Private Markets Pacing Plan

Fiscal Year 2021-2022

as of April 2021

Purpose

- Seek approval of target commitment amounts (the "pacing plan") for each private markets asset class over the next fiscal year.

Valuable context:

- Report what staff did compared with what staff said in last year's pacing plan presentation.
- Acknowledge how changes in financial markets and asset allocation impact the plans' long-term private markets program.
- Highlight topics for discussion during future private markets performance reports and the annual investment committee presentation on private market strategy.

Year in review

Executed previous pacing plan

- Staff expects to have completed 15 investments, totaling $79mm for Federated and $126mm for Police & Fire.
- Deployed as anticipated:
  - ✓ Have identifiable assets whose expected net-of-fees returns justify the risks inherent to those assets;
  - = Provide the plans with the highest level of control over the future cash flows associated with the investments;
  - = Create genuine alignment between investment managers and the plans;
  - = Adhere tightly to the Institutional Limited Partners Association's Private Equity Principles, with particular emphasis on fiduciary duty and standard of care.

Changes in market environment

- Monetary and fiscal stimulus overwhelms economic fundamentals; prevents proper pricing of risk.

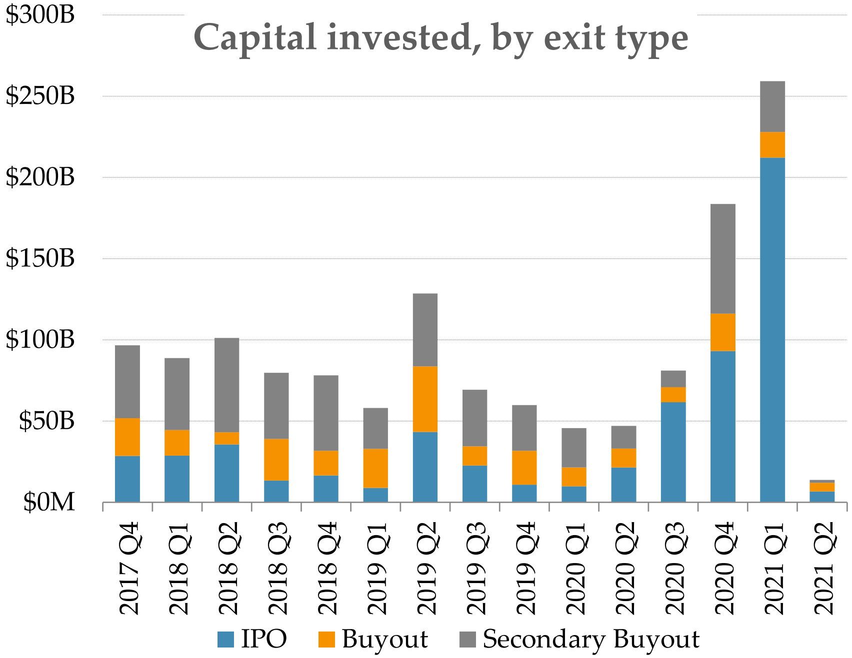
Changes in asset allocation

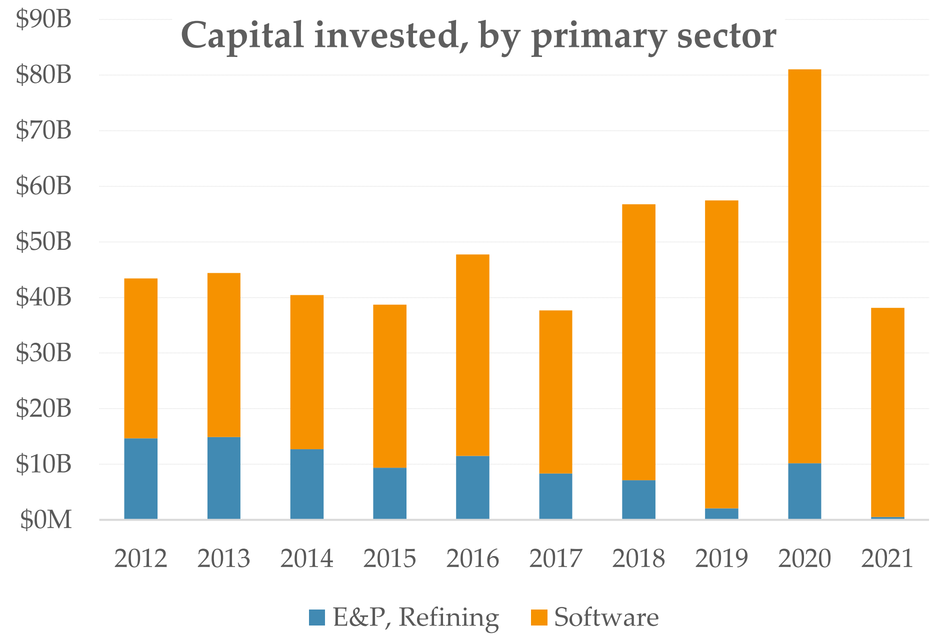
- Federated: No changes.
- Police & Fire: Buyout 6% to 7%; Venture: 4% to 3%.

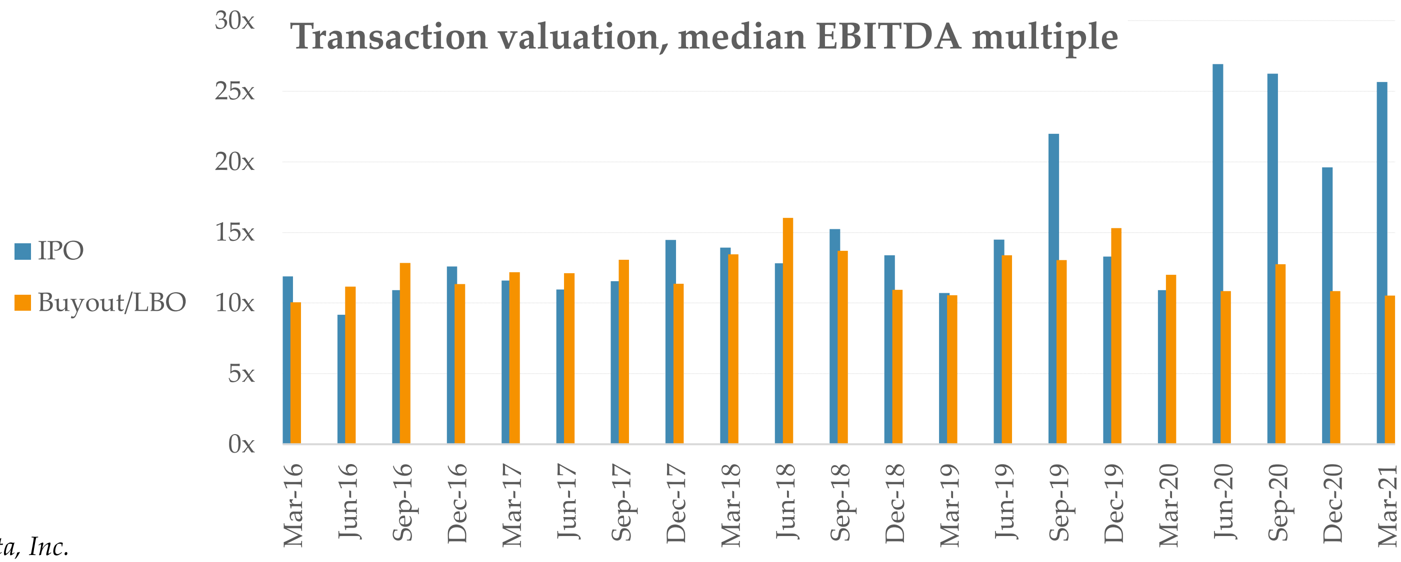
Current positioning versus target

- Federated: ~6% underweight policy target due to rising plan market value, ~3% wider than last years pacing plan expectations. Private markets NAV in line with expectations.
- Police & Fire: ~1% underweight policy target, in line with last years pacing plan expectations.

Changes in market environment







Source: Pitchbook Data, Inc.

Executed previous pacing plan

Asset Class	Federated		Police & Fire	
- Fund	**Pacing Plan**	**Actual**	**Pacing Plan**	**Actual**
Buyout	$12.5mm	$12.5mm	$12.5mm	$12.5mm
- Neuberger Berman fund-of-one		*12.5*		*12.5*
Venture Capital	$30mm	$14.8mm	$32mm	$29.2mm
- Northgate IX		-		*10.0*
- Canvas III		-		*5.0*
- VC Fund (anticipated by 6/30)		*4.8*		*4.2*
- TBD (anticipated by 6/30)		*10.0*		-
- TBD (anticipated by 6/30)		-		*10.0*
Private Debt	$24mm	$15.5mm	$48mm	$27.5mm
- HPS Special Sits I		*8.0*		*12.0*
- European Special Sits (exp by 6/30)		*7.5*		*15.5*
Private Real Estate	$20mm	$16mm	$30mm	$24mm
- Torchlight VII		*6.0*		*9.0*
- Global Opport. fund (exp by 6/30)		*10.0*		*15.0*
Private Real Assets	$20mm	$20.1mm	$33mm	$32mm
- Orion Mine Finance III		*5.0*		*9.0*
- Energy Services Co-Invest		*1.2*		*1.8*
- Crestline Co-Invest II		*1.9*		*3.2*
- TBD (anticipated by 6/30)		*6.0*		*9.0*
- TBD (anticipated by 6/30)		*6.0*		*9.0*

Plan-level net asset value forecasts

The difference in plan-level NAV forecasts vs. previous forecast last year was the increase in plan-level NAVs by ~20%.

Plan-level net asset value forecasts

(in $ mm)	6/30/2020	6/30/2021	6/30/2022	6/30/2023	6/30/2024	6/30/2025	6/30/2026	6/30/2027	6/30/2028	6/30/2029	6/30/2030	6/30/2031
Federated		**$ 2,724**	**$ 2,892**	**$ 3,070**	**$ 3,257**	**$ 3,453**	**$ 3,660**	**$ 3,875**	**$ 4,102**	**$ 4,337**	**$ 4,584**	**$ 4,843**
Previous NAV forecast	*2,123*	*2,270*	*2,427*	*2,592*	*2,766*	*2,951*	*3,145*	*3,350*	*3,567*	*3,795*	*4,037*	*n/a*
Difference (%)		*20%*	*19%*	*18%*	*18%*	*17%*	*16%*	*16%*	*15%*	*14%*	*14%*	*n/a*
Police & Fire		**$ 4,517**	**$ 4,797**	**$ 5,087**	**$ 5,383**	**$ 5,688**	**$ 6,004**	**$ 6,330**	**$ 6,666**	**$ 7,012**	**$ 7,360**	**$ 7,699**
Previous NAV forecast	*3,615*	*3,871*	*4,141*	*4,407*	*4,685*	*4,969*	*5,264*	*5,571*	*5,889*	*6,219*	*6,553*	*n/a*
Difference (%)		*17%*	*16%*	*15%*	*15%*	*14%*	*14%*	*14%*	*13%*	*13%*	*12%*	*n/a*

Asset Class NAV Targets as of 6/30/2021

Federated	**Target**	**$ million**
Private Markets	*21%*	*572*
Buyout	8%	218
Venture	4%	109
Private Debt	3%	82
Private Real Estate	3%	82
Private Real Assets	3%	82

Police & Fire	**Target**	**$ million**
Private Markets	*19%*	*858*
Buyout	7%	316
Venture	3%	136
Private Debt	3%	136
Private Real Estate	3%	136
Private Real Assets	3%	136

Change in asset allocation

Target allocations to private markets increased by ~20% due to increased plan level NAVs.

The Police & Fire plan had no change to Private Markets overall, but the Buyout target allocation was increased by 1% and Venture decreased by 1%.

Federated

			At previous target %		Δ Due to	At current NAV		Δ Due to	Δ	
	Previous Target %	Current Target %	Forecast Target $	Current Target $	NAV Forecast	Forecast Target $	Current Target $	Asset Allocation	Total Target $	
Private Markets	*21%*	*21%*	*477*	*572*	*95*	*572*	*572*	*-*	*95*	*20%*
Buyout	8%	8%	182	218	36	218	218	-	36	*20%*
Venture	4%	4%	91	109	18	109	109	-	18	*20%*
Private Debt	3%	3%	68	82	14	82	82	-	14	*20%*
Private Real Estate	3%	3%	68	82	14	82	82	-	14	*20%*
Private Real Assets	3%	3%	68	82	14	82	82	-	14	*20%*

Police & Fire

			At previous target %		Δ Due to	At current NAV		Δ Due to	Δ	
	Previous Target %	Current Target %	Forecast Target $	Current Target $	NAV Forecast	Forecast Target $	Current Target $	Asset Allocation	Total Target $	
Private Markets	*19%*	*19%*	*735*	*858*	*123*	*858*	*858*	*-*	*123*	*17%*
Buyout	6%	7%	232	271	39	271	316	45	84	*36%*
Venture	4%	3%	155	181	26	181	136	-45	-19	*-12%*
Private Debt	3%	3%	116	136	19	136	136	-	19	*17%*
Private Real Estate	3%	3%	116	136	19	136	136	-	19	*17%*
Private Real Assets	3%	3%	116	136	19	136	136	-	19	*17%*

Current positioning versus target remains on track

Federated was expected to be ~3% short of policy target but is ~6% short. The private markets NAV is exactly as expected, but the rising plan market value caused a greater underweight to policy target.

Police & Fire was expected to be ~1% short of policy target and is actually ~1% short.

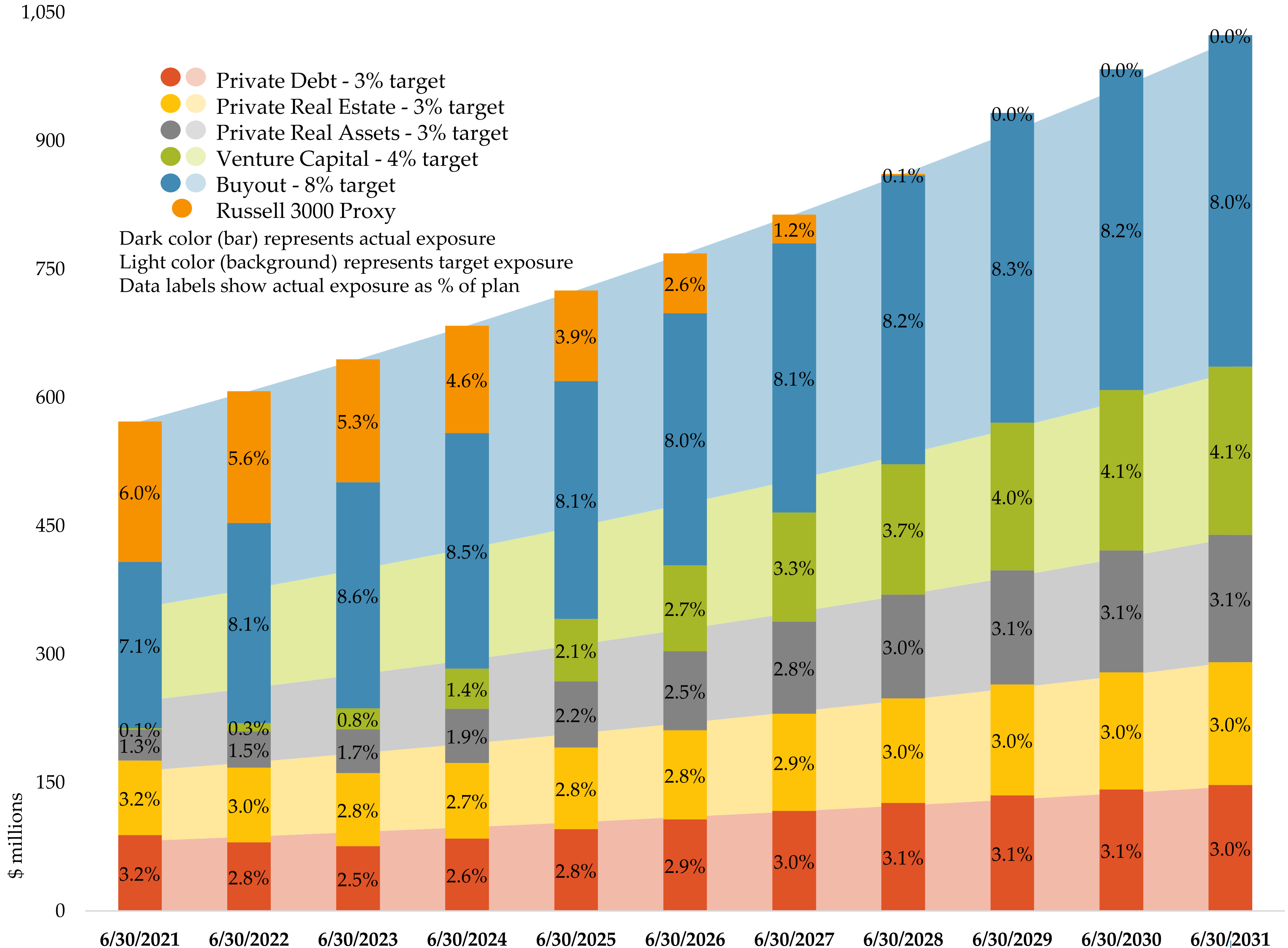
Federated

	Exp. 6/30/21 NAV				Exp. 6/30/21 Allocation		
	FY20-21 Pacing	Current Estimates	Forecast Error		FY20-21 Pacing	Current Estimates	Δ vs. Target
Private Markets	*409*	*408*	*-2*	*0%*	*18%*	*15%*	*-6%*
Buyout + Venture	205	196	-9	*-5%*	9%	7%	-5%
Private Debt	114	89	-26	*-29%*	5%	3%	0%
Private Real Estate	65	87	22	*25%*	3%	3%	0%
Private Real Assets	25	36	11	*31%*	1%	1%	-2%

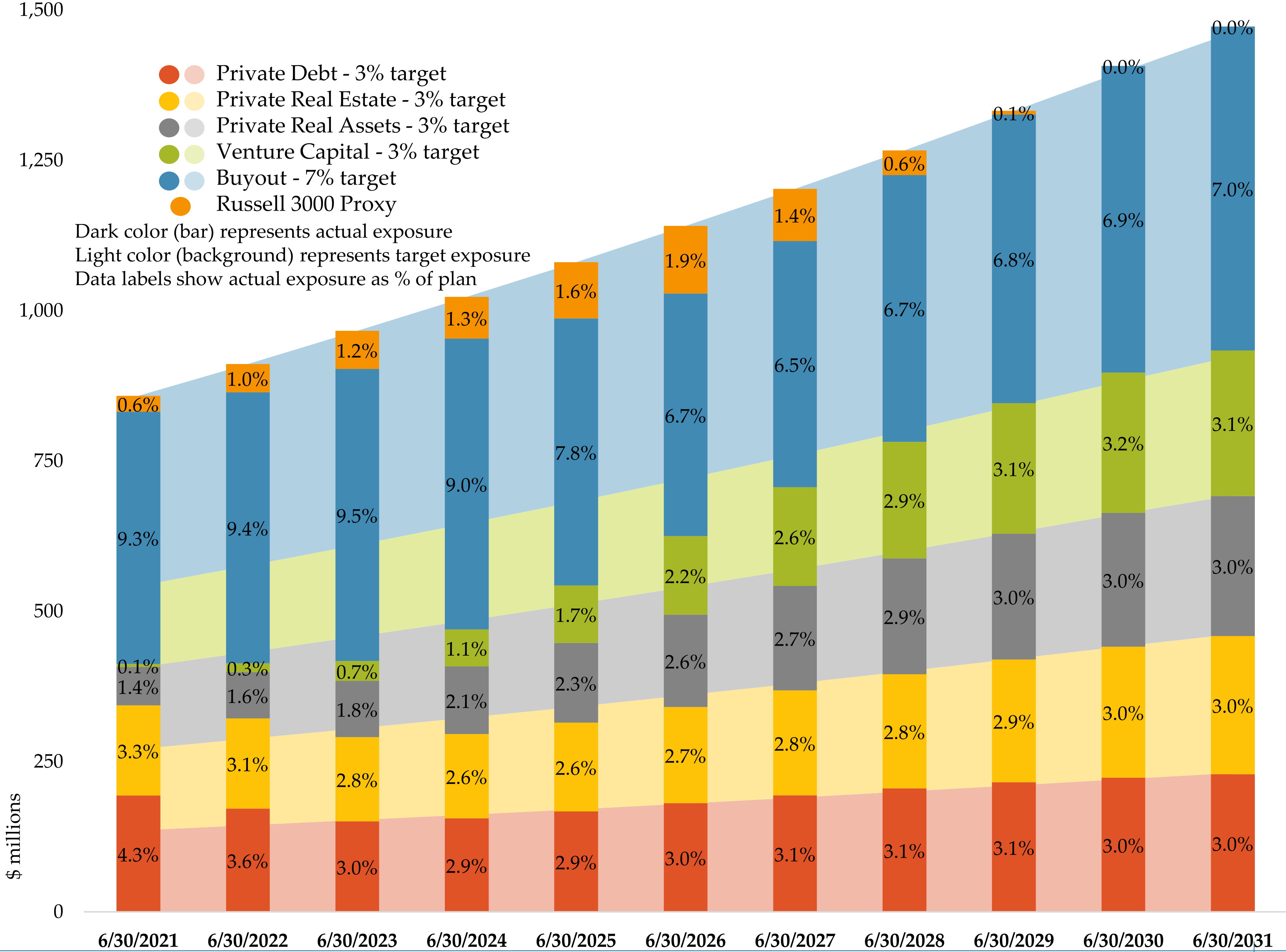
Police & Fire

	Exp. 6/30/21 NAV				Exp. 6/30/21 Allocation		
	FY20-21 Pacing	Current Estimates	Forecast Error		FY20-21 Pacing	Current Estimates	Δ vs. Target
Private Markets	*703*	*832*	*129*	*15%*	*18%*	*18%*	*-1%*
Buyout + Venture	296	425	129	*30%*	8%	9%	-1%
Private Debt	250	193	-56	*-29%*	6%	4%	1%
Private Real Estate	116	150	34	*23%*	3%	3%	0%
Private Real Assets	41	64	23	*36%*	1%	1%	-2%

Federated forecast private markets net asset values



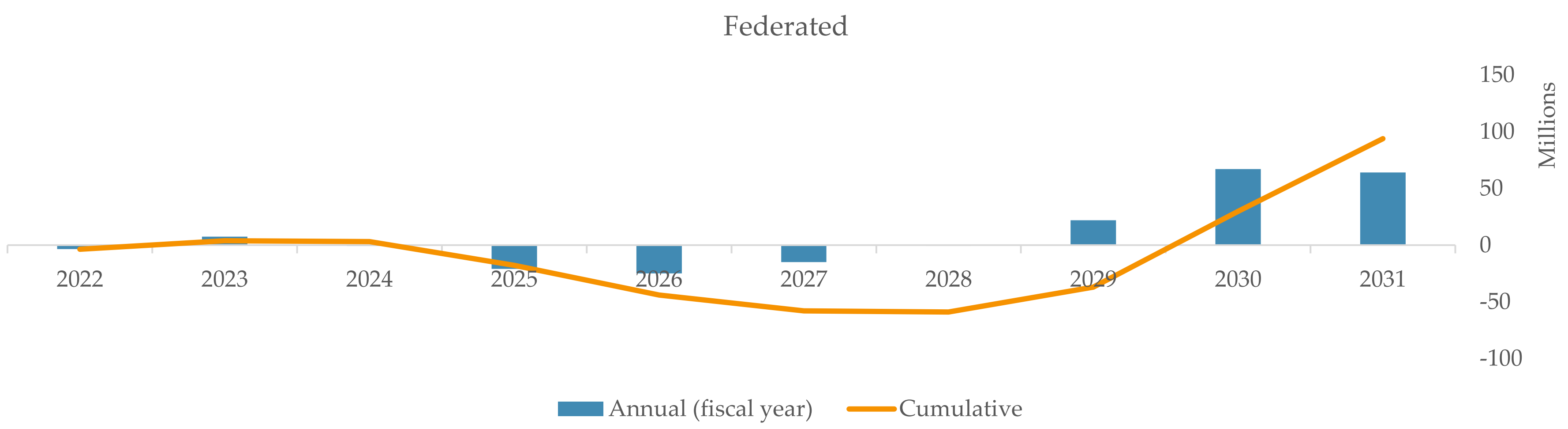
Police & Fire forecast private markets net asset values

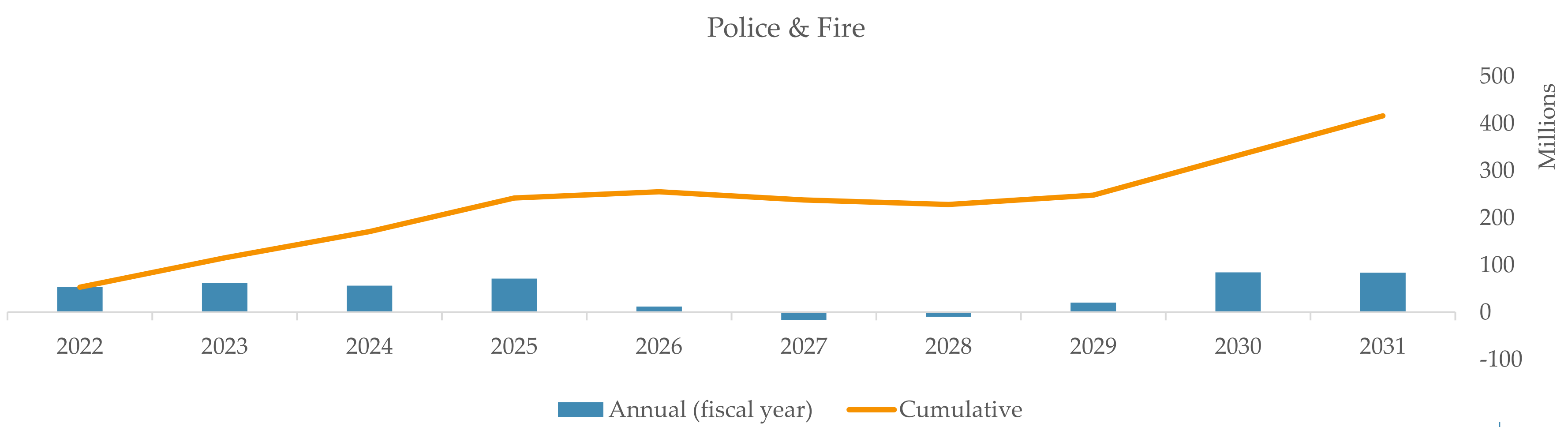


Liquidity requirements

For the Federated private markets program, contributions and distributions are expected to be roughly flat until FY 2025 when contributions exceed distributions.

For the Police & Fire private markets program, distributions are expected to exceed contributions for most future years and the program is largely self-funding.





Commitment pacing plan

Recommendation for approval.

Federated

(in $ mm)	FY 20-21		Pacing Plan				
	Pacing Plan	**Actual**	**FY 21-22**	**FY 22-23**	**FY 23-24**	**FY 24-25**	**FY 25-26**
Private Markets	*107*	*79*	*162*	*162*	*187*	*193*	*178*
Buyout	13	13	50	50	75	75	60
Venture	30	15	30	30	28	28	28
Private Debt	24	16	28	28	28	32	32
Private Real Estate	20	16	28	28	28	30	30
Private Real Assets	20	20	26	26	28	28	28

Police & Fire

(in $ mm)	FY 20-21		Pacing Plan				
	Pacing Plan	**Actual**	**FY 21-22**	**FY 22-23**	**FY 23-24**	**FY 24-25**	**FY 25-26**
Private Markets	*156*	*125*	*189*	*243*	*243*	*272*	*277*
Buyout	13	13	25	75	75	100	100
Venture	32	29	40	40	35	35	35
Private Debt	48	28	48	48	48	50	50
Private Real Estate	30	24	40	40	45	45	50
Private Real Assets	33	32	36	40	40	42	42

Deployment of commitments

- The private markets program has matured and a stable roster of managers provide core exposure in each of the asset classes. When performance and forward-looking capabilities justify it, staff can scale these relationships.

- Significant effort goes into maintaining a strong bench ready to displace incumbents by offering improved expected risk-adjusted net returns, better alignment, and/or superior execution.

- With the core portfolio in place, staff can be opportunistic by pursing niche strategies or taking portfolio management actions to drive incremental performance in each private markets asset class.

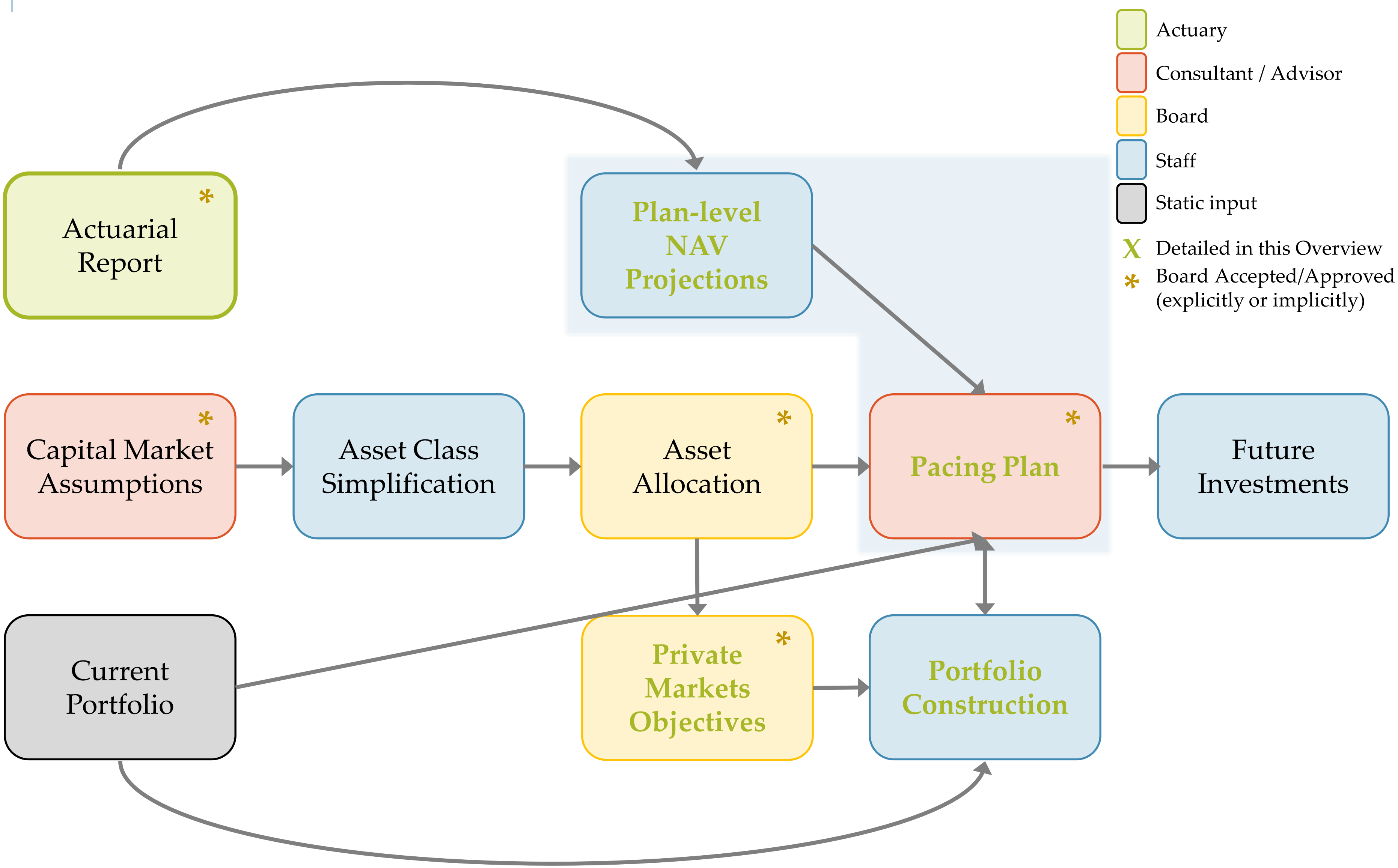
- Success in private markets is driven by information, which is not a commodity. Building relationships and serving as a resource in the marketplace enhances goodwill and deal flow that allows staff to access the best opportunities.

Appendix

Pacing plan basics

- The pacing plan models how the pension funds will reach and maintain their target allocation to private markets strategies.
- The key output is a target level of annual commitments to funds in each private market asset class.
- Many assumptions are incorporated into the pacing plan models. Because of the assumptions' high variance (actual vs. forecast), the pacing plan is revisited annually.
- Staff produces plan-level NAV targets for each private markets asset class, which are then provided to Neuberger Berman and Meketa Investment Group for detailed modeling on Buyout, Venture Capital, Private Debt, Private Real Estate, and Private Real Assets.
- Staff aggregates the output into a single pacing plan document to allow stakeholders to view the private markets program holistically.
- For Private Debt, Private Real Estate, and Private Real Assets, the Boards' approvals of their respective pacing plans sets the guideline for the constraints outlined in the IPS around delegation of manager selection to staff.
- For Buyout, the plans control the pacing of investments not through approval of the pacing plan, but rather by the level of commitments to the Neuberger Berman fund-of-ones. Over time, these are approximately equivalent methodologies.
- For Venture Capital, each board has adopted a distinct approval process that is not tied to the target level of commitments for the asset class.

Private markets process / data flow



Investment projection methodology

Meketa produced an easy-to-read white paper on commitment pacing that outlines their specific methodology (PDF link).

An example to demonstrate the assumptions and output for a sample investment is shown below using the Takashi-Alexander framework, which is the basis for the Meketa model.

Inputs

Fund type:	Large buyout	**Projected net return:**	12% IRR / 1.6x TVPI
Contribution rates, Year 1 / 2 / 3+:	15% / 25% / 40%	**Projected yield:**	2%
Fund term:	10 years	**Bow factor:**	3.0

Output