Endowment Management Review

Asset Allocation Review

July 19, 2007

Published by the Treasury Office
July 2007

Annual Asset Allocation Review

Table of Contents

Summary

Executive Summary

"Investment performance is our top priority within the risk constraints of the University."

Objective: Generate strong investment performance

- Outperform the CEF policy benchmark by 125 basis points per annum over rolling 3 year periods.
- Add $15 million per annum above the policy benchmark or $90 million over 5 years after compounding.
- Achieve performance that consistently ranks within the second quartile relative to the 50 largest colleges and universities.

Results

	2005	2006
CEF Return	15.1%	16.7%
Policy Benchmark	13.3%	16.6%
Excess Returns (basis points)	180 bp	11 bp
Contribution (dollars)	$26mm	$2mm
Peer Quartile Ranking	2nd	2nd

Plan

- Maintain policy asset allocation developed in 2005.
- Focus efforts overseas with an emphasis on Asia.
- Focus on risk management.

2006 Performance—16.7%

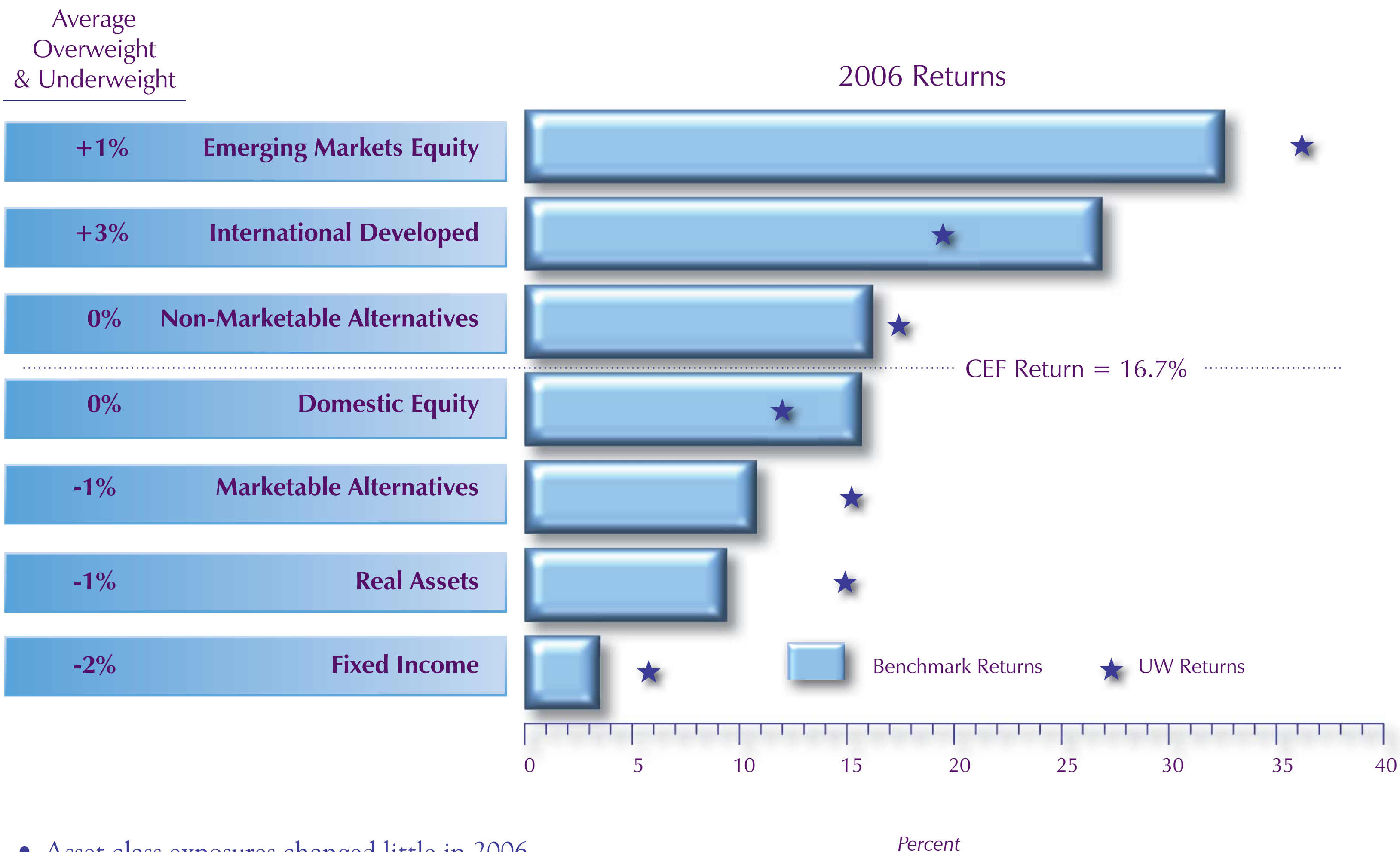
Positives

- Overweight to international developed and emerging markets.
- Overweight China.
- Underweight to fixed income.
- Strong private equity markets fueled by favorable financing environment.

Negatives

- Overweight Japan.
- Manager specific performance in domestic equity.
- US dollar strength on yen based investments.

2006 Performance by Asset Class

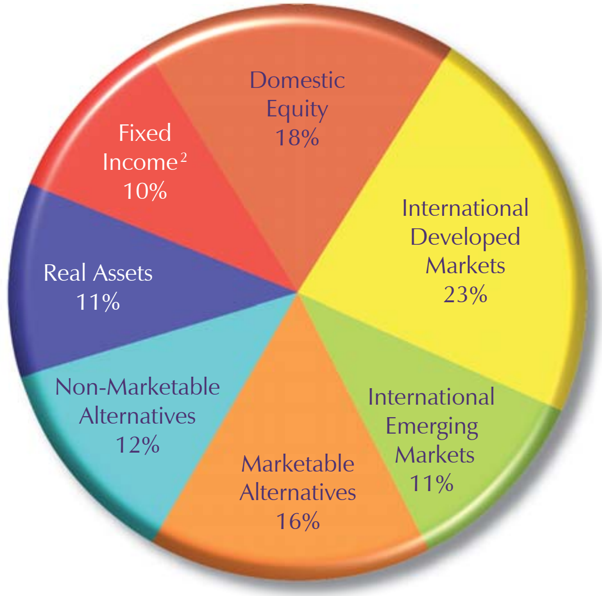


- Asset class exposures changed little in 2006.
- With the exception of domestic equity and international developed, all strategies outperformed their respective benchmarks.
- UW's increased exposure to international developed and emerging markets equities provided a competitive advantage relative to peers in 2006.

Current Asset Allocation

As of March 31, 2007

Consolidated Endowment Fund—$1,947 MM



Dollars in Millions

Current Allocation			Policy Target	Policy Range
Domestic Equity	$341	18%	18%	10%–40%
International Developed Markets	$439	23%	20%	10%–35%
International Emerging Markets	$219	11%	10%	5%–15%
Marketable Alternatives	$309	16%	16%	5%–25%
Non–Marketable Alternatives	$227	12%	12%	5%–20%
Equity Fund	**$1,534**	**79%**	**76%**	**60%–90%**
Real Assets Fund	**$225**	**11%**	**12%**	**5%–20%**
Fixed Income Fund[2]	**$188**	**10%**	**12%**	**5%–35%**
Total Consolidated Endowment Fund	**$1,947**	**100%**		

[1] Total international exposure: 45%; Estimated net foreign currency exposure: 43% *[2] Includes allocation to cash*

CEF Asset Class Exposures as of 3/31/07

	Role in Portfolio	Range	Exposure 3/31/07	Policy Target	Over/Under Traget	Direction	Market Outlook
Domestic Equity							
U.S. Equity	Growth	10–40%	18%	18%	0%	Neutral	Liquidity driven rally continues. Maintain exposure.
Inter national Equity							
Developed Markets	Growth, diversification	10–35%	23%	20%	+3%	Overweight	Overweight international equities.
Emerging Markets	Growth, diversification	5–15%	11%	10%	+1%	Overweight	Attractive long-term growth. Increase overweight in Asia
Marketable Alter natives							
Equity Hedge Funds	Growth, diversification	5–25%	16%	16%	0%	Neutral	Reduced return expectations. Capitalize on opportunities with proven managers.
Event-Driven Hedge Funds	Downside protection, diversification						
Non-Marketable Alter natives							
Venture Capital	Enhanced returns, diversification	5–20%	12%	12%	0%	Neutral	Stress core managers with proven track records in the US. Develop new relation-ships abroad.
Private Equity							
Other	Enhanced Returns, diversification	0%–10%	0%	0%			
	Total Equity F und	70–90%	79%	76%	+3%		Exposure within range of 70–90%
Real Assets							
Private & Public Real Estate	Growth, diversification	5–20%	11%	12%	-1%	Neutral	US overvalued. Increase international exposure.
Commodities	Diversification, inflation hedge					Neutral	Avoid negative roll yield. Maintain core energy exposure. Explore MLP's.
TIPS	Diversification, inflation hedge					Underweight	Low real yields.
	Total Real Assets	5–20%	11%	12%	0%		Exposure within range of 5–20%
Fixed Income							
Bonds	Diversification, deflation hedge	5–35%	10%	12%	-2%	Underweight	Tight credit spreads. Interest rate environment not attractive.
Absolute Return	Diversification, low volatility						
	Total Fixed Income	5–35%	10%	12%	-2%		Exposure within range of 5–35%
			100%	100%			

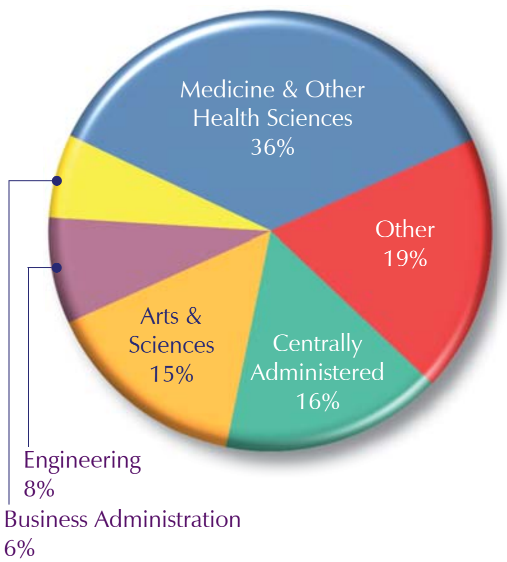
Endowment Goals

Endowment Overview

Endowed Program Support
*as of 6/30/06**

By Purpose

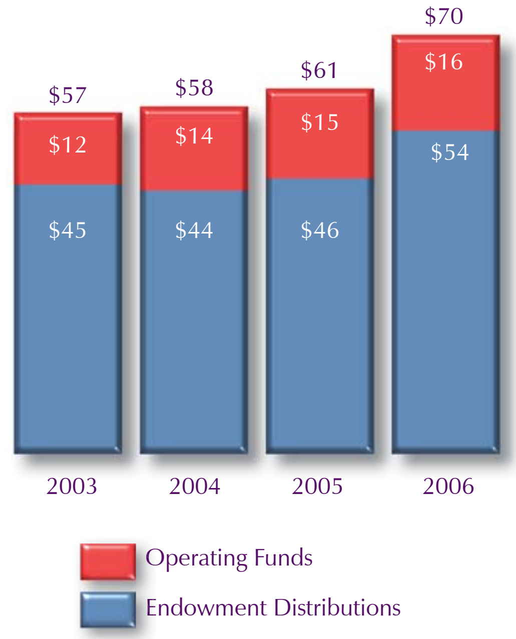
By School & College



* *Total number of endowments was 2,248 at 6/30/06.*

Endowed Distributions
$ = Millions

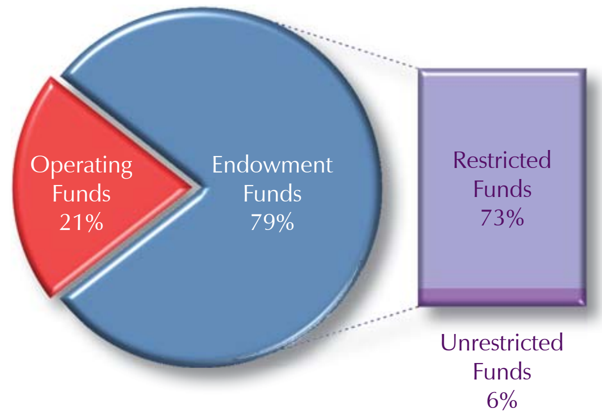
Dollars Distributed



Fiscal Years	Annual UW Revenues	Endowment Distributions	Percent
2003	$2,731	$45	1.6
2004	$2,841	$44	1.5
2005	$3,069	$46	1.5
2006	$3,308	$54	1.6
2007 (est.)		$63	

Endowed Composition
$ = Millions

$1,841 at 12/31/06



92% of the Univesity's endowed funds are restricted. In restricted endowments, distributions may be used only for donor specified purposes. Unrestricted endowment funds may be used for any legitimate purpose of the institution, whether it be scholarships or building maintenance.

Total Return Required and Spending Level

Total Nominal Return*
Required to Meet Current Spending

Endowment Distributions	5.0%	Policy Spending Level
Development Office	0.8%	Administrative Fees
Treasury Office	0.2%	
Expected Inflation	2.5%	Consumer Price Index
Total Return Required	**8.5%**	

* *Return is assumed net of investment fees (manager, consulting, custodial and legal) of approximately 50 b.p.*

Required Nominal Return Matrix

Spending Level and Administrative Fees

Inflation

	4.0%	**5.0%**	**6.0%**	**7.0%**
1.0%	5.0%	6.0%	7.0%	8.0%
2.0%	6.0%	7.0%	8.0%	9.0%
3.0%	7.0%	8.0%	9.0%	10.0%
4.0%	8.0%	9.0%	10.0%	11.0%
5.0%	9.0%	10.0%	11.0%	12.0%
6.0%	10.0%	11.0%	12.0%	13.0%
7.0%	11.0%	12.0%	13.0%	14.0%
8.0%	12.0%	13.0%	14.0%	15.0%

Current spending and inflation rate estimate

Performance Goals

Return Requirement

To attain an average annual inflation-adjusted total rate of return of 6% (net of investment manager fees) over rolling five-year periods.

The 6% target provides for a 5% distribution to endowed programs and a 1% administration fee.

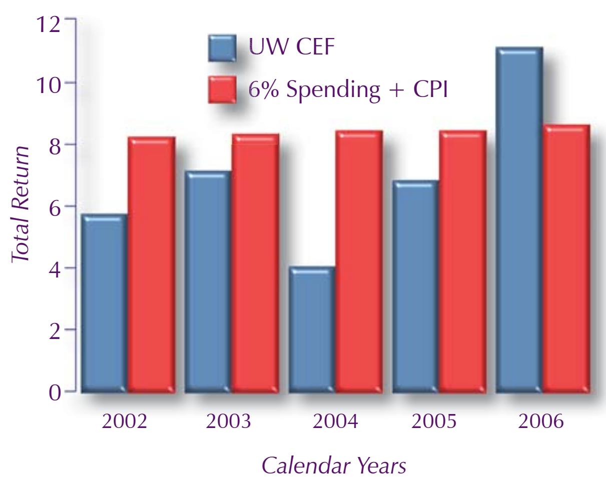
Policy Portfolio

To outperform, on a risk-adjusted basis, a representative blend of market indices which reflect the stratgic asset allocation of the CEF over the long term (rolling five-year periods).

Peer Comparison

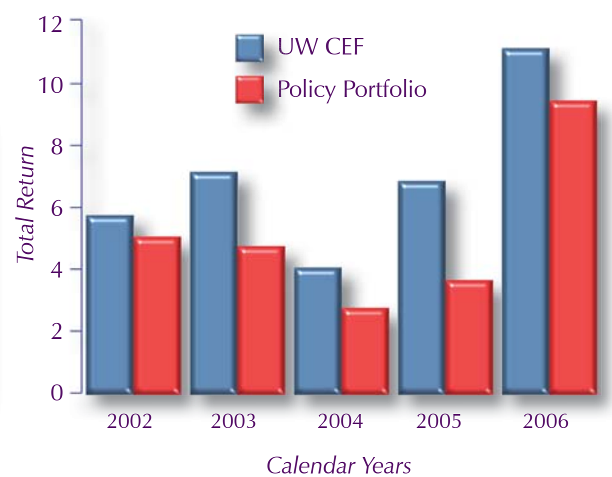
To exceed the median return of the 50 largest colleges and universities in the Cambridge Associates (CA) Universe over rolling five-year periods.

CEF vs. 6% Spending + CPI
Rolling 5 Year Annualized Returns



	2002	2003	2004	2005	2006
UW CEF	5.8%	7.2%	4.1%	6.9%	11.2%
6% Spending + CPI	8.3%	8.4%	8.5%	8.5%	8.7%

CEF vs. the Policy Portfolio
Rolling 5 Year Annualized Returns

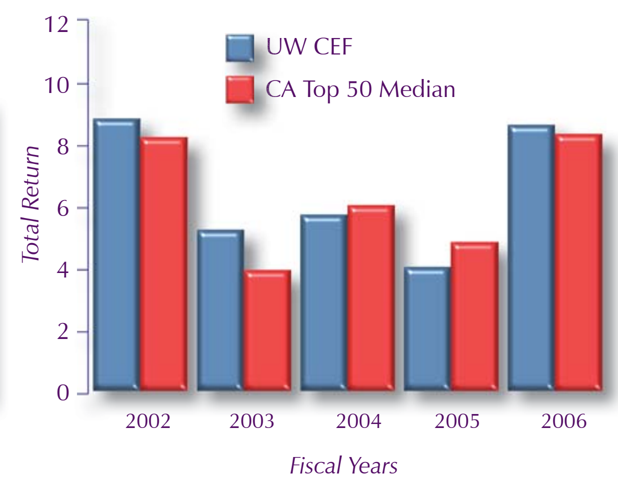


	2002	2003	2004	2005	2006
UW CEF	5.8%	7.2%	4.1%	6.9%	11.2%
Policy Portfolio	5.1%	4.8%	2.8%	3.7%	9.5%

5-Year Sharpe Ratio

	2002	2003	2004	2005	2006
UW CEF	.13	.35	.16	.62	1.24
Policy Portfolio	.07	.12	.00	.17	1.03

CEF vs. CA Top 50 Colleges & Universities
Rolling 5 Year Annualized Returns



	2002	2003	2004	2005	2006
UW CEF	8.8%	5.2%	5.7%	4.0%	8.6%
CA Top 50 Median	8.2%	3.9%	6.0%	4.8%	8.3%

Did not meet performance goal

2007 Asset Allocation

Capital Markets

Global Capital Markets

Total Market Cap as of June 30, 2006—$72.2 Trillion*

Domestic

Equity	18.7%
Private Equity	0.3%
Fixed Income	15.6%
Real Assets	7.5%
Total	**42.1%**

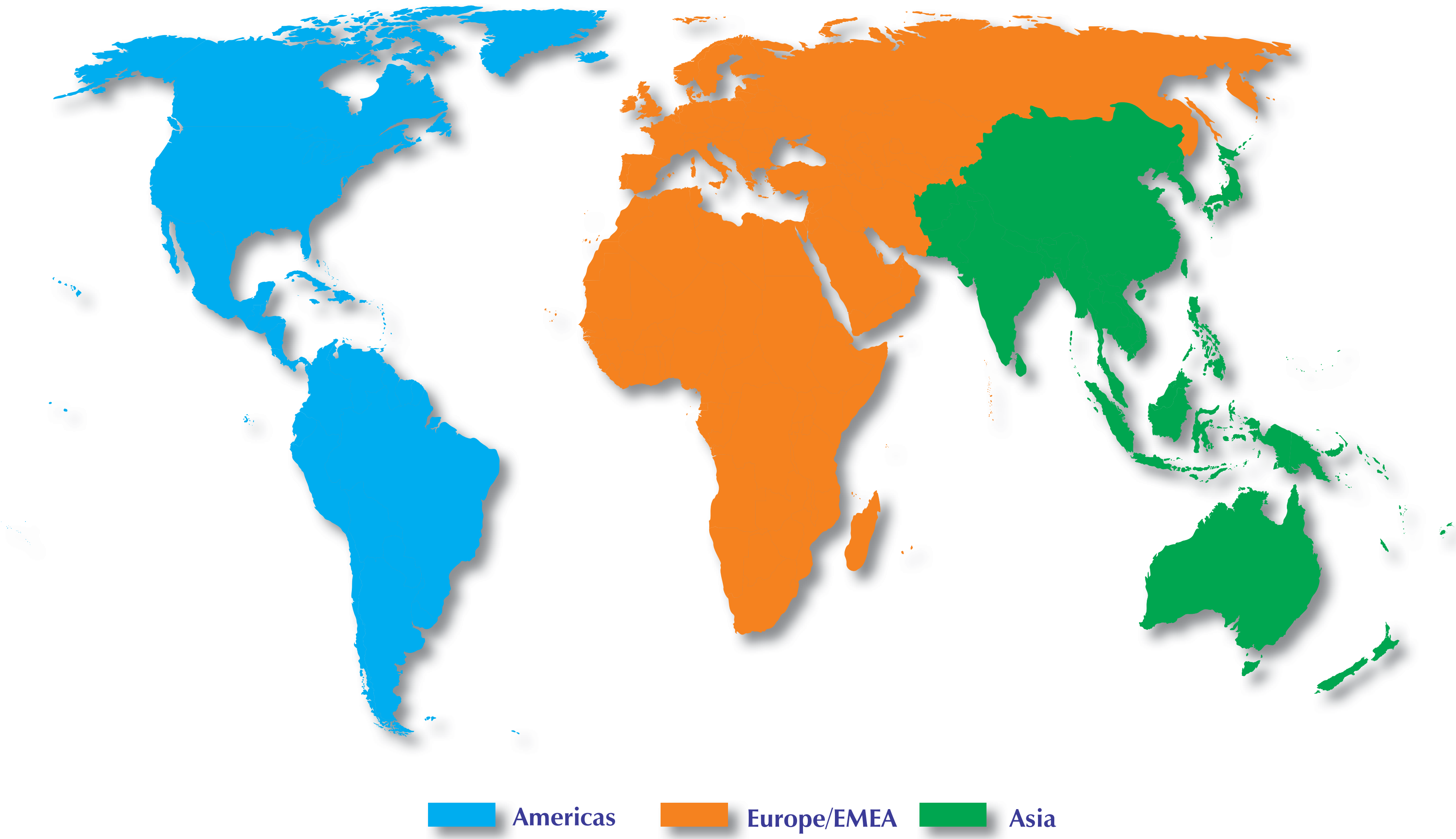
International

Developed Equity	19.4%
Emerging Markets Equity	3.3%
Private Equity	0.2%
Developed Fixed Income	18.4%
Emerging Markets Fixed Income	0.3%
Real Assests.	16.3%
Total	**57.9%**

** Sources Varous including UW proprietary research*

- **International capital markets are larger than domestic markets.**
- **Higher growth rates in emerging markets should further increase the size of international markets.**

The World in Three Regions



• **The investment team is divided into groups to cover the three regions of the world.**

The World in Three Regions

Regional Comparisons [1]

	Americas	Europe/EMEA [2]		Asia	
Developed Countries	Canada United States	Austria Belgium Denmark Finland France Germany Greece Ireland	Italy Netherlands Norway Portugal Spain Sweden Switzerland United Kingdom	Australia Hong Kong Japan New Zealand Singapore	
Emerging Countries	Argentina Brazil Chile Columbia Mexico Peru Venezuela	Czech Republic Egypt Hungary Israel Jordon	Morocco Poland Russia South Africa Turkey	China India Indonesia Korea Malaysia Pakistan	Philippines Sri Lanka Taiwan Thailand Vietnam

	Americas	Europe/EMEA	Asia
Population, total (mn)	773	759/1,573[2]	3,263
GDP (tn US$)	16	15	10
GDP (PPP) (tn)	17	16	22
MarketCap (tn)	19	13	9
Surface area (mn sq. km)	37	23.7/52[2]	26
Foreign reserve (bn)	352	955	2,756
Current account (bn)	(765)	104	359
GDP growth (annual %)	3.6	2.5	7.0
Inflation, GDP deflator (annual %)	7.9	3.0	4.5
UW exposure (as of 3/31/07)	**57%**	**21%**	**22%**

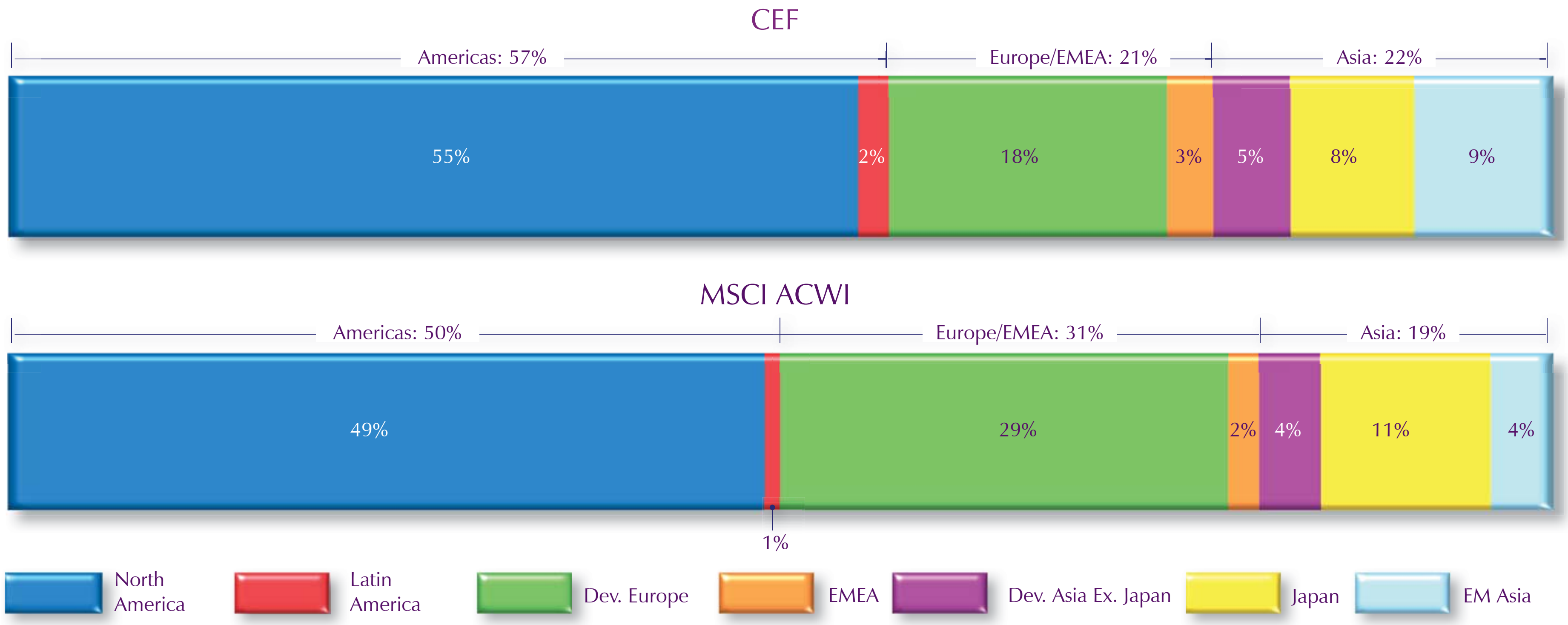
Sources: World Bank, CIA World Factbook & UW Estimates

[1] The listed countries are those used in MSCI indexes.

[2] The right side entries for population and surface area for Europe/EMEA are adjusted for the African countries that are not listed in the detail above.

- **Asia dominates other regions in terms of population and potential market capitalization growth.**

CEF Global Regional Allocation as of 3/31/07



Region	North America	Latin America	Dev. Europe	EMEA	Dev. Asia ex Japan	Japan	EM Asia
CEF	55%	2%	18%	3%	5%	8%	9%
MSCI ACWI	49%	1%	29%	2%	4%	11%	4%

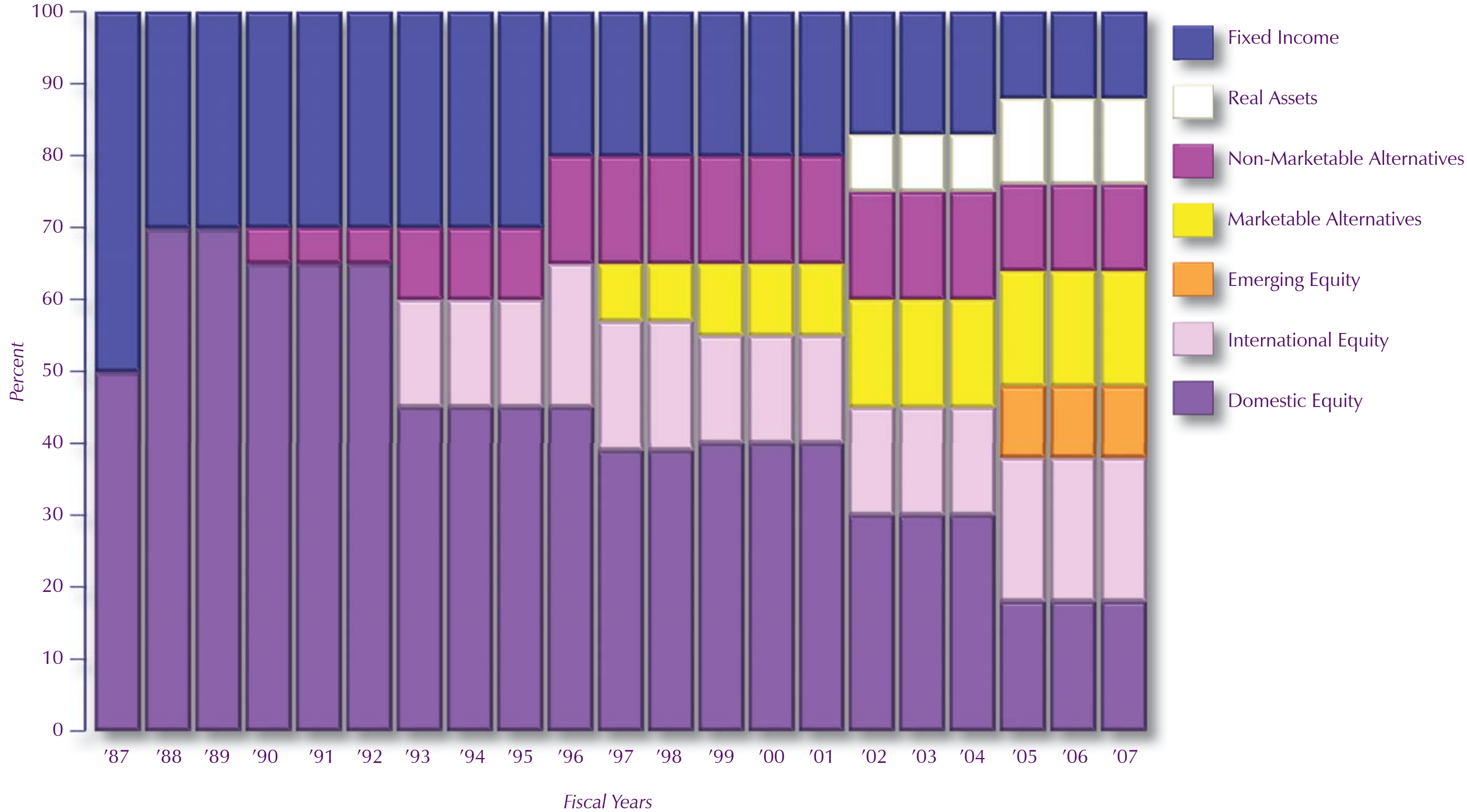
- **Compared to Global Equity market, the UW is underweight developed Europe and Japan and overweight emerging Asia including a 2.5% position in China.**

2007 Asset Allocation

2007 Asset Allocation

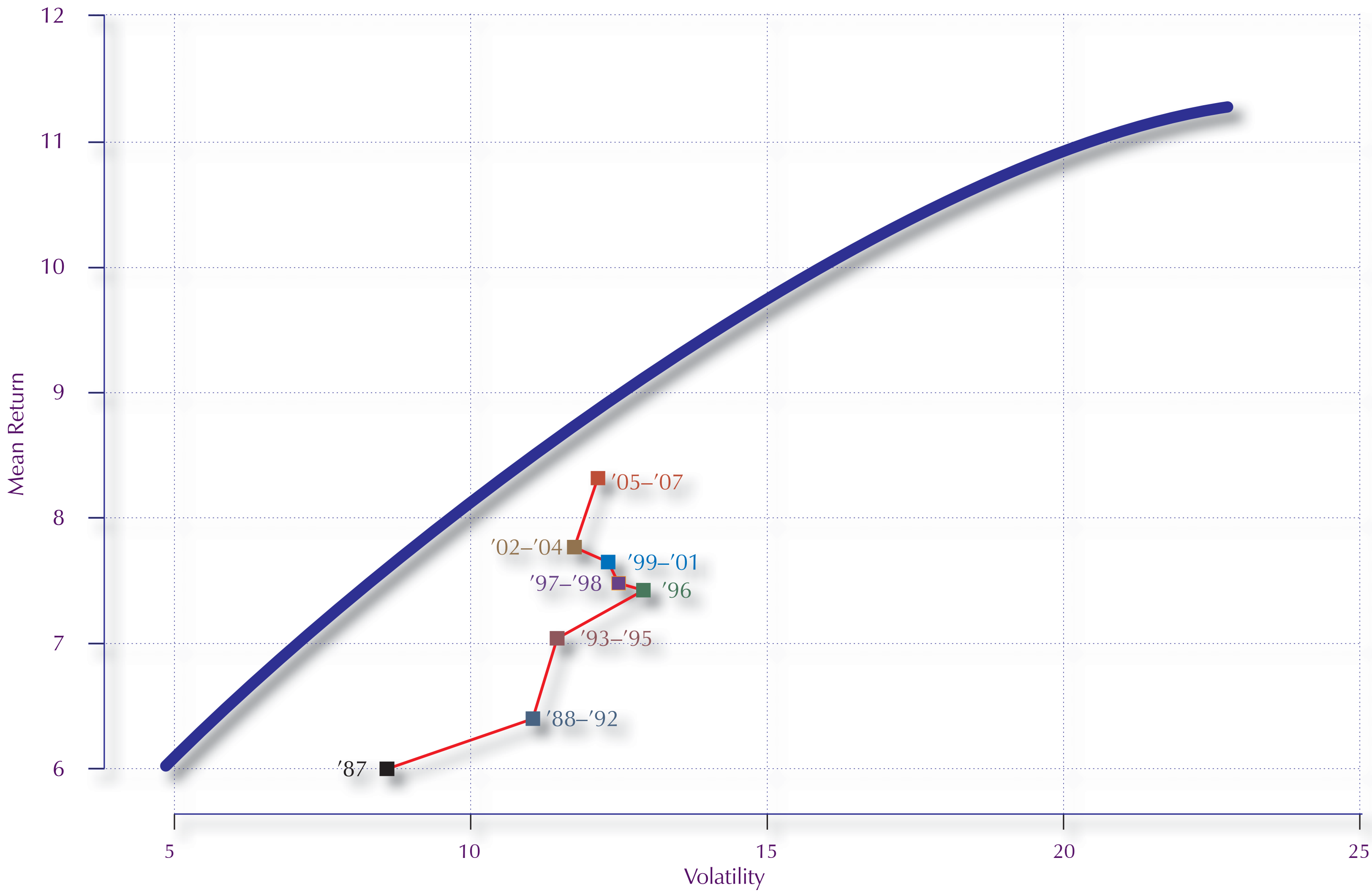
The Move Towards Greater Diversification

Policy Asset Allocation 1987–2007



- **The trend has been towards greater diversification and a higher allocation to equities. Risk adjusted returns, as measured by the Sharpe ratio, increased over time as the CEF became more diversified.**

Historical Risk Return Profile



- UW increased return and risk between 1987 and 1996.
- UW increased return and improved risk profile from 1996 to 2007.

Modeling Constraints

Policy Range Constraints

Domestic Equity	10%–40%
International Equity	10%–35%
Emerging Markets	5%–15%
Marketable Alternatives	15%–25%
Non-Marketable Alternatives	5%–20%
Real Assets	5%–20%
Fixed Income	5%–35%

Liquidity Constraint

MAS + RAS + NAS < 50%

Rationale for Constraints

1. Ability to implement
2. Sufficient liquidity for spending
3. Forecasting error

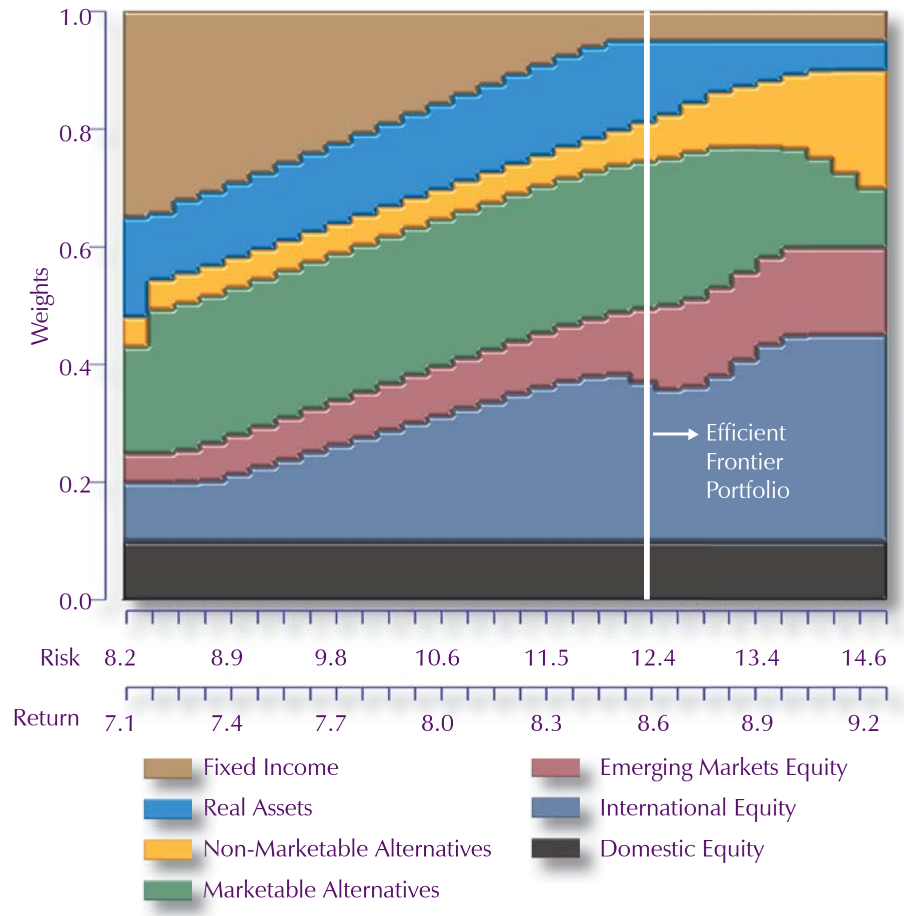
- **Policy ranges were widened in 2005 allowing more flexibililty in the asset allocation, minimizing transaction costs and building a more efficient portfolio.**

Results

Efficient Frontier

Note: Risk in Efficient Portfolios graph is volatility or returns.

Efficient Portfolios

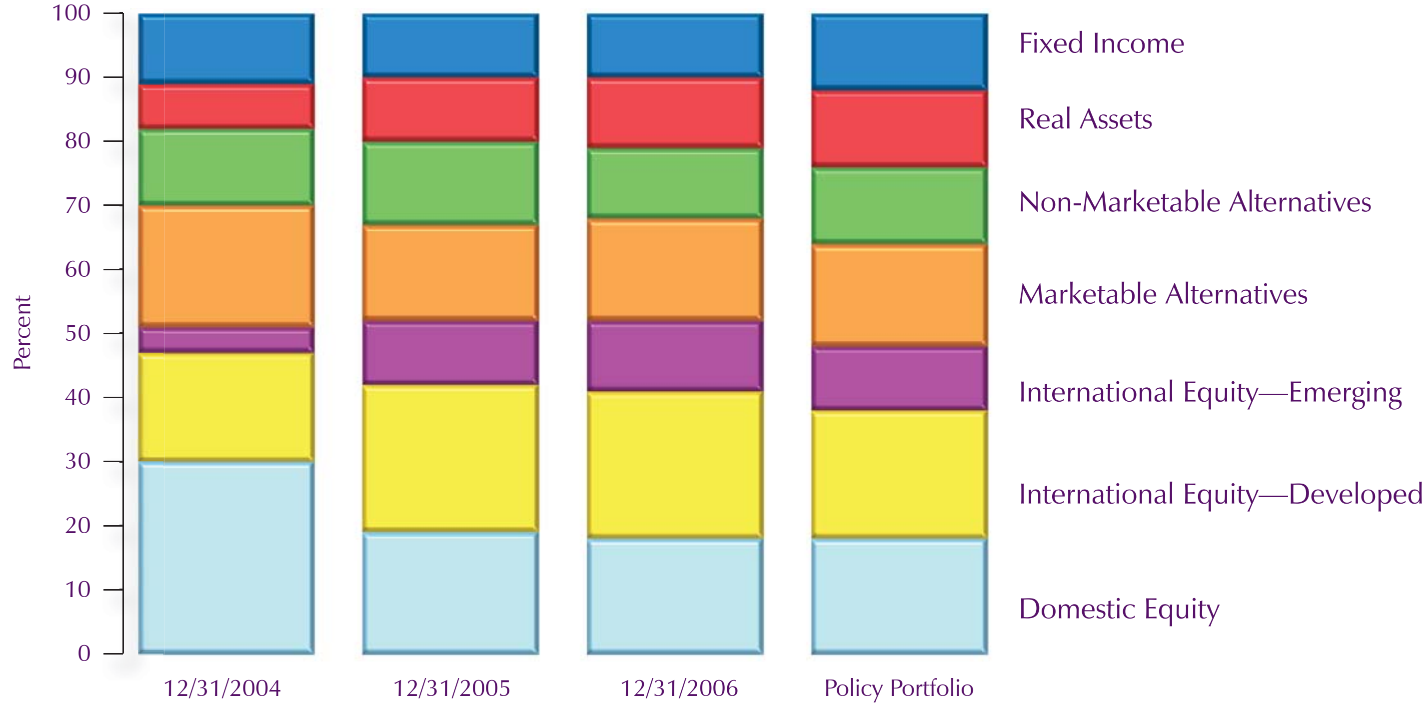


- Efficient frontier portfolio favors international equity and marketable alternatives.

2007 Asset Allocation

Risk Measures

Liability Linked Risk Indicators



	12/31/2004	12/31/2005	12/31/2006	Policy Portfolio
Portfolio Returns	8.0%	8.5%	8.4%	8.3%
Volatility	12.2%	12.7%	12.4%	12.1%
CVaR	11.6%	11.7%	11.3%	10.9%
6% Spending Level				
Spending Risk	47%	45%	44%	45%
Impairment Risk	60%	51%	50%	52%
5% Spending Level				
Spending Risk [1]	40%	38%	37%	37%
Impairment Risk [2]	36%	28%	27%	29%

Spending Risk: [1] "Spending disruption risk" is the likelihood of a real spending reduction of 10% over any 5-year period.
Impairment Risk: [2] "Purchasing power impairment risk" is the likelihood of losing half of the purchasing power of the endowment through capital depreciation over a 50-year time horizon.

- **Policy portfolio has less likelihood of disrupting spending or impairing endowment.**
- **A 5% spending level dramatically lowers risk of impairing the endowment.**

Liability Risk Indicators Defined

Spending Disruption Risk is the likelihood of a real spending reduction of 10% over the next 5 years. This is a forward looking risk measure. It measures the chance that spending will be disrupted in the future - not whether it has been disrupted in the past. For example, endowment distributions today are $60 million per year. The current Spending Disruption Risk level implies a 42% chance that distributions in five years will be at least 10% lower in today's dollars. If an endowment provided funding for 10 scholarships today, Spending Disruption Risk is the chance it will provide funding for 9 or fewer in five years.

Purchasing Power Impairment Risk is the likelihood of losing half of the purchasing power of the endowment through capital depreciation over a 50 year time horizon. This is another forward looking risk measure. The current Impairment Risk level implies a 38% chance of eroding half of the corpus of the endowment over a long time period. This measure gauges intergenerational equity—whether the spending level today will compromise spending for future generations. For ex-ample, if an endowment were worth $100 thousand today, this-measure indicates the chance that in 50 years the real value of the endowment will be $50 thousand or less.

Although these risk levels are large, the measures are sensitive to expected return levels, expected volatility, and spending levels. Recent volatility has been much lower than it has been historically but is difficult to predict and can change very quickly.

These new risk measures provide a link between the assets and the liabilities of the endowment. Expected endowment returns, risk including non-normal event risk and inflation are linked together with spending to more accurately gauge risk in the portfolio. The partnership between the Treasury Office and the Computational Finance Department enabled the creation of these as well as other risk and portfolio management tools.

2007 Asset Allocation

Policy Benchmark

Policy Benchmark

Asset Class	Benchmark
Domestic Equity	Russell 3000
International Developed Equity	MSCI EAFE
Emerging Markets Equity	MSCI Emerging Markets
Marketable Alternative Assets	30% Russell 3000 + 70% (3 month T-bills) +3%
Non-Marketable Alternative Assets	50% CA Venture Capital + 50% CA Private Equity
Real Assets	Private Real Assets: • 65% NCREIF + 20% CA Oil and Gas + 15% NCREIF Timberland Index Public Real Assets: • 33% NAREIT + 33% GSCI + 33% Lehman US TIPS Index
Fixed Income	Lehman Brothers Government Bond Index
Consolidated Endowment Fund	**Policy Target Weighted Composite of Asset Class Benchmarks**

- **The Policy Benchmark was developed in 2005 to match asset class risk characteristics.**