



# Office of the Treasurer

## Fixed Income Management

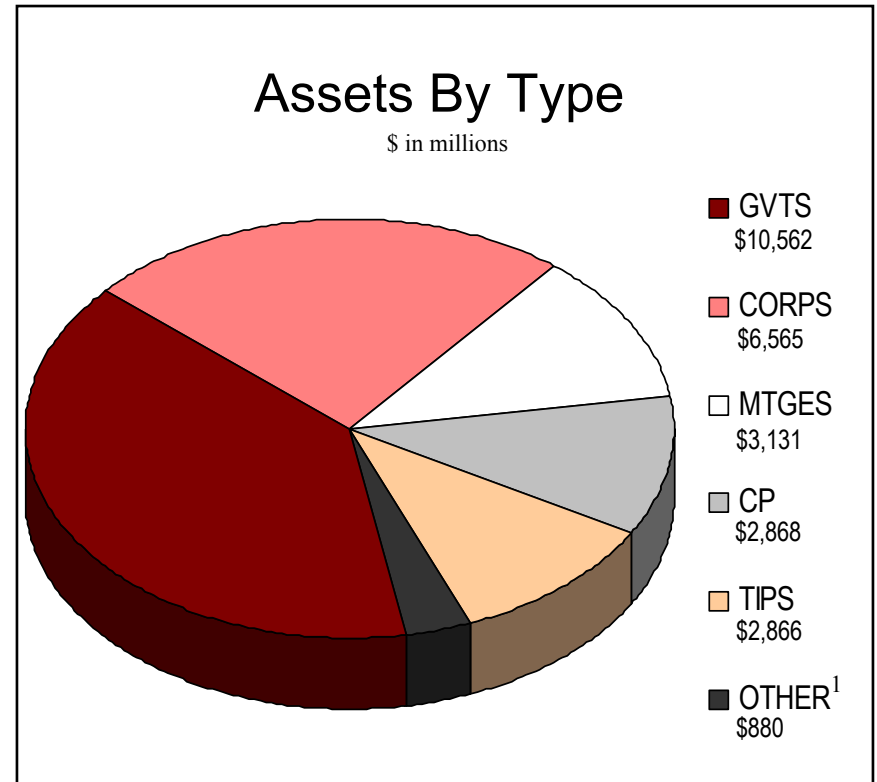
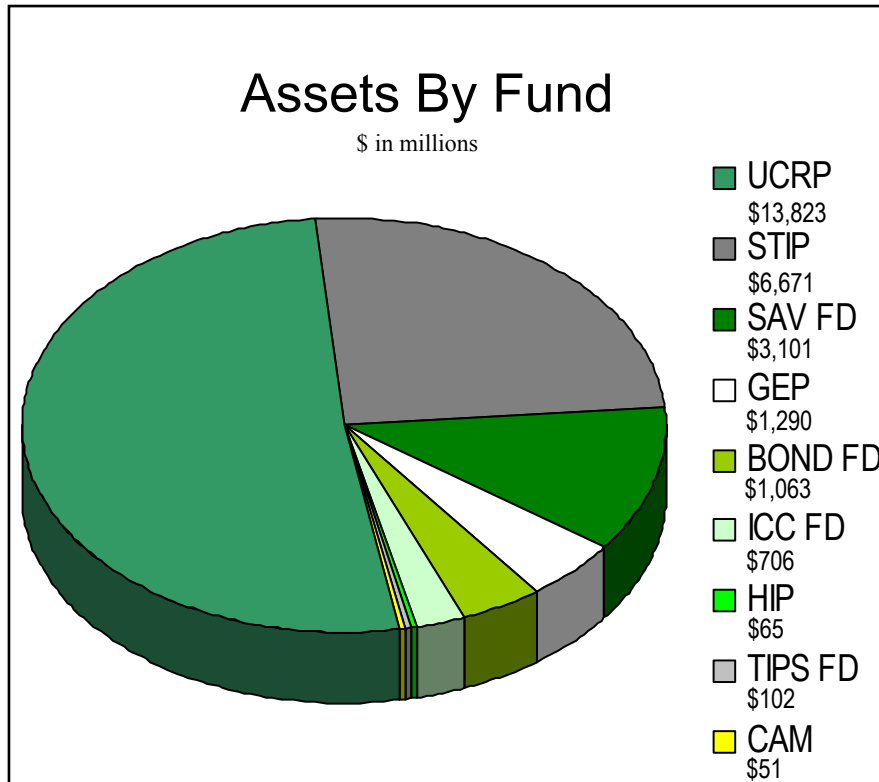
November 14, 2005

Office of the Treasurer  
Of The Regents  
University of California

# Total Fixed Income Under Management 6/30/05

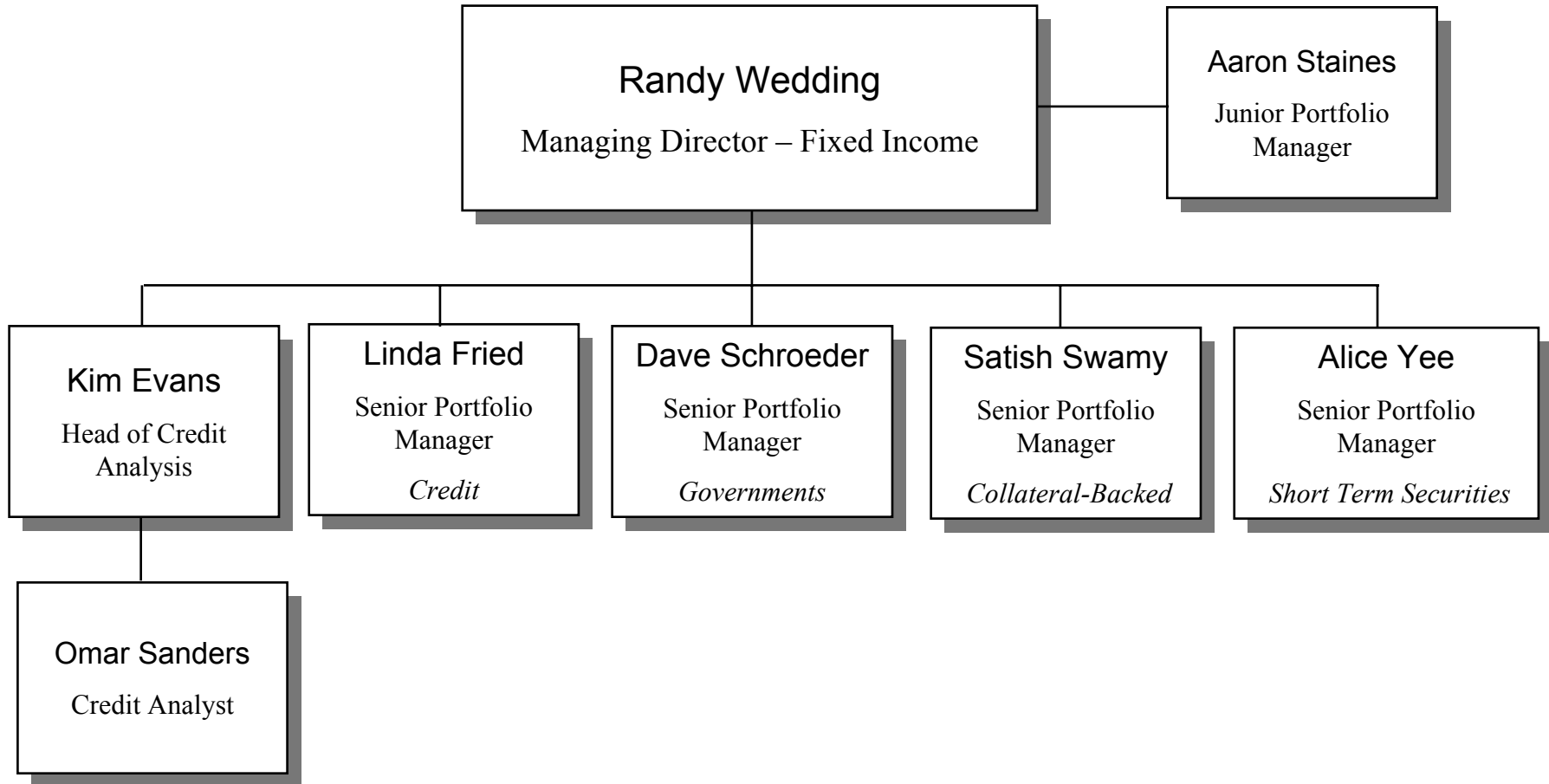


\$27 Billion



<sup>1</sup> Includes repurchase agreements, BA's, GIC's, CD's, and cash.

# Fixed Income Organizational Chart

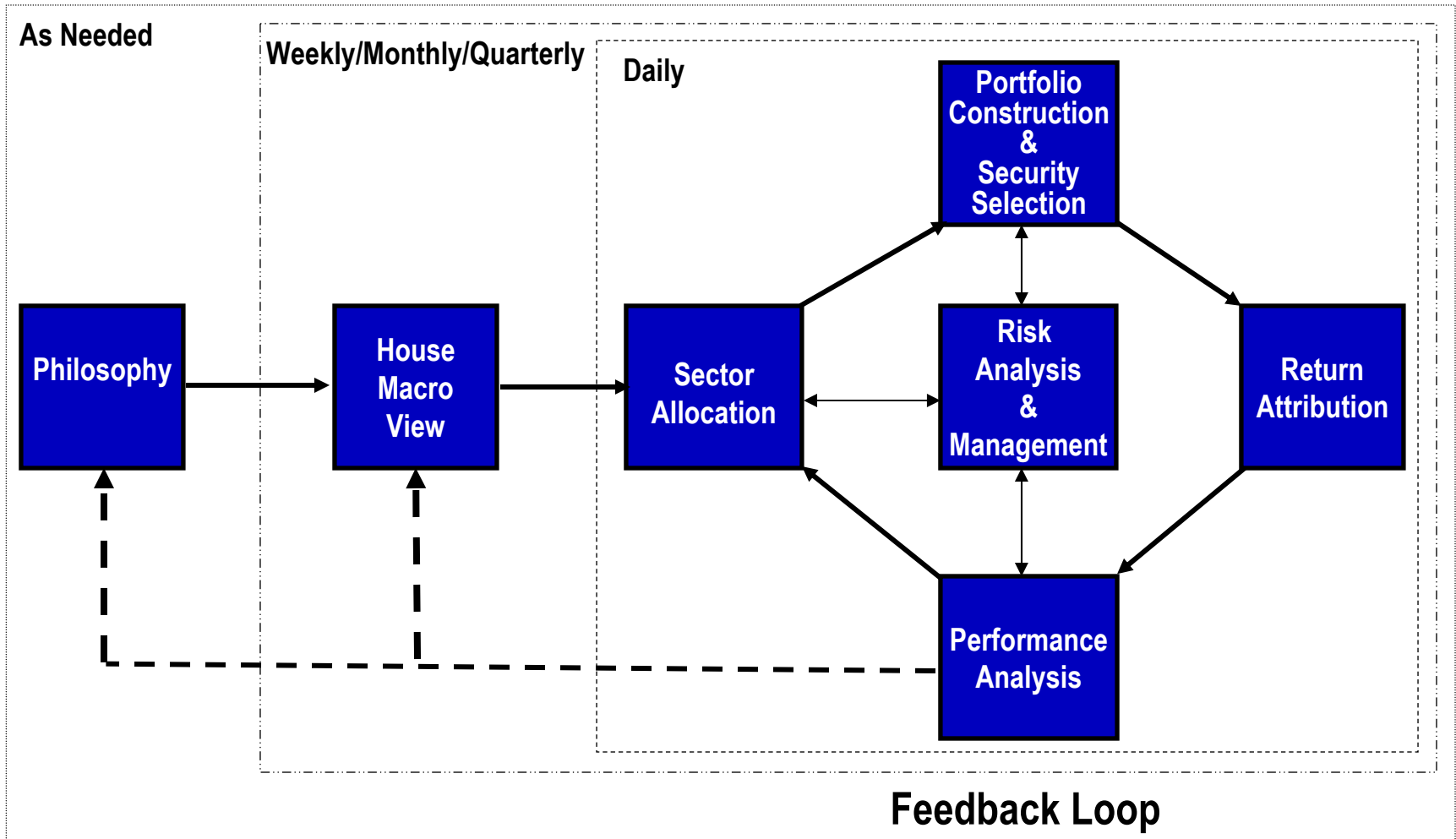


# Investment Philosophy: Fixed Income



- Returns can be enhanced through **disciplined active management** of the following risks:
  - Duration-yield curve-convexity-sector-credit.
- We believe a **long term investment horizon** yields several advantages. Among them are:
  - Allows time for our investment themes to develop.
  - Positions us to be the buyer when the market is selling and vice versa.
- We enhance core sector returns with **opportunistic investments in noncore securities**.
- Disciplined active management implies rigorous **risk assessment and management**.
  - Control overall portfolio risk.
  - Minimize unintended risk.
  - Identify sources of return.

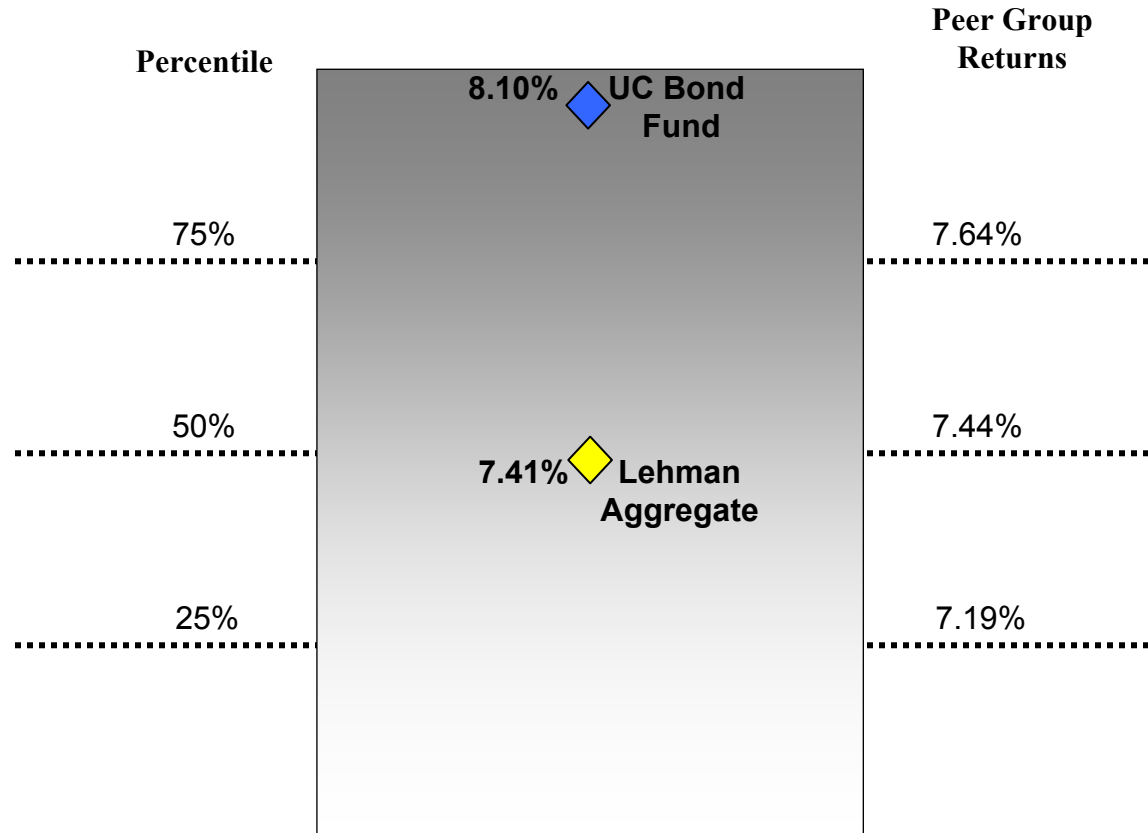
# Investment Process: Fixed Income



# Performance



UC Bond Fund's 8.10% 5-Year Return Places it at the 95<sup>th</sup> Percentile of its Peer Group

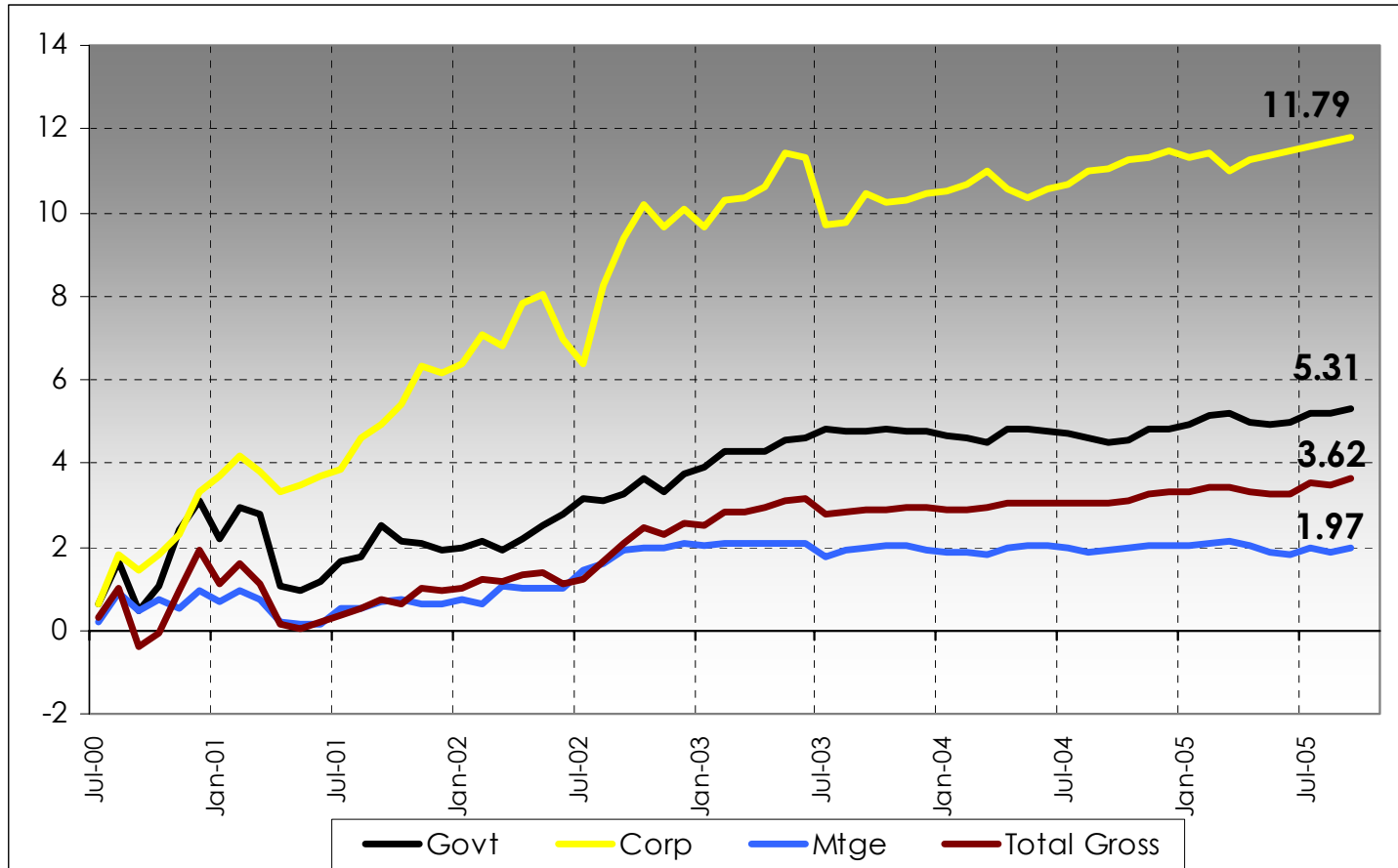


Wilshire Core/Core Plus Peer Universe includes 186 members. All returns are gross of fees for the period ending June 30, 2005.

# Cumulative Outperformance by Sector



## Bond Fund Sector Active Returns (Cumulative) %



All returns are gross of fees for the period June 30, 2000 – September 30, 2005.

# Macro View



- **Each Fixed Income Team member contributes to a consensus on these fundamentals:**
  - Economic Activity
  - Inflation Expectations
  - Monetary Policy
  - Fiscal Policy
  
- **Explicit estimates of these variables are generated:**
  - Short and long interest rates
  - Yield curve slope
  - Volatility
  - Sector supply/demand technicals
  - Credit spreads
  
- **Finally, estimates of risk and return are made for:**
  - Core sectors
  - Selected non-core investments



# Risk Settings and Sector Allocations



- **Exposures to major portfolio risk factors are dictated by our macro view.**
  - Duration
  - Curve Exposure
  - Convexity
  - Credit
  - Prepayments
- **Active sector weightings are the result of an iterative process.**
  - Optimization using expected return and historical covariance.
  - Stress testing expected return scenarios with alternative assumptions.
  - Adjusting weights and repeating process.
- **All potential portfolios are subject to:**
  - Portfolio risk guidelines.
  - Risk budgets for sectors and in aggregate.

# Current Macro Outlook



- **GDP Growth-** To average above trend 3.75% next four quarters.
- **Inflation-** Core CPI to rise to 2.5% from current 2.0%.
- **Federal Reserve Bank Policy-** Federal Funds rate to be hiked from current 4.00% to 4.75-5.00% by late 2006. Market forecast is for 4.50% rate at end of tightening cycle.
- **U.S. Treasury Yields-** Two year yields to rise to 4.65%, ten year yields to rise to 5.0%. Market implied forecasts are 4.40% and 4.55%, respectively.
- **Equity/Interest rate volatility-** Steady increase from current multiyear lows.

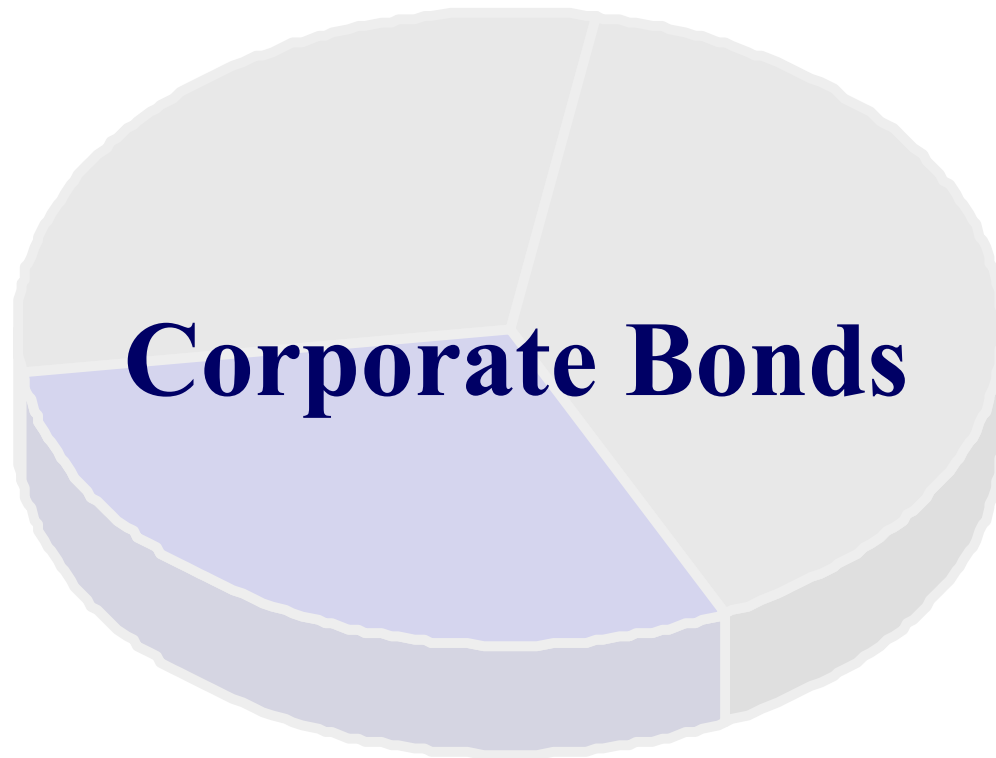
# Investment Implications



- **Interest Rate Sensitivity**- Duration 3% lower than index, policy guideline is +/- 20%.
- **Yield Curve Exposure**- Government sector positioned for a mild curve steepening following current prolonged flattening trend.
- **Sector Weights**- Sector weights for Credit and Collateral-backed sectors are close to benchmark weights but within sectors we are positioned for spread widening versus duration matched Treasuries.
  - Materially underweighting spread sectors is costly in terms of foregone yield.
  - Security selection and industry overweights/underweights more effective in expressing negative view on spreads.



- **Ratings Bias-Overweight** Higher rated, underweight lower rated credits.
  
- **Credit Sector Industry Overweights-**
  - Utilities- Good free cash flow, improving credit quality.
  - Cable- Good free cash flow, spreads discount event risk.
  - Commodities- Good free cash flow, global low cost leaders, cyclical risk more than offset by secular positives.
  - Wireless telcom
  
- **Credit Sector Industry Underweights-**
  - Financials-Banks, consumer credit.
  - Wirelines- Secular erosion, excessive capex.
  - Pharma- Product liability, lack of new drugs.

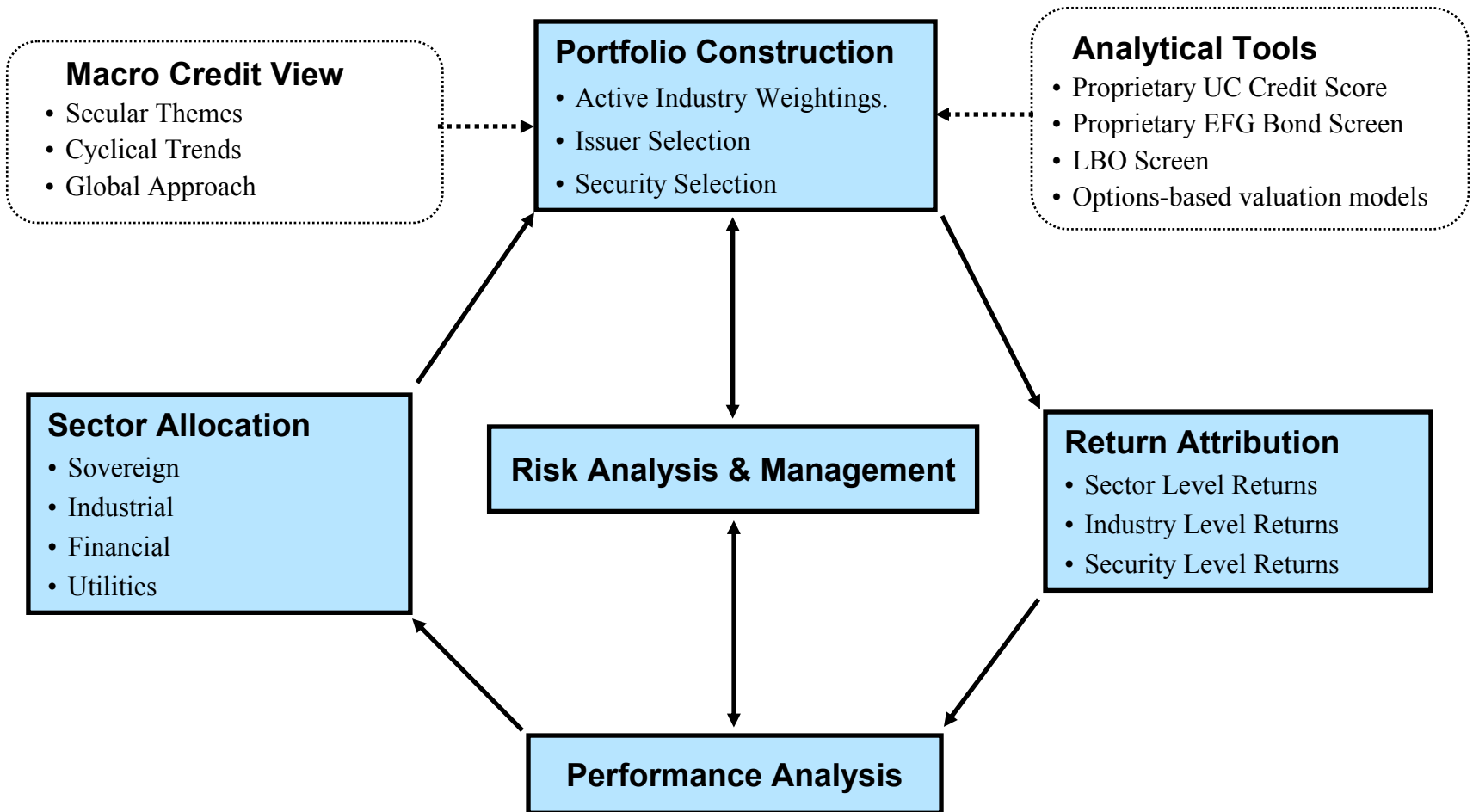


# Investment Philosophy: Corporate Bonds



- **Use an equity-like approach and proprietary credit metrics** embodying our philosophy on credit quality.
- Identify mis-priced securities resulting from structural and temporary market inefficiencies and mis-ratings of fundamental credit quality.
- Assign mis-priced or mis-rated securities a **materially different weight than the benchmark** representation.
- **Secular themes** involving globalization, demographics and technological innovation influence sector weightings. With a long-term horizon, we can weather short-term market turbulence and let these themes develop.
- Constantly monitor existing and prospective investments using proprietary tools that reflect our credit philosophy and reinforce objectivity and discipline.  
**The sell decision is at least as important as the buy decision.**

# Investment Process: Corporate Bonds



# UC Credit Score



UC CREDIT SCORE ( 1 = Best, 10 = Worst )						
ENTITY	MANAGEMENT STRENGTH	BUSINESS POSITION	FINANCIAL STRENGTH	GROWTH	EVENT RISK	UC CREDIT SCORE (Average)

Strategy	Operating history/stability/ consistency of business model	Past/projected rev/profit grwth	Growth drivers	Equity performance
Execution/stability/ consistency/credibility	Market share/business position	Profitability/margins/EVA/ global cost position	Past/projected rev/profit grwth	Equity valuation trend/comps
Depth/breadth of mgmt	Business mix/diversification	Transparency of financial statements/off-balsht/PF's	Organic/synthetic growth	Accounting/legal/SEC issues
Corporate governance/ conflict of interests/ oversight/transparency	Secular trends	Equity valuation/performance/ volatility	Unit volume growth/prc'g power	Mergers & acquisitions
Financial controls/systems	Barriers to entry/exit	Capital structure philosophy	Margin expansion potential	Shareholder-friendly actions
Capital structure philosophy	Commoditization/cyclicality	Free cash flow generation	Free cashflow/OCF growth	Sovereign events
Accounting/legal/SEC issues	Technological rate of change	Liquidity position/capital access	Consistency/stability of growth	Regulatory changes/events
		Volatility of results		Political changes/events
		Credit metrics		Legal changes/events
				Social/"other" changes/events



# UC Credit Score – Clear Channel



## UC CREDIT SCORE ( 1 = Best, 10 = Worst )

ENTITY	MANAGEMENT STRENGTH	BUSINESS POSITION	FINANCIAL STRENGTH	GROWTH	EVENT RISK	UC CREDIT SCORE (Average)
<b>Clear Channel</b>						
Q2 2004	2	3	4	6	5	4
Q2 2005	4	5	6	8	8	6

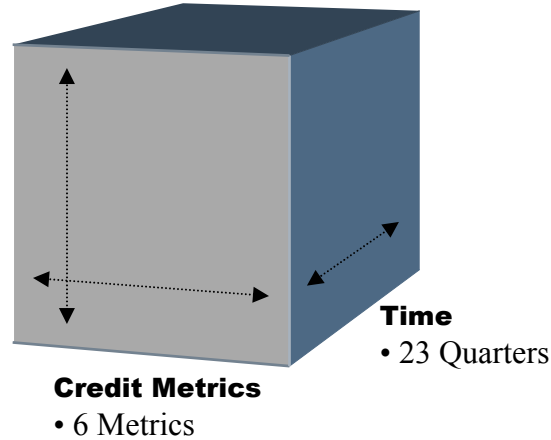
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Depth/breadth of mgmt	Business mix/diversification	Transparency of financial statements/off-balsht/PF's	Organic/synthetic growth	Accounting/legal/SEC issues
Corporate governance/conflict of interests/oversight/transparency	Secular trends	Equity valuation/performance/volatility	Unit volume growth/prc'g power	Mergers & acquisitions
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# EFG Bond Screen

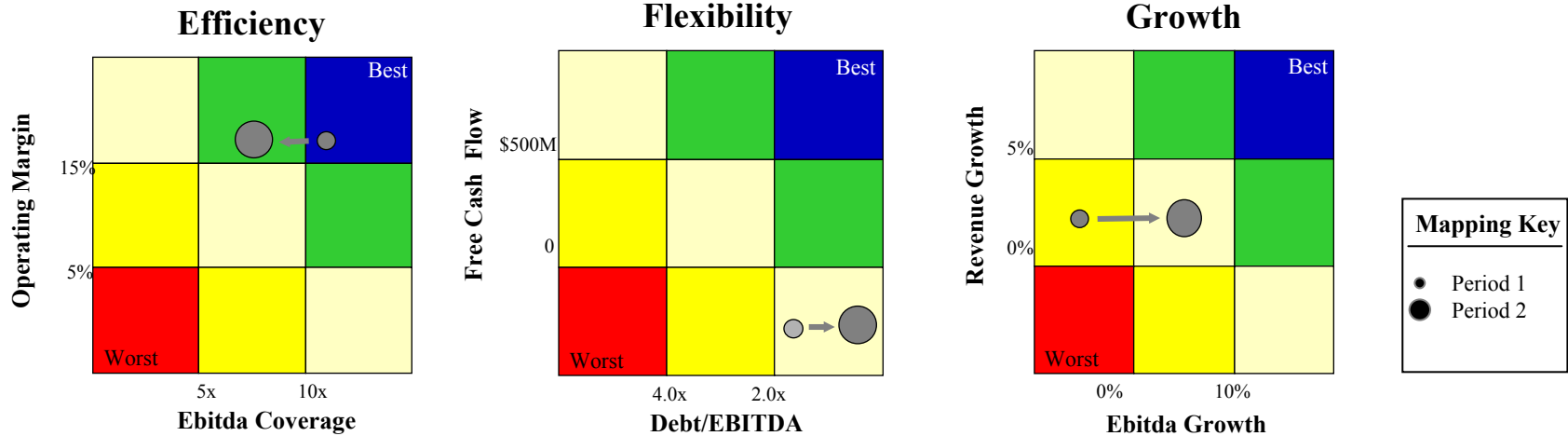


## 3-D Database

- Universe**
- 34 Sectors
  - 460 Companies



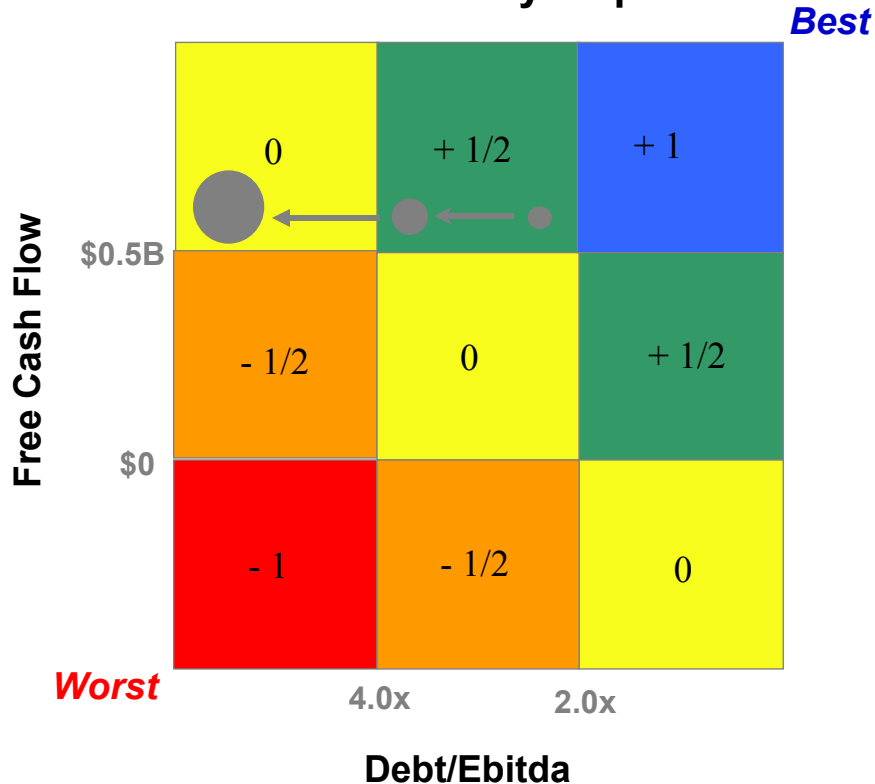
## Maps



# Clear Channel EFG Score



Flexibility Map



EFG Table

FACTORS	Q2 2004 VALUE	Q1 2005 VALUE	Q2 2005 VALUE
EFFICIENCY	+ 1/2	+ 1/2	+ 1/2
FLEXIBILITY	+ 1/2	+ 1/2	0
GROWTH	0	- 1/2	- 1/2
EFG SCORE	+ 1	+ 1/2	0

# LBO Screen



- Leveraged buyout (LBO) activity has dramatically increased given improved corporate liquidity and heightened shareholder activism
- The LBO Screen is a real-time monitor which highlights companies most susceptible to the “negative event risk” of an LBO or recapitalization
- Based on the S&P 1500 Index, the Screen calculates a company’s proposed valuation assuming:
  - 25% acquisition premium
  - 30% sponsor equity contribution
  - Corporate cash is exhausted
  - Revised capital structure includes additional debt necessary to fund the transaction
- The LBO Screen sorts companies most vulnerable to corporate actions, supports monitoring of the current portfolio, and pinpoints credits which may need further analysis

# LBO Screen



**S&P 1500 INDEX UNIVERSE  
LEVERAGED BUYOUT ANALYSIS  
ASSUMES 25% EQUITY PREMIUM, 30% SPONSOR EQUITY**

## Machinery Sector

10/14/2005

Name	Valuation		Valuation				Leverage			Liquidity		
			LTM		Proposed		TD/ LTM TD	LTM EBITDA	Proposed Add'l Leverage (\$mn)	Proposed TD/EST EBITDA*	LTM FCF	Cash & Equiv
			EBITDA Margin	EV/ LTM EBITDA	EV/EST EBITDA	EV/EST EBITDA*						
Cummins Inc	3,621.9	87%	8.3	5.6	4.6	5.3	1,645.0	1.9	2,192.7	3.7	270.0	690.0
AGCO Corp	1,556.5	76%	8.0	5.8	4.8	5.3	1,158.6	2.7	786.4	3.7	49.8	325.6
Albany International Corp	1,209.0	97%	16.3	8.2	5.1	6.4	229.6	1.4	947.7	4.5	41.2	59.0
Briggs & Stratton Corp	1,741.0	79%	10.0	7.8	7.0	8.4	486.8	1.8	1,264.2	5.9	27.4	161.6
Applied Industrial Technologies Inc	1,034.2	91%	6.1	9.4	8.4	10.6	77.0	0.7	792.8	7.4	59.1	127.1
Robbins & Myers Inc	322.7	88%	0.0	10.1	9.1	10.2	181.7	3.6	221.8	7.1	0.7	8.6
Nordson Corp	1,204.6	91%	17.3	9.0	8.1	10.3	184.5	1.3	956.3	7.2	89.4	60.6
Manitowoc Co	1,563.4	100%	8.3	10.9	9.5	11.2	583.8	3.2	1,067.8	7.9	(22.1)	178.7
Rockwell Automation Inc	9,581.3	83%	15.7	11.0	9.7	12.0	757.9	0.8	7,824.6	8.4	422.4	473.8
Flowserve Corp	1,904.7	91%	10.6	11.0	10.2	12.0	946.3	3.7	1,345.3	8.4	81.3	53.5
IDEX Corp	2,144.1	92%	19.4	11.7	10.1	12.6	225.3	1.1	1,803.4	8.8	95.8	7.3
Graco Inc	2,296.1	81%	29.6	11.7	10.4	12.6	6.0	0.0	1,964.9	8.8	67.9	60.6
Caterpillar Inc	37,046.8	91%	13.7	13.2	11.0	12.5	23,525.0	5.1	25,047.0	8.8	(1,254.0)	445.0
Gardner Denver Inc	1,128.4	95%	11.3	11.1	9.4	13.3	313.2	3.0	848.2	9.3	68.9	64.6
JLG Industries Inc	1,792.5	93%	8.6	12.5	10.9	13.5	289.4	1.9	1,325.1	9.5	94.8	223.6
Zebra Technologies Corp	2,716.4	62%	28.6	11.8	10.1	13.4	0.2	0.0	1,986.2	9.4	80.9	558.0
Astec Industries Inc	535.4	74%	6.8	13.3	11.3	14.1	37.7	0.9	451.4	9.9	(5.5)	8.4
Lindsay Manufacturing Co	241.9	71%	0.0	22.4	20.0	26.5	0.0	0.0	195.0	18.6	3.4	23.8
Cognex Corp	1,383.1	87%	28.1	25.5	21.0	26.5	0.0	0.0	1,046.0	18.5	33.9	234.7
Deere & Co	14,314.8	79%	15.4	---	---	---	14,547.9	---	5,761.6	---	76.6	3,427.8
Gerber Scientific Inc	171.9	94%	2.6	18.7	---	---	45.7	4.0	132.4	---	11.7	6.2
Stewart & Stevenson Services Inc	651.4	86%	7.5	7.1	---	---	26.7	0.3	468.9	---	(57.9)	132.9
Tecumseh Products Co	371.9	42%	7.8	---	---	---	386.1	---	50.1	---	(286.9)	227.9
<b>AVERAGE</b>	<b>3,849.3</b>	<b>84%</b>	<b>12.2</b>	<b>11.8</b>	<b>10.0</b>	<b>12.5</b>	<b>1,985.0</b>	<b>1.8</b>	<b>2,542.6</b>	<b>8.7</b>	<b>(2.2)</b>	<b>328.7</b>
<b>MEDIAN</b>	<b>1,556.5</b>	<b>87%</b>	<b>10.0</b>	<b>11.0</b>	<b>9.7</b>	<b>12.0</b>	<b>229.6</b>	<b>1.4</b>	<b>1,046.0</b>	<b>8.4</b>	<b>49.8</b>	<b>132.9</b>

# Risk Management Goals



- Assure quality and consistency of fixed income investment process.
  - Are the risk exposures within tolerances expressed by Regents?
  - Is the stated strategy being followed?
  - Is the risk budget being used efficiently?
    - Are expected returns commensurate with contribution to portfolio risk?
- Assure adequate diversification and compliance with investment guidelines.



*Thank you*

# Managing Director



## **RANDOLPH E. WEDDING**

Mr. Wedding is responsible for the strategic focus and management of the long- and short-term fixed-income portfolios. Prior to joining the Treasurer's Office in 1998, Mr. Wedding was Manager of Currency Options and Derivatives Trading for Bank of America, NT&SA, New York; Managing Director, Commodities and Derivative Sales for Bear Stearns & Co. Inc, New York; and Principal, Manager of Fixed-Income Derivative Sales for Morgan Stanley & Co., New York. Mr. Wedding began his career with Wells Fargo Bank, responsible for the Bank's Fixed Income Portfolio. Mr. Wedding earned his MBA in Finance from the University of California, Berkeley and BA in Mathematics from the University of California, San Diego.



# Credit Analysis



## **KIM B. EVANS**

Kim Evans, Head of Fixed Income Credit Research, is responsible for global credit research and fundamental credit strategy. Ms. Evans makes fundamental investment recommendations for high-grade and high-yield corporate bonds and emerging market sovereign bonds globally.

Ms. Evans' background comprises buy-side and sell-side experience in both Equity and Fixed Income investment areas. Prior to joining the Treasurer's Office in 1991, Ms. Evans worked in Investment Banking at Robertson, Colman & Stevens; as Associate Director of Financial Services for Dataquest, Inc.; and as Equity Analyst for Software & Services with Sutro & Company. Ms. Evans received her MBA degree in Finance and a double BS degree in Civil Engineering and Materials Science from the University of California, Berkeley.

# Credit Analysis



## **OMAR K. SANDERS**

Omar K. Sanders, Investment Analyst in Fixed Income Credit Research, is responsible for evaluating the fundamental credit quality and investment potential of a broad range of industry sectors and companies. Mr. Sanders makes fundamental investment recommendations for corporate bond securities.

Mr. Sanders' background comprises buy-side and sell-side experience in both Equity and Fixed Income investment areas. Prior to joining the Treasurer's Office in 2001, Mr. Sanders was an Associate Director of Global Research with MetLife Investments; Analyst in Equity Research with Daruma Asset Management; Analyst in Equity Capital Markets with Merrill Lynch & Company; and Analyst in Investment Banking with Prudential Securities. Mr. Sanders received his MBA in Finance and his BA in Political Science from Columbia University. Mr. Sanders has his CFA designation.



## **LINDA FRIED**

Linda Fried, Senior Portfolio Manager, is a member of the portfolio management team responsible for managing the fixed income portfolios. Ms Fried is responsible for formulating and implementing investment strategies for the credit portion of the fixed income portfolios, with an emphasis on evaluating relative value among industry sectors and individual credits.

Ms. Fried's background in the Treasurer's Office comprises experience in both the Equity and Fixed Income investment areas.

Prior to joining the Treasurer's Office in 1982, Ms Fried was Manager of the Statistical Department and Editorial Assistant for Keystone Massachusetts, Inc., Boston; and Statistical Assistant/Office Manager for MFI Associates, Bala Cynwyd, Pennsylvania. Ms Fried earned her BA degree from the University of Pennsylvania.



## **DAVID W. SCHROEDER**

David Schroeder, Senior Portfolio Manager, is responsible for managing the long-term fixed income portfolios. Mr. Schroeder is responsible for formulating and implementing investment strategies for the Government Bond portion of the of the fixed income portfolios, with an emphasis on evaluating relative value and interest rate risk.

Prior to join the Treasurer's Office in 2002, Mr. Schroeder was Senior Vice President, Senior Portfolio Manager and Head of Taxable Fixed Income with American Century Investments in Mountain View, Ca.; Vice President and Proprietary Trader, Pacific Securities, Inc. in San Francisco, Ca.; and Vice President and Proprietary Trader, Wells Fargo Bank, N.A. in San Francisco, Ca. Mr. Schroeder received a B.A. degree from Pomona College.

# Collateral-Backed



## **SATISH SWAMY**

Satish Swamy, Senior Portfolio Manager, is a member of the portfolio management team responsible for managing the fixed income portfolios. Mr. Swamy is responsible for formulating and implementing investment strategies for the MBS portion of the fixed income portfolios, with an emphasis on evaluating relative value and prepayment risk.

Prior to joining the Treasurer's Office in 1998, Mr. Swamy was VP/Director of Reuters Risk Management; Fixed Income Strategist for Lincoln Investment Management and Fixed Income analyst for Analytic Investment Management.

Mr. Swamy earned his MBA in Finance from the University of Southern California, MS in engineering from the University of Houston and BS in engineering from India. Mr. Swamy has his CFA designation.

# Short Term Securities



## **ALICE L. YEE**

Alice Yee, Senior Portfolio Manager, Short-Term Securities, is responsible for the investment of the cash of the University system in short-term money market and fixed-income securities. This includes analyzing investment alternatives, forecasting cash needs and monitoring cash balances. In addition to the management of the Short Term Investment Portfolio (STIP), Ms. Yee manages the Savings Fund and the Money Market Fund.

Prior to joining the Treasurer's Office in 1980, Ms. Yee was a Financial Analyst and Investment Analyst for Southern Pacific Transportation Company and a Systems Analyst with Bank of America, BankAmericard Systems, San Francisco. Ms. Yee earned her MBA degree in Quantitative Methods from the University of Washington and her BA degree in Applied Mathematics from the University of California, Berkeley.

# Junior Portfolio Manager



## **AARON STAINES**

Aaron Staines, Junior Portfolio Manager, is responsible for a broad range of analytics in support of the Fixed Income portfolio management team. Prior to joining the Treasurer's Office in 2001, Mr. Staines received his BS in Political Science from UC Berkeley; his coursework emphasized political economy. He is currently a candidate for the CFA designation.