



D A L L A S
POLICE & FIRE
PENSION SYSTEM



Asset Allocation Implementation

November 8, 2018

Asset Allocation Implementation Recommendation

- Staff seeks approval of the asset allocation implementation plan, as presented by Meketa, to allow timely investment of private-market distributions.
- Until a rebalancing policy is approved by the Board, recommended rebalancing would be submitted to the Board for approval.
- Staff intends to recommend an interim passive index solution for investment grade bonds at the December Board meeting.

Current Position

Asset Allocation Implementation

Asset Class Funding Priority	10/31/18	Target	Variance	\$ millions		
				10/31/18	Target	Variance
Safety Reserve - Cash	2.1%	3.0%	-0.9%	43	60	-17
Safety Reserve - ST IG Bonds	12.4%	12.0%	0.4%	250	242	8
Minimum Global Equity	21.3%	22.0%	-0.7%	429	443	-14
Minimum Emerging Mkt Equity	2.3%	2.5%	-0.2%	47	50	-4
Investment Grade Bonds (to be established)	0.0%	4.0%	-4.0%	0	81	-81
Global Bonds	3.1%	4.0%	-0.9%	62	81	-18
High Yield Bonds	4.1%	4.0%	0.1%	83	81	2
Bank Loans	5.7%	4.0%	1.7%	115	81	34
Emerging Mkt Debt	1.0%	4.0%	-3.0%	19	81	-61
New Global Equity	0.0%	18.0%	-18.0%	0	363	-363
New Emerging Mkt Equity	0.0%	7.5%	-7.5%	0	151	-151
Real Estate	23.3%	5.0%	18.3%	470	101	369
Private Equity	12.5%	5.0%	7.5%	252	101	151
Natural Resources	8.7%	5.0%	3.7%	176	101	75
Infrastructure	2.9%	0.0%	2.9%	59	0	59
Private Debt	0.5%	0.0%	0.5%	11	0	11
Total	100.0%	100.0%	0.0%	2,015	2,015	0

Source: JP Morgan Custodial Data, Staff Calculations

Glide Path Model Appendix

- Staff has developed a glide path model to assist in monitoring the implementation of the long-term asset allocation.
- The glide path exhibits that follow are included only as a reference.
- Cash flows are based on private asset distribution projections and redeployment according to the recommended implementation **plan**. Private asset cash flow projections are based on either in-process/planned sales, if available, or gradual disposition through 2022. Actual experience will likely be different than projections.
- Net negative cash flow is assumed to be offset by investment gains.

Glide Path Model – Cash Flow Estimates

Cash Flow	4Q18	2019	2020	2021	2022	2023
Net cash flow (appreciation~outflow)	0	0	0	0	0	0
Total Equity	0.6	77.5	87.0	119.2	95.5	0.0
Global Equity		100	100	100	77	
Emerging Markets Equity		40	40	40	34	
Existing Private Equity	0.6	-62.8	-73.3	-71.1	-46	
New Private Equity			20	50	30	
Fixed Income	-0.4	191.5	53.4	-45.0	-93.0	0.0
Short Term Core Bonds		70	60	-45	-93	
Investment Grade Bonds (Barc Agg)		81				
Global Bonds		18				
High Yield Bonds		-1				
Bank Loans		-34				
Emerging Markets Debt		61				
Private Debt	-0.4	-3.9	-7			
Real Assets	-32	-261	-137	-77	3	0
Natural Resources	-10.1	-65				
Infrastructure	2.4	-15.9	-20.4	-15.9	-9	
Existing Real Estate	-24.4	-180.5	-146.7	-110.7	-7	
New Real Estate			30	50	20	
Cash	32	-8	-3	2	-6	0

Blue reflects rough estimates for private market distributions

Glide Path Model – Variance Estimates

Variance	Now	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Total Equity	-18.9%	-18.9%	-15.0%	-10.7%	-4.8%	0.0%
Global Equity	-18.7%	-18.7%	-13.8%	-8.8%	-3.8%	0.0%
Emerging Markets Equity	-7.7%	-7.7%	-5.7%	-3.7%	-1.7%	0.0%
Existing Private Equity	12.5%	12.5%	9.4%	5.8%	2.3%	0.0%
New Private Equity	-5.0%	-5.0%	-5.0%	-4.0%	-1.5%	0.0%
Fixed Income	-5.2%	-5.3%	4.2%	6.9%	4.7%	0.0%
Short Term Core Bonds	0.4%	0.4%	3.9%	6.9%	4.6%	0.0%
Investment Grade Bonds (Barc Agg)	-4.0%	-4.0%	0.0%	0.0%	0.0%	0.0%
Global Bonds	-0.9%	-0.9%	0.0%	0.0%	0.0%	0.0%
High Yield Bonds	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Bank Loans	1.7%	1.7%	0.0%	0.0%	0.0%	0.0%
Emerging Markets Debt	-3.0%	-3.0%	0.0%	0.0%	0.0%	0.0%
Private Debt	0.5%	0.5%	0.3%	0.0%	0.0%	0.0%
Real Assets	25.0%	23.4%	10.4%	3.6%	-0.2%	0.0%
Natural Resources	3.7%	3.2%	0.0%	0.0%	0.0%	0.0%
Infrastructure	2.9%	3.1%	2.3%	1.3%	0.5%	0.0%
Existing Real Estate	23.3%	22.1%	13.1%	5.9%	0.4%	0.0%
New Real Estate	-5.0%	-5.0%	-5.0%	-3.5%	-1.0%	0.0%
Cash	-0.9%	0.7%	0.3%	0.2%	0.3%	0.0%

Glide Path Model – Allocation % Estimates

Allocation %	Now	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Total Equity	36%	36%	40%	44%	50%	55%
Global Equity	21%	21%	26%	31%	36%	40%
Emerging Markets Equity	2%	2.3%	4.3%	6.3%	8.3%	10.0%
Existing Private Equity	13%	13%	9%	6%	2%	0%
New Private Equity	0%	0%	0%	1%	3%	5%
Fixed Income	27%	27%	36%	39%	37%	32%
Short Term Core Bonds	12%	12%	16%	19%	17%	12%
Investment Grade Bonds (Barc Agg)	0%	0%	4%	4%	4%	4%
Global Bonds	3%	3%	4%	4%	4%	4%
High Yield Bonds	4%	4%	4%	4%	4%	4%
Bank Loans	6%	6%	4%	4%	4%	4%
Emerging Markets Debt	1%	1%	4%	4%	4%	4%
Private Debt	1%	1%	0%	0%	0%	0%
Real Assets	35%	33%	20%	14%	10%	10%
Natural Resources	9%	8%	5%	5%	5%	5%
Infrastructure	3%	3%	2%	1%	0%	0%
Existing Real Estate	23%	22%	13%	6%	0%	0%
New Real Estate	0%	0%	0%	1%	4%	5%
Cash	2%	4%	3%	3%	3%	3%
Illiquid	35%	33%	20%	15%	13%	15%

Glide Path Model – Allocation \$ Estimates

Allocation \$mm	Now	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22
Total Fund	2015	2015	2015	2015	2015	2015
Total Equity	728	728	806	893	1012	1108
Global Equity	429	429	529	629	729	806
Emerging Markets Equity	47	47	87	127	168	202
Existing Private Equity	252	253	190	117	46	0
New Private Equity		0	0	20	70	100
Fixed Income	539	539	731	784	739	646
Short Term Core Bonds	250	250	320	380	335	242
Investment Grade Bonds (Barc Agg)	0	0	81	81	81	81
Global Bonds	62	62	81	81	81	81
High Yield Bonds	83	83	82	82	82	82
Bank Loans	115	115	81	81	81	81
Emerging Markets Debt	19	19	81	81	81	81
Private Debt	11	10	7	0	0	0
Real Assets	705	673	412	274	198	201
Natural Resources	176	166	101	101	101	101
Infrastructure	59	62	46	25	9	0
Existing Real Estate	470	445	265	118	7	0.000
New Real Estate		0	0	30	80	100
Cash	43	75	67	64	66	61