The Academy
The Health Management Academy

RETURN AND RISK CHARACTERISTICS OF HEALTHCARE SYSTEM

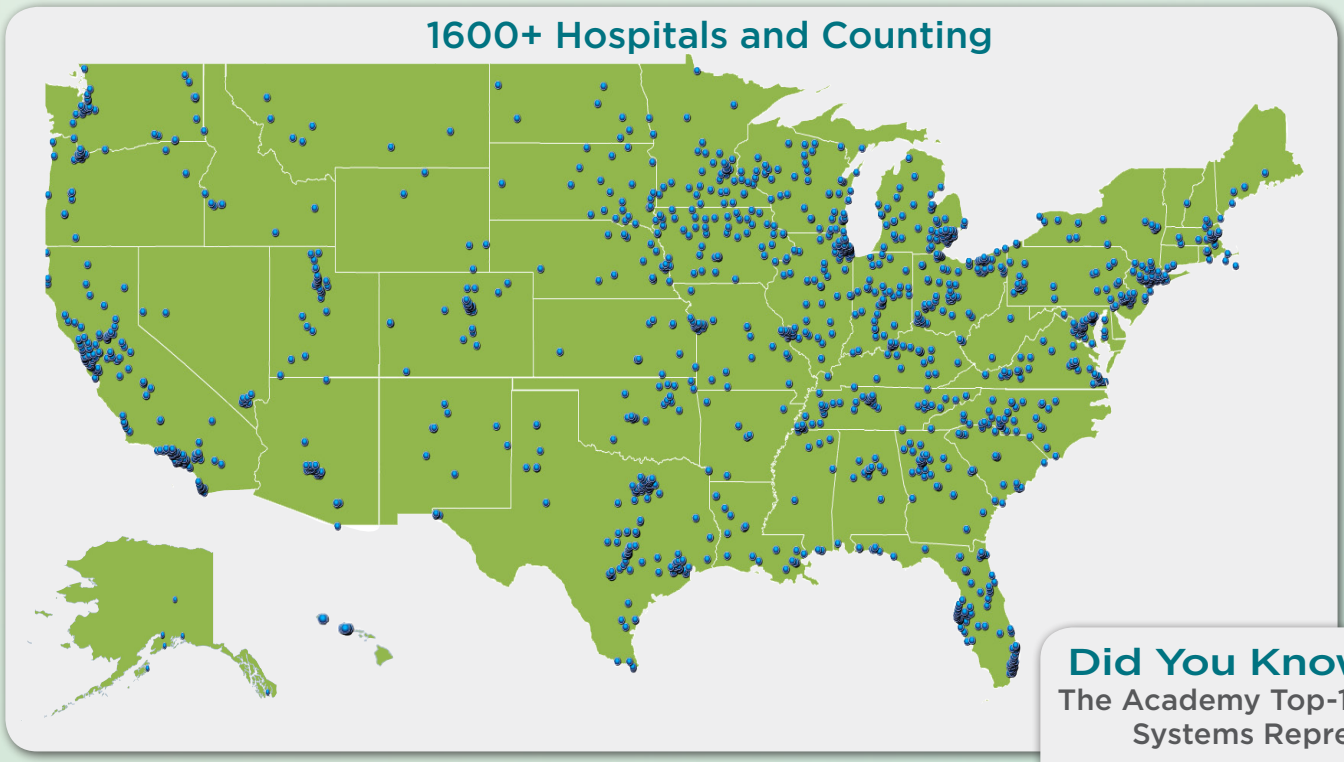
Investment Portfolios 2013

Strategic Investment Group®

Impact & Reach of The Academy Members

The Academy member health systems have evolved through consolidation and organic growth during the lifespan of The Academy. In most cases, they are the private sector leaders in their communities by developing fully integrated, population-based services. We have taken seriously our mission of assisting executives to build successful enterprises, which has led to the variety of services that now comprise The Academy.

1600+ Hospitals and Counting



Did You Know?

The Academy Top-100 Health Systems Represent:

- 65% Net Patient Revenue
- 67% Inpatient Visits
- 40% ER Encounters
- 46% Outpatient Visits
- 44% Healthcare Employees
- 44% Employed Physicians
- 4% GDP

“As pace of change in the healthcare industry increases, the value of learning from the best educators and your peers becomes more critical.”

– James H. Skogsbergh
President & CEO, Advocate Health Care

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The Health Management Academy and Strategic Investment Group are pleased to partner on this report analyzing the risk and return characteristics of the portfolios of leading health systems. The findings should be of interest to senior finance and investment officers seeking fresh insights for managing investment risk and navigating through volatile markets.

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About Strategic Investment Group

Strategic Investment Group, a pioneer in dedicated Outsourced CIO (OCIO) solutions since 1987, offers a comprehensive service platform for managing customized portfolios for institutional and private investors. Our proprietary process combines active portfolio management, rigorous risk management, and open architecture manager selection.

As a provider of Outsourced CIO services, Strategic has more than 26 years of experience serving as a co-fiduciary with day-to-day investment discretion and oversees $33.7 billion in assets under management (as of March 31, 2014). Collaborative relationships have led to long-term partnerships with clients, including some of the largest healthcare systems in the United States.

Acknowledgments

The Health Management Academy extends its appreciation to Strategic Investment Group for their contribution.

As healthcare systems face increased pressure on their operating margins, many are more reliant on their investment pools to help support their balance sheets and key financial metrics. Striking the right balance between the two goals of total portfolio return and providing a sufficient cash buffer to bolster credit ratings is becoming increasingly important for senior finance executives. This second edition of our annual report seeks to provide you with the peer group comparators and risk analytics to help ask the right questions about balancing risk and return.

The paper covers the following topics:

- Asset allocation trends in the context of the changing investment environment
- How average portfolio structures differ by credit rating and fund size
- How those differences may impact investment performance and outcomes

The Health Management Academy (The Academy) conducts quarterly surveys of the investment practices of prominent healthcare systems, providing a wealth of information on the systems' asset allocation and return experience. The survey data highlights the widely divergent asset allocations of these investment pools, reflecting significant differences in both the circumstances of healthcare systems and their approaches to investing.

This paper was a collaboration between The Academy and Strategic Investment Group.

Introduction

This paper is the second in an annual series of analyses of the risk and return characteristics of sample portfolios drawn from The Academy's quarterly survey of the investment practices of The Academy's member healthcare systems.[1] The purpose of the paper is to apply a range of analytical techniques to sample long-term investment portfolios (LTIPs) to assess the expected risk and return characteristics of these portfolios in different states of the world.[2]

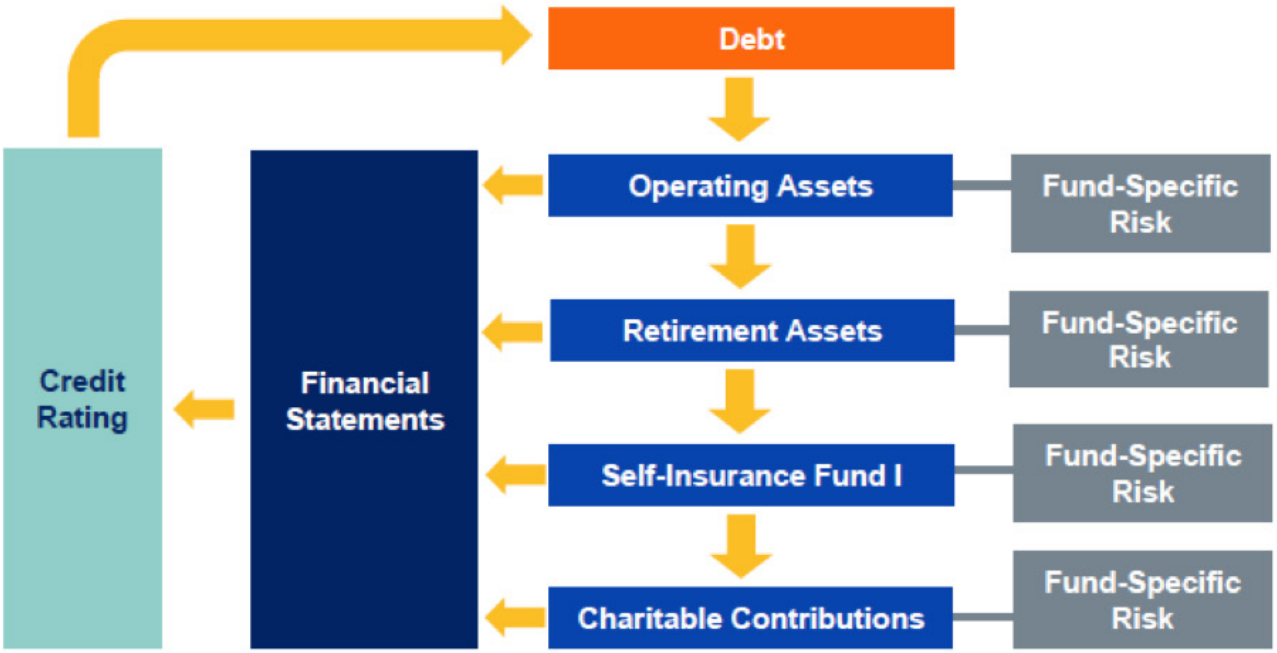
The paper is structured as follows. We first examine the integral role played by the investment pools in the finances of healthcare systems, focusing on how investments and operations are linked. The strong link between investment performance and a system's financial strength underscores the need for a comprehensive asset/liability management framework for analyzing risk. In the second section, we analyze the asset allocation of different LTIPs included in The Academy survey data, sorting the various portfolios by risk appetite, size, and credit rating, and isolate the main changes in asset allocation in 2013. We then apply a rigorous risk assessment to several illustrative portfolios drawn from The Academy survey data. The analytical techniques used to illustrate how these portfolios would likely perform in different states of the world include a mean-variance analysis that places sample portfolios along an efficient investment frontier, a Monte Carlo simulation of prospective returns over a 10-year horizon, and historical scenario analyses. We conclude by suggesting possible ways to improve and extend the analysis of sample portfolios. Annexes to the paper provide additional information on a broader range of sample portfolios and their expected risk and return characteristics.

1 The paper is a collaboration of The Health Management Academy and Strategic Investment Group (Strategic). We welcome your comments on the data and analysis presented. Please address your comments to Jay Flounlacker (jay@hmacademy.com) or David J. Ordoobadi (dordoobadi@strategicgroup.com).

2 This material is provided for educational purposes only and should not be construed as investment advice or an offer to sell, or the solicitation of offers to buy, any security. Opinions expressed herein are current as of the date appearing in this material and are subject to change at the sole discretion of Strategic. It is not intended as a source of any specific investment recommendation. The analysis contained in this paper is shown for illustrative purposes only, does not represent actual portfolio performance, and is subject to change at the sole discretion of Strategic. Actual portfolios and their performance may differ significantly from those shown here. Please see the Disclosures at the end of this paper for important information on expected returns and risk as well as the scenario analysis.

Integral Role of Investments

Large healthcare systems encompass a number of investment pools. The largest of these pools, the LTIP, serves as the keystone of the balance sheet, supporting capital expenditure, facilitating access to capital markets at reasonable cost, and providing an ad hoc or regular supplement to operating income. Many healthcare systems also have sizeable investments supporting a defined benefit pension plan. In addition, healthcare systems typically also maintain smaller self-insurance funds and investment pools comprising charitable donations. Each of these multiple pools has its own specific objectives and constraints, but all are integral to the financial strength of the system. It is not enough to assess the risk and return characteristics of each investment pool in isolation; an aggregate picture of how the various investment portfolios combine and interact with the system's broader finances and operations is essential. Managing investment risk requires a comprehensive asset/liability management (CALM) approach to rigorously model and continuously monitor the potential impact of investments on the system as a whole.[3]

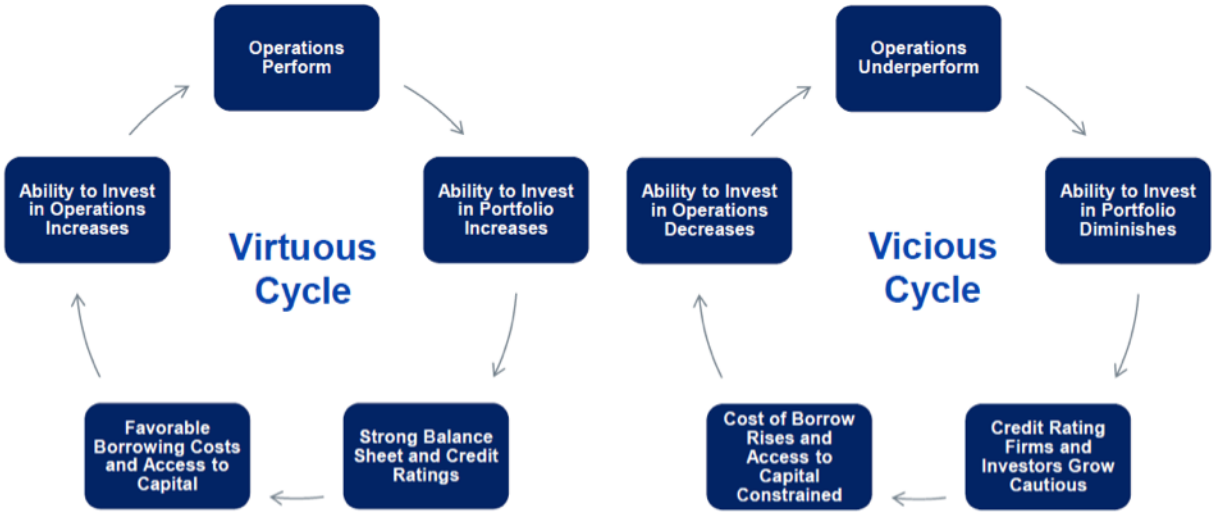


The importance of a CALM approach to enterprise risk management is underscored by the potential of good and bad investment and operational outcomes to reinforce each other to create virtuous and vicious cycles. When all is well, favorable operating and investment results increase the potential to expand investments, which in turn contribute to balance sheet strength and a solid credit rating, facilitate access to capital markets at a reasonable cost, and support the scope for capital expenditure to enhance operations. In an adverse cycle, the unfavorable loop of poor operational and investment performance undercuts the system's financial strength and credit rating, and erodes the capacity for capital expenditure, which in turn further detracts from operating results. Given the potential for both favorable and unfavorable dynamics of this kind, carefully modeling the risk imparted by investments on a system's broader operations and finances through a CALM framework is critical.

Construction of Sample Portfolios

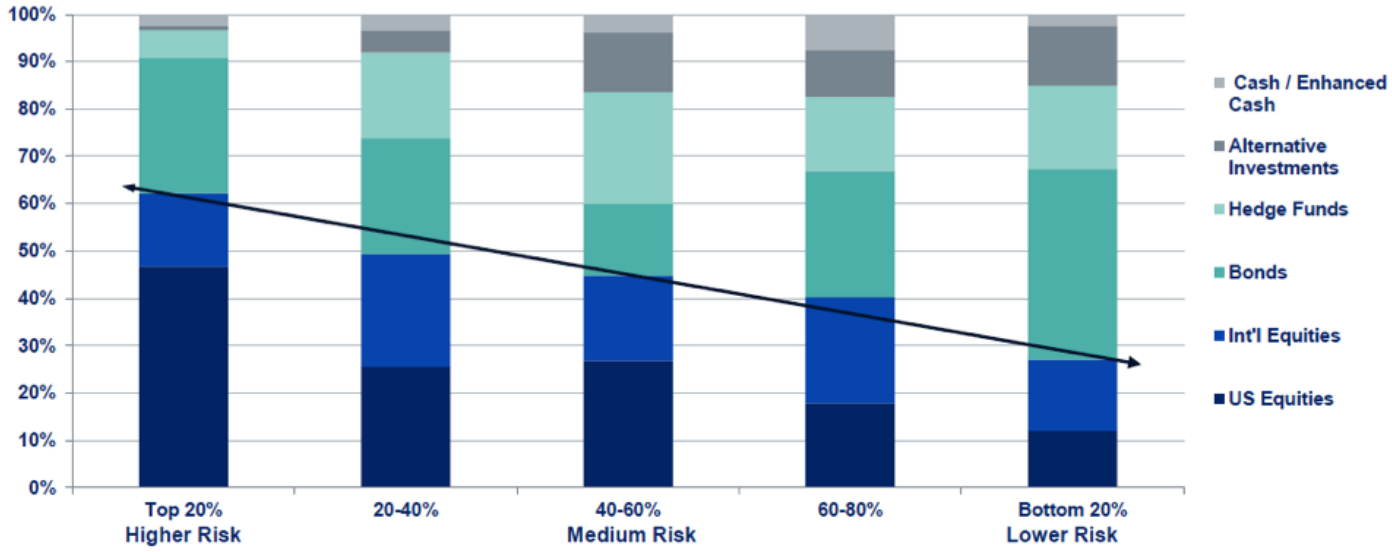
The sample portfolios are drawn from The Academy's quarterly survey of its member health systems as of the fourth quarter of 2013. There were 29 respondents providing data on LTIPs, totaling $36.3 billion in assets. To preserve anonymity, The Academy organized the data into several aggregate categories. Average allocations of the constituents of each sample group were analyzed.

3 Strategic Investment Group has developed the CALM approach as a framework for healthcare systems and other institutional investors to assess the appropriate structure of their investments and assess the types and level of risk arising from investments. The CALM analysis includes scenario analyses on the interaction of favorable and unfavorable investment and operating results on the system's financial strength and credit rating.



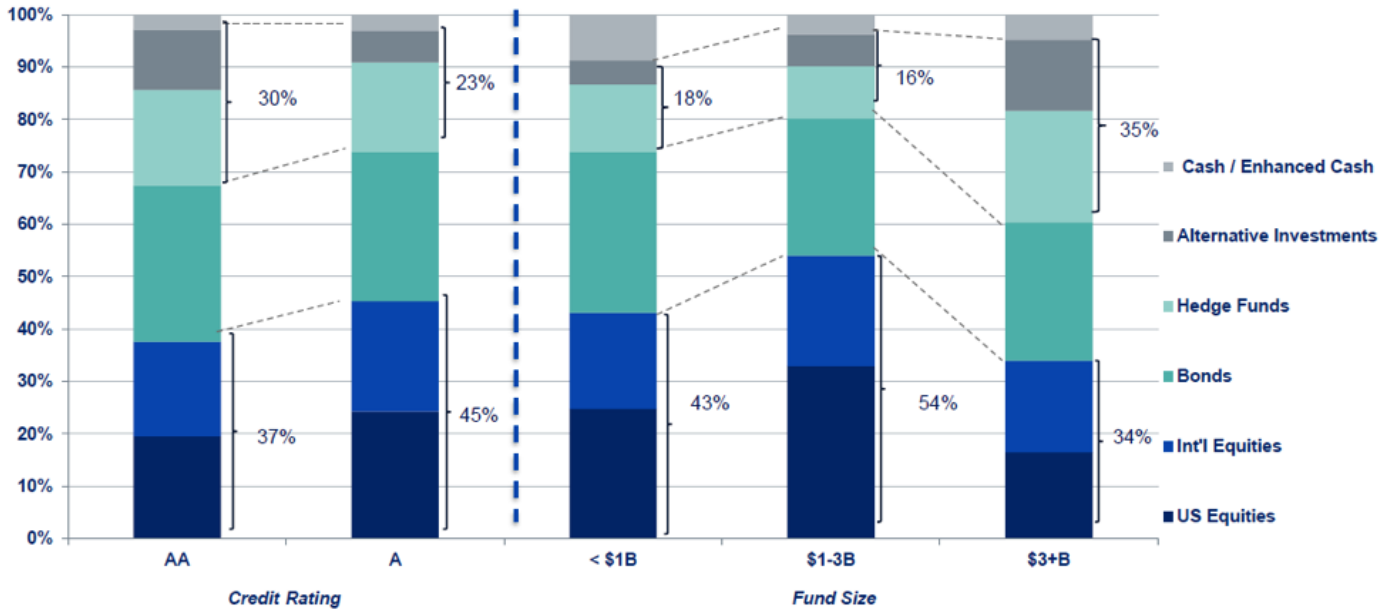
We focus on portfolios sorted by quintiles of risk appetite, with the degree of equity exposure used as a proxy for risk. We chose this focus because risk appetite is a key factor in portfolio construction. Each institution's ability to absorb the volatility imparted to its broader operations by investment portfolios and the role of investments in complementing operational income and liability management are likely to be key factors in determining the asset allocations of its LTIP. Sorting each portfolio by risk appetite thus highlights a fundamental characteristic of the sample portfolios. These portfolios can be interpreted to reflect the revealed risk preferences of the institutions concerned. We use the average asset allocations of the upper and lower quintiles of risk appetite to help frame the subsequent analysis of sample portfolios. The figure below (Figure 1) illustrates the average asset allocation for LTIPs sorted by quintile of risk appetite, with the higher quintiles having a higher equity allocation and thus a higher implied risk appetite. As illustrated below, the average portfolio at the highest quintile of risk has an allocation to U.S. and non-U.S. equities of about 60% of the total portfolio compared with about 25% in the case of the bottom quintile.

Figure 1. Asset Allocation by Risk Quintile - LTIP



We also considered a number of other sample portfolios sorted by the size of each portfolio, and the credit rating of each healthcare system. As illustrated below (Figure 2), the largest portfolios and those with the highest credit ratings tend to have higher allocations to hedge funds and other alternatives, with commensurately smaller allocations to U.S. and non-U.S. equities.

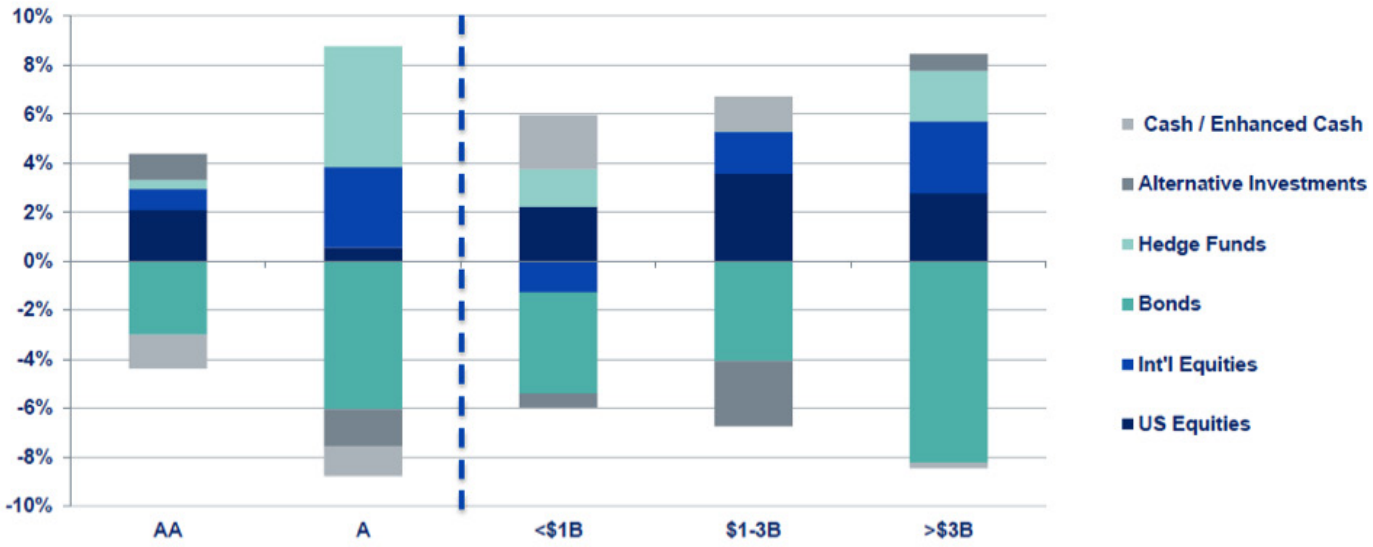
Figure 2. Asset Allocation by Credit Rating and Size



Changes in Asset Allocation in 2013

There has been a significant shift in asset allocation in 2013. In the past calendar year, healthcare systems across the size and credit rating spectrum have tended to reduce their holdings of bonds and increase the share of the portfolio held in U.S. and non-U.S. equities, hedge funds, and other alternatives (see Figure 3 below). It is noteworthy that this shift away from bonds has been significant and widespread, and has taken place in the context of increasing signals from the Fed that it intends to pursue a continued gradual reduction in monetary stimulus.

Figure 3. Changes in Asset Allocation in 2013



Sample Portfolios Along the Efficient Frontier

Capital Market Assumptions

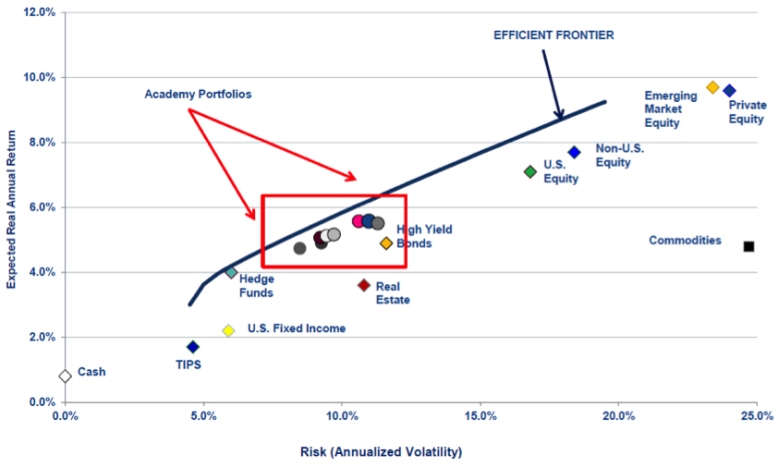
We have calculated the expected risk and return of the asset allocations of selected sample LTIPs using Strategic Investment Group's proprietary capital market assumptions for the expected risk, return, and correlation characteristics of each asset class.

The capital market assumptions used in the analysis are derived from historical experience, adjusted to account for secular trends and to compensate for data inadequacies, including those arising from irregular pricing in illiquid markets. We also adjust the equilibrium expected market returns (or beta) to incorporate active return (or alpha) assumptions. We believe that it is appropriate to consider the potential for mispricing and the resulting scope for value added through security selection and structuring tilts across the various asset classes, and to incorporate this information into analyses of optimal portfolio construction. The active management return and risk assumptions are based on historical data and forward-looking assumptions (using conservative information ratio estimates).[4]

LTIP Efficient Frontier

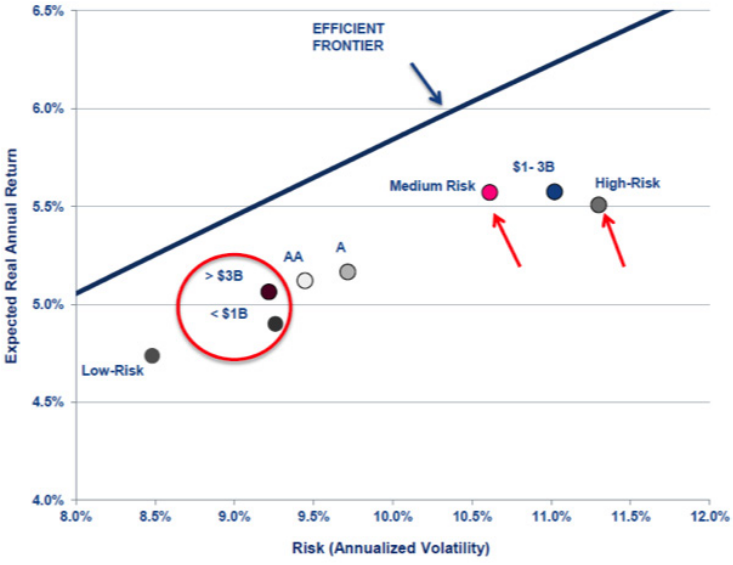
Having calculated the expected risk and return characteristics of the sample portfolios using the capital market assumptions described above, we plot each sample portfolio in relation to an efficient frontier (see Figure 4). The efficient frontier represents the expected risk and return of optimally allocated portfolios. A portfolio on the efficient frontier has the maximum return achievable for its level of risk. Also shown are the risk and return assumptions for each major asset class used to construct the efficient frontier and calculate the expected risk and return of the sample portfolios. The box in red highlights how The Academy sample portfolios are positioned relative to the major asset classes and the efficient frontier.

Figure 4. Academy Portfolios and the Efficient Frontier



The adjacent figure (Figure 5) focuses on The Academy sample portfolios, highlighting their risk and return characteristics and position relative to the efficient frontier representing the optimum tradeoff between risk and return. Upon closer inspection, it is evident that the sample portfolio representing healthcare systems with assets of under $1.0 billion is less efficient than portfolios whose assets exceed $3 billion (see portfolios circled in red). The larger portfolio has a higher expected real return and a lower level of risk. This improved efficiency results from the increased diversification of the larger portfolio, which includes a higher share of hedge funds and alternatives in the asset mix and a commensurately smaller allocation

Figure 5. Detail View of Efficient Frontier



4 The information ratio is calculated as the excess return of a strategy over a benchmark divided by the standard deviation of returns. A high information ratio suggests that there are opportunities for skilled managers to add value.

to equities than the portfolio representing the average allocation of portfolios with less than $1 billion in assets. A similar phenomenon is at work in the case of the medium –and high-risk portfolios (highlighted by red arrows in the figure), which have very similar expected real annual returns, despite their divergent levels of volatility. Here again, the diversification benefits of higher allocations to alternative investments and hedge funds in the case of the medium-risk portfolio increases portfolio efficiency.

The sample portfolio representing the low end of the risk appetite spectrum has an expected real (i.e., net of inflation) return of 4.7% and an expected real volatility of 8.5%, compared with an expected real return of 5.5% and an expected real volatility of 11.3% for the portfolio at the upper end of the risk spectrum.

HMA - LTIP Sample Portfolios	Risk Appetite		Credit Rating		Fund Size		
	High Risk	Low Risk	AA	A	<$1B	$1-3B	>$3B
Real Returns	5.5%	4.7%	5.1%	5.2%	4.9%	5.6%	5.1%
Real Volatility	11.3%	8.5%	9.4%	9.7%	9.3%	11.0%	9.2%
Real Geometric Return	4.9%	4.4%	4.7%	4.7%	4.5%	5.0%	4.6%
1 Standard Deviation Loss	-5.8%	-3.7%	-4.3%	-4.6%	-4.4%	-5.4%	-4.2%
2 Standard Deviation Loss	-17.1%	12.2%	13.8%	-14.3%	13.6%	-16.5%	-13.4%
3 Standard Deviation Loss	-28.4%	-20.7%	-23.2%	-24.0%	-22.9%	-27.5%	-22.6%
Disequilibrium Real Returns	5.2%	4.4%	4.9%	4.9%	4.7%	5.3%	4.9%
Liquidity Score	94.2%	76.5%	76.8%	81.0%	85.6%	86.9%	73.1%

The 5.5% expected real return of the sample portfolio at the top quintile of the risk appetite spectrum is an average expected annual outcome. The 11.3% expected real volatility of this return quantifies the expected average variability around this return, which can be used to calculate the probability and magnitude of outcomes different from the average. For example, we can expect that this portfolio's real return will fall within the range of +28.1% and –17.1% about 95% of the time, equivalent to a range of ±2 standard deviations. The comparable range for the sample portfolio at the bottom end of the risk spectrum is +21.7% and –12.3%. To illustrate the impact of volatility on compound returns over time, we have included an estimate of the real geometric return, which is less that than the expected average annual return as a result of the volatility drag on compound returns over time.[5]

We have also calculated a liquidity score for each portfolio to highlight another dimension of risk that must be balanced in constructing the optimal portfolio. To model portfolio liquidity, we assign each asset class a percentage score. At the extremes of the liquidity spectrum, we give U.S. Treasuries and cash a score of 100% and private equity a score of 0%. In between are hedge funds (20%), open-end real estate funds (30%), and TIPS (90%). As we note in the table above, the high-risk portfolio, which has a high allocation to traded equities, also has a high liquidity score, reflecting the heavy allocations to traded equities and bonds, and relatively low allocation to less liquid alternative investments and hedge funds.

The "right" level of portfolio liquidity needs to be carefully calibrated and is institution-specific. Too much liquidity could result in foregone opportunities to add value and improve portfolio efficiency. Too little liquidity can result in an inability to meet actual or contingent obligations on the portfolio. Moreover, liquidity is needed to rebalance the portfolio back to policy allocation following wide market swings. A failure to rebalance can significantly alter the risk characteristics and long-term return of the portfolio.

As discussed, long-term, or equilibrium, asset class returns are used as inputs to estimate the risk and return characteristics of the sample portfolios. However, it is certain to be the case that, at the time of analysis, market conditions will not be in equilibrium – some assets may be significantly misvalued. It is typically not useful to adjust for short-term disequilibrium conditions affecting relative asset prices, but better to handle such mispricing through tactical asset allocation decisions.

Current conditions in fixed income assets necessitate a more nuanced approach, however. Because of government intervention, real yields on U.S. government bonds and other safe-haven assets, as well as certain corporate securities, are at extreme lows. We have estimated the disequilibrium real returns that would result if our expectations that interest rates

5 The compound annualized growth rate (CAGR) likely to be realized will be lower than the expected average annual return as a result of the "volatility drag." The real geometric return incorporating the impact of the volatility drag is shown for each portfolio. The effect of the volatility drag can be approximated as: $(1 + \text{average return})^2 - (\text{standard deviation})^2 = (1 + \text{CAGR})^2$.

will revert to more normal levels over the medium term are realized. As illustrated in the above table, the assumption of a reversion to equilibrium yields from current abnormally low levels over the medium term results in lower expected returns for the sample portfolios.

Risk Analysis

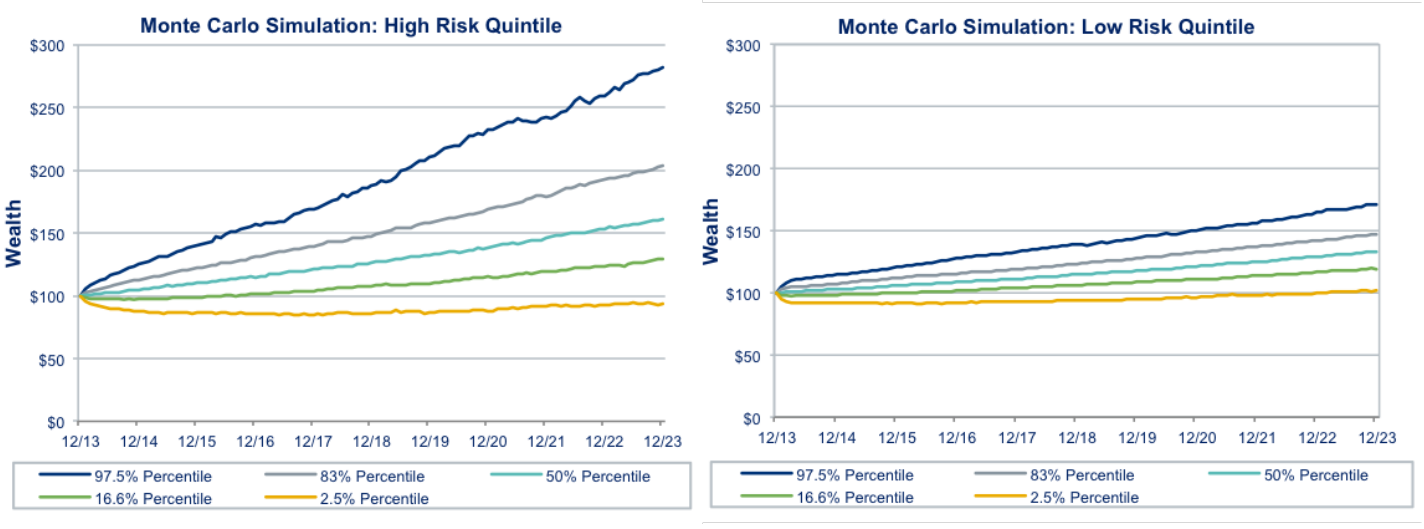
Robust risk analysis is an essential component of good investment governance. Exploring potential negative outcomes helps to set appropriate expectations of portfolio volatility and permits a more focused assessment of the impact of bad outcomes and the system's ability to withstand and adapt to adverse developments. Considering adverse scenarios helps avoid the common mistake of making ad hoc decisions in difficult circumstances.

With those benefits in mind, we have extended the mean-variance risk analysis of the previous section, using a number of additional analytical techniques to assess how the portfolios might respond to different market environments. First, we apply a Monte Carlo analysis based on randomly generated outcomes to produce a cumulative distribution of terminal wealth over a 10-year horizon. We complement this analytical approach to risk measurement with a historical scenario analysis that illustrates how the representative portfolios would have performed in past periods of significant market disruption. Historical scenario analyses have the benefit of providing internally consistent market and economic movements against which to test the robustness of sample portfolios.

Monte Carlo Simulation

We have performed a Monte Carlo simulation of returns over a 10-year horizon to estimate the probability distributions of terminal wealth of the sample portfolios at the top and bottom quintiles of the risk-appetite spectrum. There is a tendency over time for the range of randomly generated potential annualized returns to converge toward the mean. However, there is still significant risk that the return over the horizon will diverge significantly from the mean. There is also an increasing probability over time that markets will experience episodes—such as the recent financial crisis—of unusually high price volatility in any one period. So, while the probability of meeting an expected average return increases significantly with a longer horizon, the probability of facing a really bad (or really good) scenario in any one year also increases over time. The results of the Monte Carlo simulation highlight the significantly larger dispersion of terminal wealth in the high-risk portfolio. For example, the projected terminal wealth of $100 invested in the high-risk portfolio ranges between $282 (at the 97.5 percentile of outcomes) and $94 (at the 2.5 percentile) compared with a range of $172 and $102 for the low risk portfolio. The median projected outcome for the high-risk portfolio is $161 versus $133 for the low-risk portfolio.

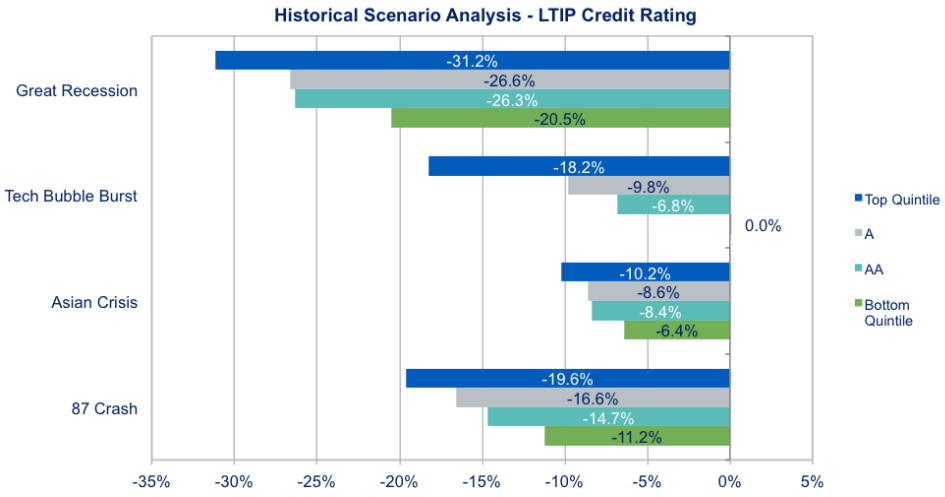
Figure 6. Monte Carlo Simulation: High-Risk vs. Low-Risk



Historical Scenario Analysis

Considering how sample portfolios would have performed in historical episodes of market turmoil provides a further test of portfolio robustness, as these historical episodes encapsulate a wealth of information across economic and financial indicators of how markets have actually behaved under duress. Notably, these crises illustrate how the assumptions of mean-variance analysis can break down and highlight the extent to which return volatility and correlations can be unstable.

Figure 7. Academy Portfolios and the Efficient Frontier



The figure above (Figure 7) considers the peak-to-trough loss that would be experienced in the event of a recurrence of one of the four most recent financial market crises. It provides an indication of the steepest drawdown in asset value that would have resulted during each crisis in the case of sample portfolios categorized by size and credit rating. For example, the sample portfolio at the top quintile of risk appetite would have experienced a peak-to-trough drawdown of 31%, or more than a three-standard-deviation loss, during the 2007-09 credit crisis, compared to a loss of 11% for the sample portfolio at the bottom of the risk appetite range.

Conclusions

The sample portfolios drawn from The Academy's survey of the investment practices of its member healthcare systems illustrate a wide range of asset allocations and divergent revealed risk preferences across respondents. As illustrated in the results of the risk analytics undertaken, the sample portfolios would generate substantially different mean returns over time. The expected variability of returns is also quite divergent across sample portfolios.

Last year's review survey results revealed a similarly divergent range of risk appetite. A notable difference from last year's survey, however, is the significant reduction in the allocation of LTIPs to fixed income securities in favor of equities, hedge funds, and other alternatives. This trend in asset allocation was evident in sample portfolios across the size and credit rating spectrums. Although the motivation for this trend away from bonds in the course of 2013 is impossible to discern with certainty, it corresponds with the signaling by the Fed of a shift in monetary policy and the initiation of a tapering of asset purchases by the Fed.

As emphasized at the outset, it is essential to view the asset allocations of each LTIP in the context of the broader operations, finances, and strategic direction of the healthcare system whose mission it supports. The very strong integral link between investments and a healthcare system's financial strength suggests that one factor behind the widely divergent risk preferences of the various sample LTIPs considered reflects divergent circumstances across healthcare systems. This link and the potential for favorable and unfavorable feedback loops between investments and operations argue strongly for the use of a CALM approach to judging the appropriate asset allocation for the LTIP and a healthcare system's other investment pools. A key extension to the analysis presented here is thus the undertaking of an institution-specific CALM analysis that incorporates other elements of a healthcare system's finances, including debt levels and related covenants, borrowing costs, credit rating metrics, the stability of operating income, liquidity requirements, the duration of pension liabilities, and the funded status of the pension plan.

About The Academy

The Academy provides unique, executive peer learning, complemented with rigorous and highly targeted research and advisory services to executives of Top-100 health systems. These services enable health system and industry members to cultivate the relationships, perspective, and knowledge not found anywhere else.

The Academy has created the first and only knowledge network exclusively focused on Top-100 health systems. This learning model is based on a proven approach refined over 16 years working side-by-side with members.

The Academy Member Health Systems

Account Name	CEO Forum	CFO Forum	CHRO Forum	CIO Forum	CMIO Forum	CMO Forum	CNIO Forum	CNO Forum	CSO Forum	GRO Forum	ONC Forum	PHIL Forum	SRE Forum	TRS Forum	Trustees	CFO Fellowship	CMO Fellowship	CNO Fellowship	SRE Fellowship	The Advisors	Collaboratives	PLP
Grand Total	25	56	25	23	32	38	31	30	24	39	28	16	34	35	14	38	75	16	40	13	115	21
Adventist Health (CA)	■		■		■	■	■	■					■		■	■						
Adventist Health System (FL)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■		■	■	■	
Advocate Health Care	■	■	■		■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Allina Health	■																		■			
Ascension Health		■								■				■		■						
Atlantic Health System			■	■		■		■			■		■				■				■	
Aurora Health Care	■	■	■	■				■		■	■	■	■	■	■	■	■		■	■		
Avera Health													■									
BJC HealthCare		■		■												■						
Banner Health	■	■	■	■	■	■	■	■	■	■		■	■	■		■	■		■		■	
Barnabas Health								■														
BayCare Health System	■									■			■		■						■	
Baylor Scott & White Health		■				■	■	■		■	■			■								
Beaumont Health System	■	■				■						■										
Bon Secours Health System	■	■	■		■	■	■	■					■	■			■	■	■		■	
CHE Trinity Health					■	■				■												
CHRISTUS Health																■						
Carilion Clinic		■																				
Carolinas HealthCare System		■	■	■										■					■			
Catholic Health Initiatives											■		■	■			■		■			
Cedars-Sinai						■					■											
Christiana Care Health System	■	■	■			■		■	■	■	■	■		■	■	■	■			■	■	■
Cleveland Clinic		■							■	■				■		■						
Cone Health		■	■	■	■	■	■	■			■		■	■			■	■			■	■
Dignity Health		■			■							■		■		■						
Duke University Health System				■		■		■		■							■	■			■	
Einstein Healthcare Network		■																				
Elliot Health System					■																	
Fairview Health Services		■							■	■			■	■		■			■			
HCA Healthcare					■	■	■	■					■				■					
Hackensack University Medical Center						■																
Hawai'i Pacific Health		■		■						■		■				■						
Hoag			■	■		■			■		■		■	■			■				■	
Hospital Sisters Health System		■	■																			
Indiana University Health										■												
Inova Health System					■	■	■			■												
Integris Health	■														■							
Intermountain Healthcare	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	
Johns Hopkins Health System						■	■			■			■					■			■	
Kaiser Permanente		■																				
Lahey Clinic							■															
Legacy Health														■			■					
Lehigh Valley Health Network	■	■	■	■	■	■		■	■	■	■	■	■									■
Mayo Clinic							■			■												
McLaren Health Care	■					■					■		■									
MedStar Health		■			■		■						■	■			■					
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MemorialCare Health System (CA)										■			■						■			

Account Name	CEO Forum	CFO Forum	CHRO Forum	CIO Forum	CMIO Forum	CMO Forum	CNIO Forum	CNO Forum	CSO Forum	GRO Forum	ONC Forum	PHIL Forum	SRE Forum	TRS Forum	Trustees	CFO Fellowship	CMO Fellowship	CNO Fellowship	SRE Fellowship	The Advisors	Collaboratives	PLP
Mercy Health					■	■				■				■						■		
Methodist Le Bonheur Healthcare										■					■					■		
Montefiore Medical Center	■	■	■	■	■	■	■		■	■	■	■		■		■	■			■	■	
MultiCare Health System			■					■								■						
NYU Langone Medical Center																	■					
NewYork-Presbyterian Hospital	■	■	■			■		■	■	■	■		■		■	■	■	■	■	■	■	■
North Shore-LIJ Health System		■	■	■	■		■	■		■	■		■	■			■	■	■		■	■
Northwestern Memorial HealthCare		■	■	■	■	■			■			■	■	■		■					■	
Norton Healthcare		■	■	■	■	■		■		■			■	■			■		■			
Novant Health		■							■												■	
Oakwood Healthcare System		■				■																
Ochsner Health System	■	■		■	■	■	■		■	■			■	■	■	■	■	■	■			
OhioHealth						■					■						■				■	
Palmetto Health						■		■														
Partners HealthCare							■		■	■	■			■								
Piedmont HealthCare		■							■		■					■						
Presbyterian Healthcare Services		■			■	■		■	■				■	■					■			
Presence Health					■												■					
Providence Health & Services	■	■			■		■	■	■	■	■		■			■	■		■		■	
Regional One Health		■										■									■	
SCL Health System		■												■							■	
SSM Health Care		■					■															
Scripps Health		■	■							■				■								
Sentara Healthcare		■	■											■		■						
Sharp HealthCare	■	■		■	■	■	■		■	■	■	■	■			■	■		■			
Spectrum Health			■		■	■											■					
St. Joseph Health									■	■											■	
St. Joseph Hoag Health	■	■													■							
Stanford Hospital & Clinics	■	■		■	■			■		■						■					■	
Summa Health System							■															
Sutter Health															■							
Tenet Healthcare Corporation					■	■	■	■		■			■				■			■		
Texas Health Resources		■					■							■								
Thomas Jefferson University Health System												■										
UCLA Health							■	■														
UF Health Shands		■		■																		
UMass Memorial Medical Center											■											
UPMC		■																				
UnityPoint Health	■	■	■	■	■	■			■	■				■	■					■		
University Hospitals					■	■		■		■				■				■				
University of Chicago Medical Center		■																				
University of Maryland Medical System					■																	
University of Michigan Health System		■														■						
University of Pennsylvania		■																				
Vanderbilt University Medical Center	■						■	■			■					■						
Veterans Health Administration							■															
Virtua	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■		■	■	■	■
Yale New Haven Health System	■	■		■				■	■	■	■	■	■	■		■		■	■	■	■	■

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