

Investment Challenges for Small Defined Benefit Plans



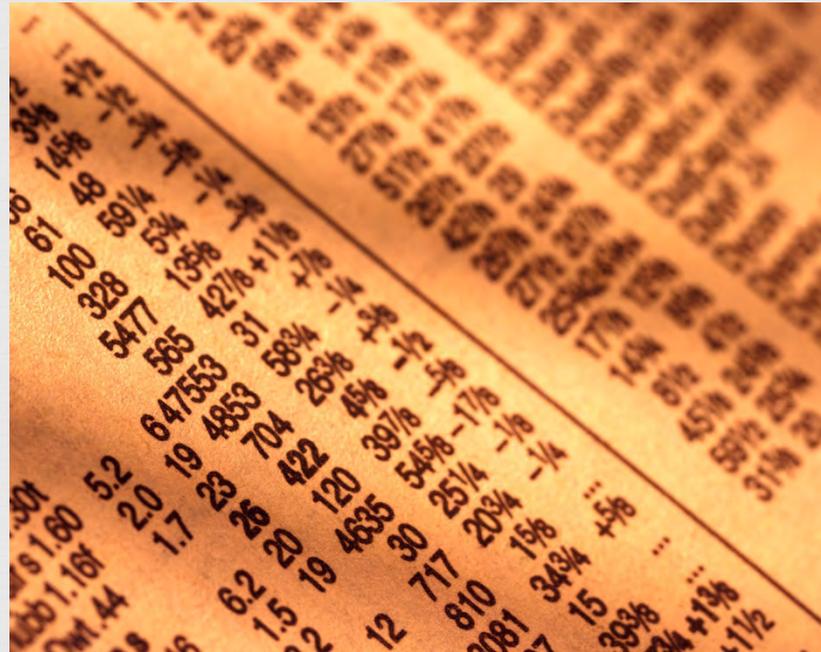
Mike Hall
Cetera Financial Specialists
Registered Representative
Financial Advisor
Series 7 Series 66

Investment Building Blocks



Note: Alternatives not available except through WVIMB

S&P 500



S&P 500 what is it?



Capitalization

Stock Price times outstanding shares

market cap

Apple \$462,285,000,000

IBM \$196,029,000,000

Goodyear Tire \$5,155,000,000

497 others

S & P 500

70% of the
value US
Market

500 Large
“CAP” stocks

70% Of the
S & P value is
the top 100
Stocks



Owning the Index as an
investment is called:

Indexing or
Passive investing

Why own the Index?

- Low Cost – There are no managers the math decides
- Broad Based - Diversified
- Track record of performance

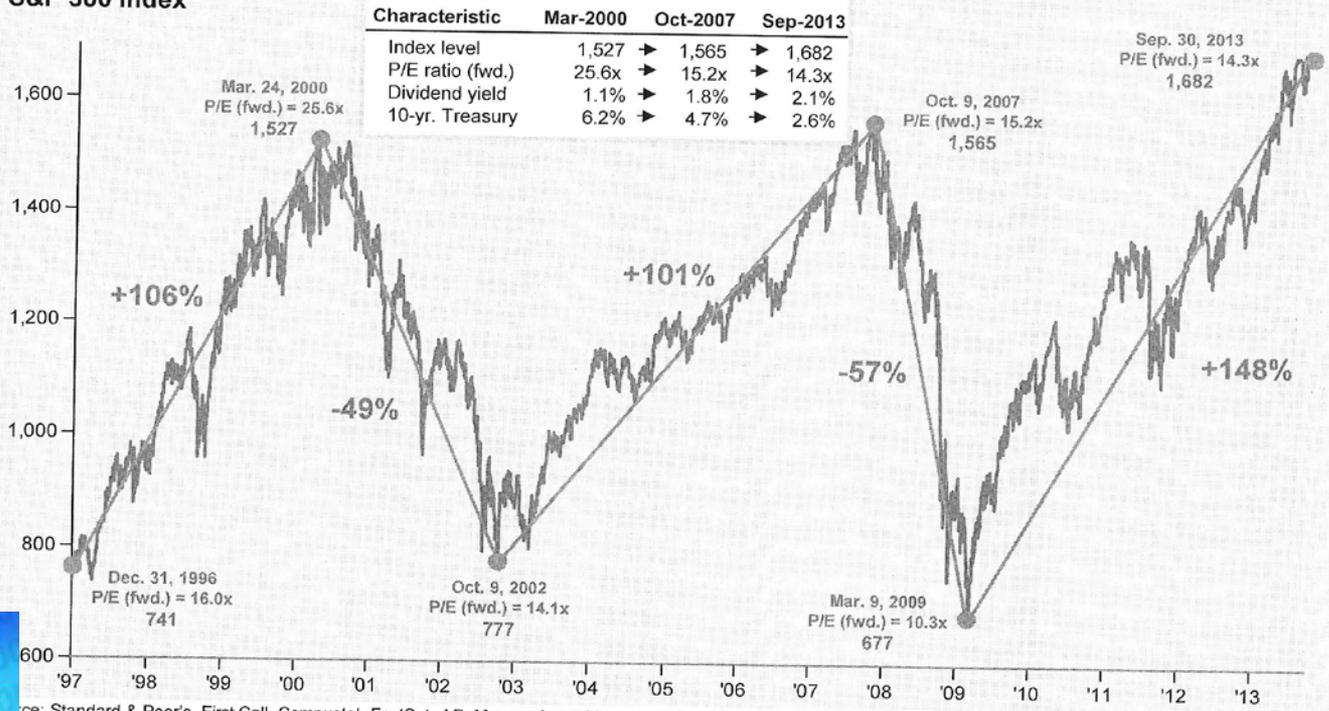
Why not own the index?

MARKET
INSIGHTS

S&P 500 Index at Inflection Points

Equities

S&P 500 Index



Source: Standard & Poor's, First Call, Compustat, FactSet, J.P. Morgan Asset Management.

Dividend yield is calculated as the annualized dividend rate divided by price, as provided by Compustat. Forward Price to Earnings Ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future results.

Equities to the Markets - U.S.
Returns are as of 9/30/13.



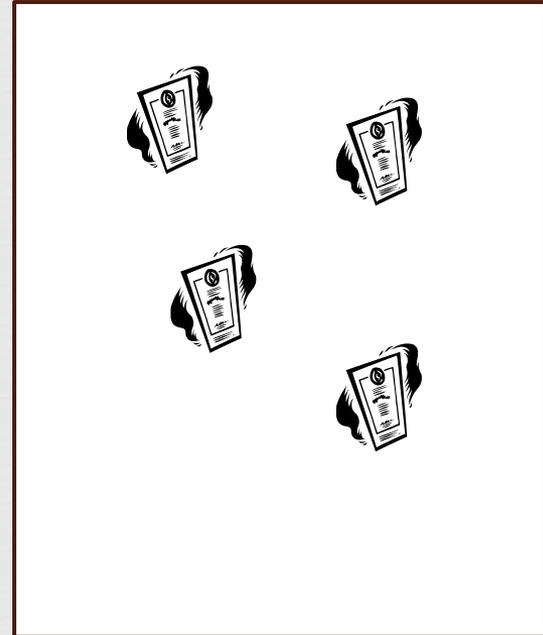
J.P.Morgan
Asset Management

Indexing
Passive investing



Cost
.10-.20%

Managed Money
Active Investing



Cost
.90 - 1.25%



Bonds?? What are they?



They are loans? The bond buyer is the lender

Loans



Money Back
Maturity



From whom do you buy them?



Governments

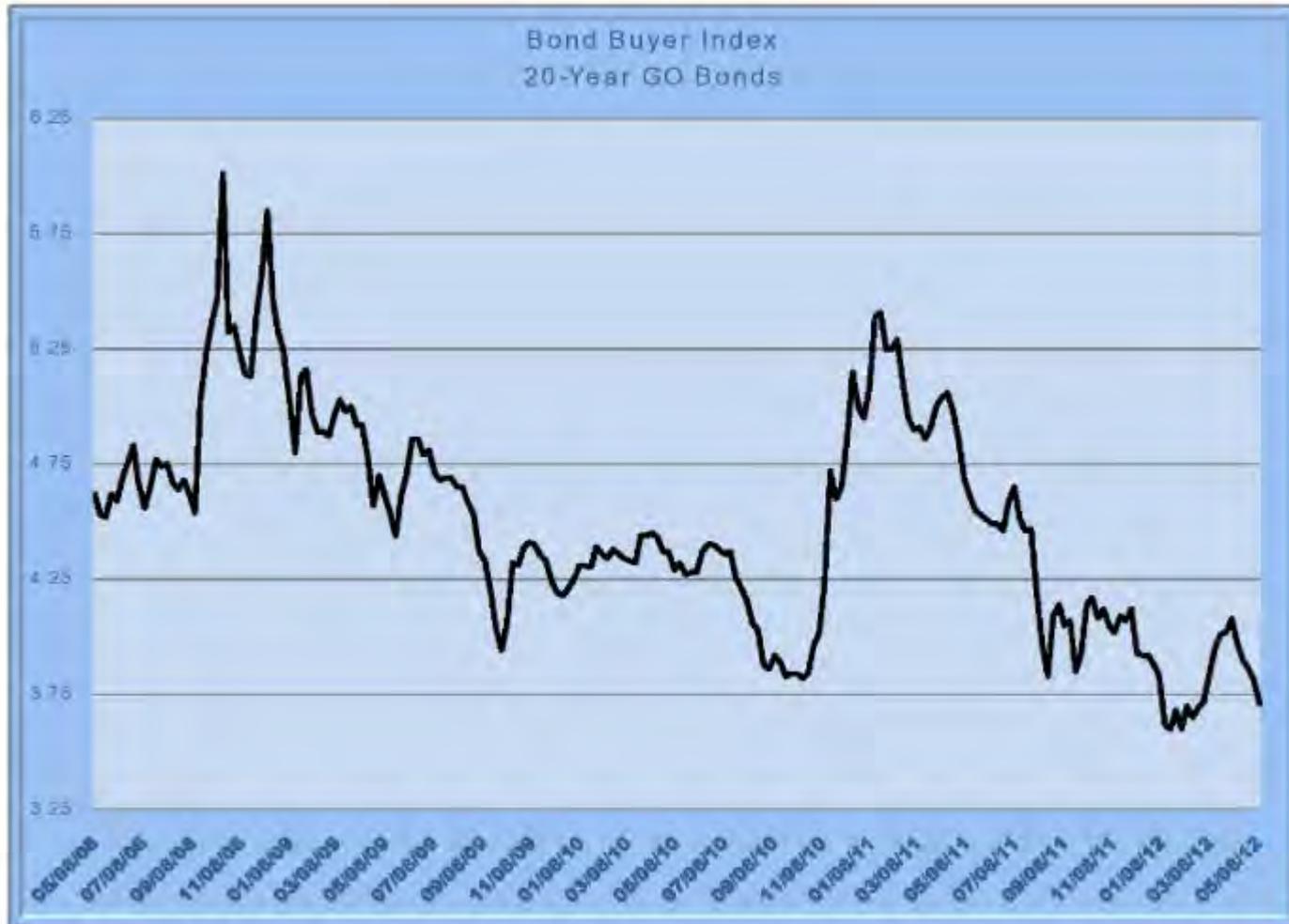
Corporations

Interest rates up



Interest rates down





General Obligation Bonds maturing in 20 years are used in compiling this index.
 The 20-Year Bond Index has a rating roughly equivalent to Moody's Aa and S1's AA-minus.

West Virginia Investment Management Board
 Composite Asset Allocation & Performance Net of Fees
 As of July 31, 2013

	Asset (\$000)	%	Performance %						
			1 Month	3 Month	FYTD	1 Year	3 Year	5 Year	10 Year
Investment Pools Composite	14,963,320	100.00							
Total Equity Composite	6,823,679	45.60	5.16	2.15	5.16	24.73	13.83	7.05	8.97
+/- Total Equity Policy Index (b)			0.22	0.08	0.22	2.55	1.37	2.08	1.00
US Equity Composite	3,367,181	22.50	5.78	6.50	5.78	27.79	18.82	8.67	8.81
+/- Russell 3000 Index			0.30	(0.07)	0.30	0.93	0.73	0.10	0.67
Large Cap Composite	2,476,454	16.55	5.27	5.93	5.27	24.60	18.04	8.22	7.79
+/- S&P 500 Index			0.18	(0.17)	0.18	(0.40)	0.30	(0.04)	0.15
Non-Large Cap Composite	890,727	5.95	7.24	8.10	7.24	37.35	21.65	10.70	11.11
+/- Russell 2500 Index			0.71	(0.52)	0.71	2.61	2.27	0.25	0.65
International Equity Composite	3,456,498	23.10	4.57	(1.82)	4.57	21.73	8.90	5.15	10.15
+/- MSCI AC World ex US Index			0.17	0.49	0.17	4.26	1.99	3.89	0.87
Fixed Income Composite	3,693,967	24.69	0.28	(2.17)	0.28	1.51	4.61	6.15	5.45
+/- Fixed Income Policy (c)			(0.05)	0.94	(0.05)	2.42	0.86	0.52	0.35
Core Fixed Income	1,321,663	8.83	0.11	(2.68)	0.11	(0.60)	4.23		
+/- Barclays Capital Aggregate			(0.03)	0.49	(0.03)	1.30	1.04		
Total Return Fixed Income	2,372,304	15.86	0.37	(1.89)	0.37	2.67	4.79	6.74	6.12
+/- Barclays Capital US Universal			0.04	1.22	0.04	3.58	1.04	1.11	0.90
TIPS Composite	668,673	4.47	0.73	(7.12)	0.73	(5.86)	4.77		
+/- Barclays Capital U.S.TIPS			0.00	(0.01)	0.00	0.01	(0.07)		
Cash Composite	255,075	1.70	0.01	0.05	0.01	0.16	0.12	0.30	1.84
+/- Citigroup 90 Day T-Bill + 0.15%			(0.02)	(0.02)	(0.02)	(0.08)	(0.13)	(0.11)	(0.03)
Private Equity Composite	1,159,258	7.75	1.22	(0.08)	1.22	8.20	13.03	6.90	
+/- S&P 500 + 5% (d)								(6.36)	
Real Estate Composite	1,011,989	6.76	0.31	1.12	0.31	10.12	10.67	3.82	
+/- NCREIF + 1% (d)								0.34	
Hedge Funds Composite	1,350,679	9.03	0.78	0.62	0.78	10.30	6.03	4.53	
+/- LIBOR + 4%			0.41	(0.47)	0.41	5.98	1.67	(0.08)	

Equity

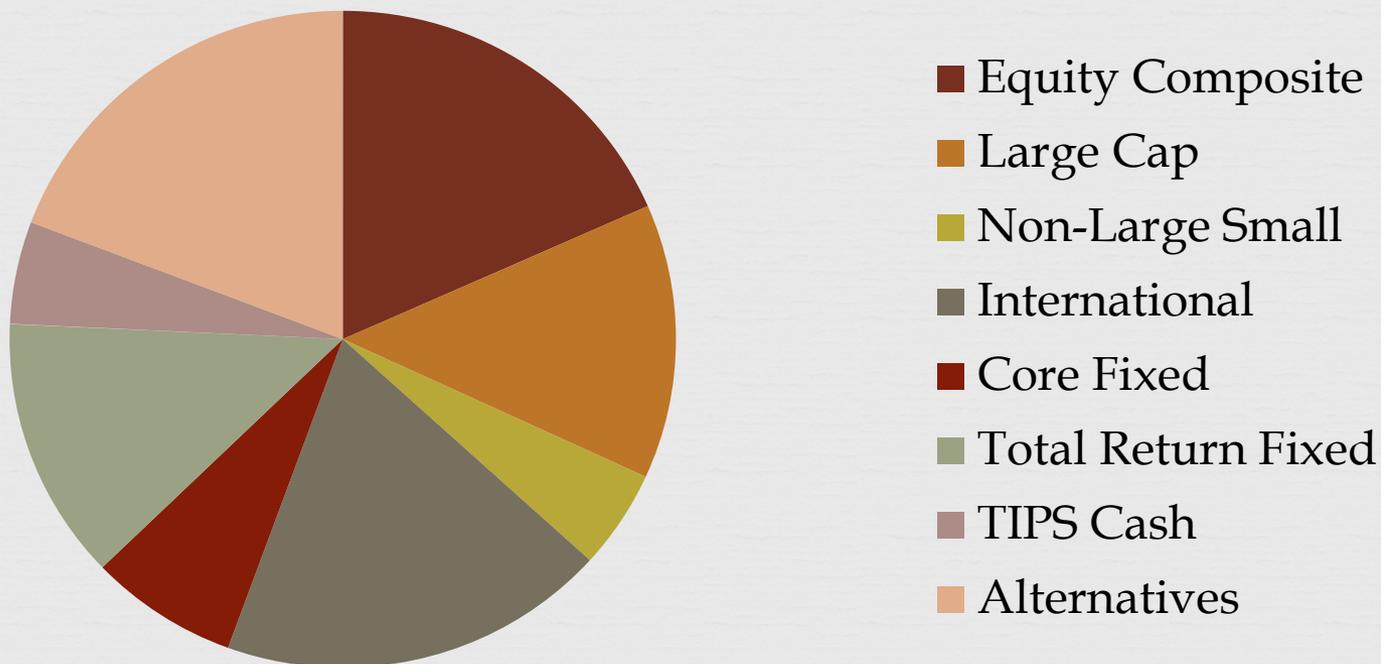
Debt

Alternatives

WVIMB Asset Allocation



WVIMB Allocation



Asset Class Returns

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2Q'13	YTD '13	10-ys. '03 - '12 Cum.	10-ys. '03 - '12 Ann.
MSCI EME	REITs	MSCI EME	REITs	MSCI EME	Barclays Agg	MSCI EME	REITs	REITs	REITs	REITs	Russell 2000	Russell 2000	MSCI EME	MSCI EME
56.3%	31.6%	34.5%	35.1%	39.8%	5.2%	79.0%	27.9%	8.3%	19.7%	3.1%	15.9%	376.0%	16.9%	
Russell 2000	MSCI EME	DJ UBS Cmdty	MSCI EME	DJ UBS Cmdty	Cash	MSCI EAFE	Russell 2000	Barclays Agg	MSCI EME	S&P 500	S&P 500	REITs	REITs	
47.3%	26.0%	21.4%	32.6%	16.2%	1.8%	32.5%	26.9%	7.8%	18.6%	2.9%	13.8%	204.6%	11.8%	
MSCI EAFE	Market Neutral	REITs	MSCI EME	Market Neutral	MSCI EAFE	Market Neutral	REITs	Russell 2000	Russell 2000					
39.2%	14.0%	14.0%	26.9%	11.6%	1.1%	28.0%	19.2%	4.5%	17.9%	1.4%	5.8%	152.8%	9.7%	
REITs	Russell 2000	REITs	Russell 2000	Market Neutral	Asset Alloc.	Russell 2000	DJ UBS Cmdty	S&P 500	Russell 2000	Cash	Asset Alloc.	MSCI EAFE	MSCI EAFE	
37.1%	18.3%	12.2%	18.4%	9.3%	-24.0%	27.2%	16.8%	2.1%	16.3%	0.0%	4.5%	130.3%	8.7%	
S&P 500	Asset Alloc.	Asset Alloc.	S&P 500	Asset Alloc.	Russell 2000	S&P 500	S&P 500	Cash	S&P 500	Asset Alloc.	MSCI EAFE	Asset Alloc.	Asset Alloc.	
28.7%	12.5%	8.3%	15.8%	7.4%	-33.8%	26.5%	15.1%	0.1%	16.0%	-0.6%	4.5%	117.7%	8.1%	
Asset Alloc.	S&P 500	Market Neutral	Asset Alloc.	Barclays Agg	DJ UBS Cmdty	Asset Alloc.	Asset Alloc.	Asset Alloc.	Asset Alloc.	MSCI EAFE	Market Neutral	S&P 500	S&P 500	
25.1%	10.9%	6.1%	15.2%	7.0%	-35.6%	22.2%	12.5%	-0.6%	11.3%	-0.7%	2.2%	98.6%	7.1%	
DJ UBS Cmdty	DJ UBS Cmdty	S&P 500	Market Neutral	S&P 500	S&P 500	DJ UBS Cmdty	MSCI EAFE	Russell 2000	Barclays Agg	REITs	Cash	Barclays Agg	Barclays Agg	
23.9%	9.1%	4.9%	11.2%	5.5%	-37.0%	18.9%	8.2%	-4.2%	4.2%	-2.1%	0.0%	65.7%	5.2%	
Market Neutral	Market Neutral	Russell 2000	Cash	Cash	REITs	Barclays Agg	Barclays Agg	MSCI EAFE	Market Neutral	Barclays Agg	Barclays Agg	Market Neutral	Market Neutral	
7.1%	6.5%	4.6%	4.8%	4.8%	-37.7%	5.9%	6.5%	-11.7%	0.9%	-2.3%	-2.4%	61.5%	4.9%	
Barclays Agg	Barclays Agg	Cash	Barclays Agg	Russell 2000	MSCI EAFE	Market Neutral	Cash	DJ UBS Cmdty	Cash	MSCI EME	MSCI EME	DJ UBS Cmdty	DJ UBS Cmdty	
4.1%	4.3%	3.0%	4.3%	-1.6%	-43.1%	4.1%	0.1%	-13.3%	0.1%	-8.0%	-9.4%	49.3%	4.1%	
Cash	Cash	Barclays Agg	DJ UBS Cmdty	REITs	MSCI EME	Cash	Market Neutral	MSCI EME	DJ UBS Cmdty	DJ UBS Cmdty	DJ UBS Cmdty	Cash	Cash	
1.0%	1.2%	2.4%	2.1%	-15.7%	-53.2%	0.1%	-0.8%	-18.2%	-1.1%	-9.5%	-10.5%	18.2%	1.7%	

Asset Class

Source: Russell, MSCI, Dow Jones, Standard & Poor's, Credit Suisse, Barclays Capital, NAREIT, FactSet, J.P. Morgan Asset Management.
 The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the EMI, 25% in the Barclays Capital Aggregate, 5% in the Barclays 1-3m Treasury, 5% in the CS/Tremont Equity Market Neutral Index, 5% in the DJ UBS Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. All data represents total return for stated period. Past performance is not indicative of future returns. Data are as of 6/30/13, except for the CS/Tremont Equity Market Neutral Index, which reflects data through 5/31/13. "10-ys" returns represent period of 1/1/03 - 12/31/12 showing both cumulative (Cum.) and annualized (Ann.) over the period. Please see disclosure page at end for index definitions. *Market Neutral returns include estimates found in disclosures.
 Data are as of 6/30/13.

What Does WVIMB DO?



- ❧ Consultants help
 - ❧ Pick the allocation
 - ❧ Pick the managers
- ❧ Diversified around all three building blocks
- ❧ Careful monitoring of performance
 - ❧ Style Drift
 - ❧ Rebalancing
 - ❧ Manager effectiveness
 - ❧ Change of managers in group
 - ❧ Long term outlook

What Do You DO?



- ❧ Who gives you advice?
- ❧ How diversified are you?
- ❧ Do you know the allocations of your portfolio?
- ❧ Do you know your fees? (next slide)
- ❧ Careful monitoring of performance?
 - ❧ Style Drift
 - ❧ Rebalancing
 - ❧ Manager effectiveness
 - ❧ Change of managers in group
 - ❧ Long term outlook

Fees

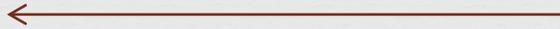


- ❧ Fund Management Fees
- ❧ Advisor Fees
- ❧ Consulting Fees
- ❧ Third Party Administrators
- ❧ Custodial Fees
- ❧ Commissions
 - ❧ Loaded or Unloaded
 - ❧ 12-b1 Fees .25%



You

Consultant



Investment Manager

Custodian

3rd Party Administrator

Questions?

