns – Balanced approach with investments throughout the capital structure – Long-term, growth induced inflation hedge
High Dividend Equities	2.0% - 5.0%*	N/A	39%	– The focus on cashflow leads to an understanding of sustainable and growing dividends – Cashflow and dividend based measures have proven effective in both up and down cycles
Hedge Funds	T-Bills + 3.0% - 4.0% (Conservative) T-Bills + 5.0% - 7.0% (Moderate) T-Bills + 6.0% - 9.0% (Aggressive) Potentially higher yield (Opportunistic)	3 - 12 months	49%	– Ability to construct customized portfolios based on client's investment objectives, guidelines and preferences – Ability to generate attractive returns while exhibiting low correlation to traditional equity and fixed income markets and provide diversification benefits (i.e. hedge funds added to a portfolio of stocks and bonds generally enhance the risk/return profile) – Hedge fund managers can take advantage of market inefficiencies/dislocations (e.g. reinsurance) – Manager selection is important as the dispersion of hedge fund manager returns is high
Private Equity	6.0% (Primary: Median) 16.0% (Primary: Top Quartile) 15.0% (Secondary: Median) 20.0% (Secondary: Top Quartile)**	6 - 9 Yrs (Partnerships) 3 - 6 Yrs (Secondaries)	49%	– Expanded opportunity set of investments not typically available through public markets – High degree of control and influence over investments, and legitimate access to non-public information prior to investing – Considerations: private equity is an illiquid, long-term asset class with high return dispersion between median and top performing managers

Source: J.P. Morgan Asset Management; Data as of December 31, 2012., Capital charges are based on a best estimates basis and is J.P. Morgan's interpretation of the Technical Specifications of Solvency II published on October 18, 2012. Section SCR.5.5. Mkt_int interest rate risk is not considered in this number as it depends on the insurers individual liability duration.

Limitations of Reliance

It should be noted that a quantitative framework is only one input into the asset allocation process and cannot replace the professional skill and judgment necessary to arrive at an appropriate strategy. The importance of allowing for subjective–and often qualitative–factors in decision making remains. Further, there is always an explicit need to account for the investor's specific circumstances, including liabilities, when arriving at an appropriate portfolio allocation

The model used here to calculate asset returns is a simplified statistical representation of the complex interaction of economic variables and asset returns. The model as well as its outputs are provided for illustration/discussion purposes only and are subject to significant limitations. While it produces specific return estimates for asset classes and portfolios of assets in each scenario, these estimates are subject to uncertainty and error. For example, changes in the structural specification of the model or the historical data from which it is estimated will result in different implications for asset class returns. The model provides expected returns for each asset class conditional on an economic scenario; actual returns in the event the scenario comes to pass could be higher or lower, as they have been in the past, so an investor should not expect to achieve returns similar to the outputs shown herein . References to future returns for either asset allocation strategies or asset classes are not promises of actual returns a client portfolio may achieve.

Because of the inherent limitations of all models, potential investors should not rely exclusively on the model when making a decision. The model cannot account for the impact that economic, market, and other factors may have on the implementation and ongoing management of an actual investment portfolio. Unlike actual portfolio outcomes, the model outcomes do not reflect actual trading, liquidity constraints, fees, expenses, taxes and other factors that could impact the future returns. The model assumptions are passive only—they do not consider the impact of active management. A manager's ability to achieve similar outcomes is subject to risk factors over which the manager may have no or limited control.

Prospective investors should review carefully the risk factors associated with any investment. No representation is made that a manager will achieve the results similar to those of the model output. Actual portfolio results could be higher or lower than the model outputs shown herein. Given the complex nature of investing in various market conditions, investor should rely on their own judgment and work with an investment professional when building long term strategic allocations.

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