San Francisco Employees' Retirement System

San Francisco City and County
Employees' Retirement System
Chief Investment Officer

William J. Coaker Jr., CFA, MBA

RETIREMENT BOARD CALENDAR SHEET
Retirement Board Meeting of May 13, 2020

DATE: May 13, 2020

TO: Members of the Retirement Board

THROUGH: Jay Huish JH
Executive Director

FROM: William J. Coaker Jr. – CFA, CFP, MBA
Chief Investment Officer

SUBJECT: CIO Monthly Report

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1 – SFERS Returns

In April 2020 SFERS investments returned 4.29%, backed by the largest monthly increase in stocks since 1987. Our Public Equity portfolio returned 12.09% during the month, edging the MSCI ACWI return of 10.76%. Our Fixed Income portfolio recorded a strong month, gaining 0.95% in April as credit spreads tightened.

Calendar YTD SFERS portfolio is down -3.75%. Over the same period the S&P 500 is down -9.29% and the MSCI ACWI has lost -21.08%.

Our Fiscal YTD return is +1.37%. After April's strong rebound, the S&P 500 has inched into positive territory with a return of 0.62%, but the returns of the broader equity market remain in the red FYTD. From July 1, 2019 to April 30, 2020, the Russell 2000 and the MSCI ACWI have recorded losses of -15.32% and -4.78%, respectively. The Russell 2000 and MSCI ACWI are benchmarks for U.S. small stocks and global equities, respectively.

Index	Apr-20	CYTD	FYTD
S&P 500	12.92%	-9.29%	0.62%
Russell 2000	13.74%	-21.08%	-15.32%
MSCI ACWI	10.76%	-12.78%	-4.78%
Bloomberg Barclays U.S. Aggregate Bond	1.78%	4.98%	7.56%

Our returns will be boosted by pricings from our Private Markets portfolios for 4Q2019 which will be recorded before Fiscal Year-End. The markdowns from our Private Markets portfolios for 1Q2020 will be recorded as they are received, some of which may take place in June and some in the third quarter.

2 - Canaan XII, L.P.

At its meeting on March 11, 2020, the Retirement Board approved in closed session an investment of up to $40 million in Canaan XII, L.P. and Canaan 2020+, L.P. This was approved by the following votes:

Ayes: Commissioners Chu, Driscoll, Heldfond, Stansbury
Absent: Commissioners Bridges, Casciato, Safaí

SFERS closed on $30 million in Canaan XII, L.P. on April 24, 2020.

This investment will be classified as a Venture Capital investment within SFERS' Private Equity portfolio.

More information about Canaan Partners is available on https://www.canaan.com/.

3 – Human Health Crisis

COVID-19

The most rapid bear market in the history of the S&P 500 occurred from late February to late March 2020, as the index plunged -34% in thirty days.

As recently as February 29, the U.S. had not recorded a COVID-19 related fatality. By March 31, the U.S. was experiencing 700 fatalities a day and totaled 3,874 in one month. Just a week later, on April 7th the U.S. incurred 1,943 fatalities in one day and total deaths had jumped to 12,704. At that time, fatalities were rising 3x per week. One forecast from an infectious disease expert in the U.K. predicted that the U.K. would incur 550,000 fatalities and the U.S. would experience between 1.1 and 2.2 million COVID-19 related deaths.

To Slow the Spread of the Virus, Governments Shutdown Economic Activity

In response to the rapid number of infections and fatalities, and because the health care industry was not well prepared to manage the caseload of a large-scale pandemic, governments through much of the world adopted stay-at-home ordinances. If the spread of the virus went unchecked, the health care industry would have been overwhelmed and hospitals would have become hospices. The emergency measures brought economies worldwide to a sudden and unparalleled halt. In other shocks such as Pearl Harbor and 9/11, the vast majority of U.S. industries and jobs continued on, but not this time. Seemingly overnight, much of the U.S. and world economy slammed on the brakes.

Economic Damage in Some Respects is Greater than the Great Depression

The U.S. and much of the world has just experienced an unprecedented economic collapse. The impact of lost jobs and income has been surreal.

Job Loss: In just five weeks, from late-March to late April, 30 million Americans filed for unemployment. Prior to COVID-19, there were about 6 million Americans out of work. The U.S. had about 170 million jobs. In just five weeks, the unemployment rate soared from 3.5% to approximately 21%. Only once before, during the Great Depression, has the U.S. experienced a higher unemployment rate. It reached 24.9% in 1932, but it took two years into the Great Depression to get to that level. This time, we may surpass that level in about two months. Only once in our history has unemployment been much over 10%. In just five weeks, it soared to about twice that level.

Plunge in GDP: Goldman Sachs and Morgan Stanley estimated that second quarter GDP in the U.S. will contract by an annualized -34% and -38%, respectively. Previously, the worst-ever quarterly contraction was -10% and occurred in 1958.

Forecasts: The St. Louis Federal Reserve estimated that unemployment will soar to 32% in the second quarter. One person's income is also their spending which in turn is another person's income, creating a virtuous cycle of prosperity. That cycle is now in reverse.

4 – Asset Class Update

Public Equity

Results: In the current crisis SFERS Public Equity portfolio has outperformed in both the up market and when stocks plunged. In April 2020, our Public Equity portfolio gained 12.09% while the MSCI ACWI returned 10.76%. CYTD our equity portfolio has declined -10.37% and outperformed the MSCI ACWI which has lost -12.78%. FYTD SFERS Public Equity portfolio has lost -2.82% while the MSCI ACWI has declined -4.78%.

Discussion: In March investor fear overwhelmed the market and stocks plunged -34% from late February to late March. COVID-19 began in Wuhan, China in December. In January China and the World Health Organization were downplaying the likelihood of human-to-human transmission. The U.S. did not diagnose its first case until January 20 and did not experience its first fatality until February 29.

However, by early March Italy and Spain were reporting much larger daily fatalities than China reported, prompting worry among policymakers in Europe and the U.S. The U.S. was trending about two weeks behind Italy and Spain, who were experiencing fatality rates of around 10% of people infected. Faced with a highly infectious disease and death rates in Italy and Spain that were fearfully high, in mid-March policymakers began to shut down the U.S. and European economies. By late March, the S&P 500 had plunged -34% in just thirty days. To slow the spread of the virus and limit fatalities, by early April about 95% of the U.S. was subject to Stay-at-Home orders.

Our Public Equity portfolio has outperformed due to a combined overweight of 10% to Technology and Health Care. These two sectors have held up well, outperforming the S&P 500 this CY by 8% and 11%, respectively.

The strong rebound in April was backed by signs that social distancing was reducing the number of hospitalizations and fatalities as well as unprecedented actions by Congress and the Federal Reserve to support the U.S. economy. In the second week of April, initial forecasts that the U.S. would experience between 1.1 million and 2.2 million fatalities was reduced to less than 100,000. In late March, Congress and the Federal Reserve took historic actions to support the U.S. economy. Their combined actions will pump approximately $4 trillion into the domestic economy, providing income to households, support to businesses, and tools to enhance market liquidity.

Fixed Income

Results: SFERS Fixed Income portfolio gained 0.95% in April and is up 1.40% FYTD.

Discussion: The COVID-19 crisis caused yield spreads to blow apart in March. The 10-year treasury now yields less than 0.70% while High Yield and Emerging Market Bond yields have risen to around 10%. Earlier this year the spread was about 4%. The current spread is the second largest on record, surpassed only during the Global Financial Crisis.

Absolute Return

Results: The Absolute Return marks for April are 50% recorded. The portfolio was up approximately 2.50% during the month. The final results will be reported at the May 13 Board Meeting. In March, the Absolute Return portfolio lost 10.56%, a very disappointing return after it held up very well when the market began falling the month prior. In February when the equity markets lost more than 7%, Absolute Return posted a decline of just 0.31%.

Discussion: As shown in this month's Absolute Return update, from October 2016 through February 2020 the portfolio had captured less than 11% of the equity's return in months when stocks declined. In other words, in its first 3 ½ years the portfolio was providing excellent protection when stocks fell. The March 2020 return was extremely disappointing, but we believe we will recapture most of its losses that month.

In March, mortgage securities as well as the structured credit space more broadly experienced very large losses. Investors in mortgages panicked in March, fearing a Depression and a repeat of the Global Financial Crisis when the value of mortgage securities collapsed. Residential mortgage REIT's and ETF's declined in value by as much as 90% in just three weeks. Mortgage REIT's are often levered up to ten times and those that did not have sufficient cash reserves were forced to sell assets that were rapidly declining in value. When deleveraging pressure increased and mortgage assets came under pricing pressure, even our absolute return managers that hold higher quality assets and utilize much lower leverage were forced to mark down their securities to market prices.

We believe the decline in the value of our mortgage securities were driven by the evaporation of liquidity, deleveraging, and mark-to-market volatility, but do not represent a permanent loss. Importantly, the fundamentals of the mortgage market now are much better than they were prior to the GFC. In today's markets, for SFERS to experience a permanent loss of capital in the mortgage securities in our Absolute Return portfolio housing prices would have to fall 30% or more and unemployment would have to rise above 15% for a sustained period of time. Unemployment will rise over 20% short term, but we are likely to restart economic activity soon, which will begin bringing the unemployment rate down. Most forecasts are that unemployment will be about 10% within one year.

Further, loan to value ratios now are very low and homeowners have significant equity in their homes. Credit quality is very strong, due to stringent underwriting standards that have been in place since the GFC. Entering the GFC, loan to value ratios were often close to 100%, underwriting quality was poor, and credit quality was also poor. Back in 2008, it took only a small decline in home values for homeowners to be incentivized to not pay and wipe out the value of mortgage securities. This time, the fundamentals of the mortgage market are very strong. Strong fundamentals will be further supported by massive amounts of government stimulus targeted at individuals and homeowners designed to keep borrowers in their homes and avoid foreclosure.

It may take a while, but we think our investments in mortgage securities in the Absolute Return portfolio are "money good", meaning, we will earn income and our principal will be returned. The Federal Reserve and Congress have demonstrated they will not let asset values and unemployment fall into the abyss. Home values are extremely valuable to the U.S. economy, job formation, household net worth, and government revenues via property taxes. With time, we are confident that our investments in mortgage securities in the Absolute Return portfolio will be money good.

It's also worth recalling that just the month prior when global stocks lost about 7% that the Absolute Return portfolio lost only 0.31%. And as we noted earlier, in its first 3 ½ years through February 2020, the portfolio had impressive resistance in down markets, posting less than 1/9th the loss of global stocks in months when stocks declined.

Private Equity

Results: Our Private Equity portfolio posted a return of 0.23% in April. FYTD the portfolio has gained 11.50%. Manager selection has been especially strong. Our overweight to Technology and Health Care have also contributed significantly to our returns.

Discussion: The Private Equity marks for 4Q2019 will post to our books in 2Q2020. We expect to post positive returns of around 6.5% for the quarter. Private Equity values for 1Q2020 will post to our books in 3Q2020. We expect to post negative returns of about 10-15% for the quarter.

Our Private Equity portfolio consists of Venture Capital/Growth and Buyout investments. Our portfolio is heavily tilted toward technology and health care, with weights of about 45% and 30%, respectively, which held up better during the March plunge and which led the market higher in April's rebound.

Within technology, we have a substantial emphasis investing in Software businesses, which we expect will hold up much better than most industries. That's because every business needs a complete suite of software solutions, including financial reporting and analysis, financial planning, human resources, E-commerce solutions, data analytics and artificial intelligence, procurement, safety, and managing a suite of software applications.

Health care remains a very attractive sector for investment. Demand for health care is strong and recent scientific advances are promising for the future of human health. The current human health crisis has likely reduced political pressure and drawn focus to the value of medical research and the need to bring new therapies to market.

In Venture Capital, in recent years we emphasized early stage investments, due to their lower valuations compared to late stage. The selloff in March will have less impact on early stage investments, so our Venture portfolio should be in good position, due to its emphasis on technology, software, health care, and early stage. Due to the large contraction in late stage venture in March, we are looking at opportunities to lean into that weakness.

Real Assets

Results: The Real Assets portfolio posted returns of -0.46% in April and is up 2.19% FYTD.

Discussion: Our Real Assets portfolio consists of nearly 70% Real Estate, about 30% Natural Resources, and some niche investments. In 4Q2020 our Real Estate portfolio gained approximately 3%, and these gains will post to our books by FYE. Amidst COVID-19 we believe our Real Estate portfolio has held up well. We have a considerable allocation to Core Real Estate which posted slightly positive returns thru March 31. Hotels have been badly hurt, with occupancy rates falling from about 70% to 20% or less, but our allocation to Hotels is low.

The Natural Resources part of our Real Assets portfolio has suffered large losses as global demand for energy plunged about 30% in March and April. Oil prices sank from about $70 a barrel to less than $20 in just over a month. Even as demand fell off a cliff, Saudi Arabia and Russia raised production, perhaps to gain market share but exacerbating the decline in the price of oil. The economies of both Saudi Arabia and Russia are much more dependent on the energy sector than is the U.S. economy. Saudi Arabia needs oil prices around $60 a barrel to fund their national budget while Russia needs prices in the $40 range just to cover their cost of production. Meanwhile, the financial health of small, midsized, and independent U.S. energy producers, who often have extra debt to finance long-term projects, is experiencing significant stress due to the collapse of demand. We also have several renewable energy investments in our portfolio. Demand for renewables will also be negatively impacted if economies and oil prices remain depressed.

In sum, due to the demand shock caused by plunge in economic activity, the Natural Resources part of our Real Assets portfolio may have lost 30-35% in 1Q. The loss will be recorded when we receive valuations late in 2Q or during 3Q. On the positive side, manager selection in our Natural Resources program has been top notch. In 2018 SFERS was one of the very few public plans to post positive returns, edging out a gain of just over 1% when peers were down on average about -3%. The largest contributor to our returns that year was our Natural Resources portfolio, which gained 20% in 2018.

Private Credit

Results: Our Private Credit portfolio posted a loss of -0.87% in April and positive returns of 5.47% FYTD.

Discussion: For the quarter ended December 31, 2019, our Private Credit portfolio gained about 2%, which will be recorded on our books this quarter. For 1Q2020, we expect a mark-to-market decline of 5-8% which will be posted to our books later this quarter or in 3Q.

At this time, we expect a large majority of the decline in our Private Credit book in 1Q will be "money good", meaning we expect to receive our income and return of principal. Distributions, however, may take longer than expected.

The one segment where we have exposure that has been hard hit is aviation finance. Air traffic has collapsed, plunging 90%. Recovery in the airline industry is likely to take quite some time due to safety concerns and the surge in unemployment.

That said, a majority of our commitments to aviation finance have not yet been called. Now, our managers will be able to invest at much lower prices and be able to command much more favorable terms than they could even two months ago. That's also the case for our Private Credit portfolio as a whole. The net asset value of our Private Credit portfolio is $1.28 billion while our uncalled capital totals $1.36 billion. The latter will now be invested at lower prices and at more favorable terms, potentially boosting the future returns for our Private Credit portfolio.

5 – What May Occur Going Forward

V-Shaped, U-Shaped, or L-Shaped Recovery?

There is substantial uncertainty as to how the COVID-19 crisis will unfold, and whether we will experience a V-Shaped, U-Shaped, or L-Shaped recovery. V-Shaped signifies a rapid recovery, U-Shape a slower recovery, and L-Shape represents a deep, long-lasting, Depression like experience.

V-Shape Recovery

The thesis behind a V-Shaped recovery is that since the economy was stopped by government decree, lifting that decree will turn the economy back on. The rapid recovery of stock prices in late March and April suggests investors are pricing in a V-Shaped rebound.

We think a V-Shaped recovery is unlikely. In our view, a V-Shape rebound requires a vaccine or treatment, so that people feel safe in returning to their previous gatherings. Also, recent data and modeling suggests that fatalities could increase in coming months, as social restrictions are eased. As long as social gatherings are dangerous, the economy is not likely to recover quickly.

U-Shaped Recovery

We think a U-Shaped recovery is most likely. Until we have a vaccine, a treatment, or mass testing and tracing in place, there will be a real risk of a second wave, resulting in a halting recovery. Even from the damage already done, many businesses will not reopen, and there will be many bankruptcies. Businesses that survive, such as restaurants, sporting events, and concerts, may be required to put more space between patrons, limiting customers and revenues and also employment. When the economy reopens, individuals concerned with personal safety or new regulations requiring social distancing will limit economic upside.

How long the trough of the U in a U-Shaped recovery depends on the magnitude of a second wave and the restrictions on social gatherings and the limits on economic activity that would cause. As we noted earlier, one person's spending is another person's income. Until a vaccine or treatment is in place, the velocity of money will be slow to return.

L-Shaped Recovery

To be honest, a Depression like experience is possible. COVID-19 is unlike anything we have ever seen. While its fatality rate has not been high, recent data and modeling indicates fatalities and the number of new cases could spike considerably as social restrictions are eased. Fatalities peaked in mid-April at just under 2,500 deaths daily but have recently declined to less 2,000 per day. Some models are now projecting fatalities of about 3,000 per day by June. As states and cities open their economies and relax restrictions, we could unleash a second wave, even before the first wave has been stopped.

COVID-19 is also becoming unpredictable. Initially, the virus posed a risk of fatality for the elderly or those with preexisting conditions, and it is especially dangerous to the lungs. More recently, cases involving serious neurological, kidney, and pulmonary impairment have been reported, including blood clots and major strokes in younger people.

We also don't know when a vaccine will be ready. Vaccines usually take years, sometimes decades, of research, and occasionally they are never developed. A flu shot boosts our ability to ward off that virus, but it is not a cure. Influenza still causes 20,000 to 60,000 deaths in the U.S. annually.

So long as human interactions remain dangerous, people will be cautious. Even if the virus is contained, people may be less inclined to crowd into airplanes, restaurants, and concerts.

Long-term losses on the shutdown thus far will be based on how the economy unfolds going forward. Many companies and federal, state and local governments have thin reserves and are debt heavy. If revenues do not recover, and they are unable to repay their debts and are forced to lay off more employees, we risk experiencing a financial collapse of epic proportions.

Ken Rogoff, Harvard economist, historian of financial crisis, and co-author of "This Time is Different: Eight Centuries of Financial Folly", recently stated the following: "This is already shaping up as the deepest dive on record for the global economy for over 100 years. Everything depends on how long it lasts, but if this goes on for a long time, its certainly going to be the mother of all financial crisis."

Summary

In sum, a Depression experience, something deeper and longer lasting than anything we have known in our lifetimes, is plausible. If social distancing and limiting economic activity is all we have to limit COVID-19, a Depression scenario comes more into focus.

That said, we lean toward a U-Shaped recovery, though the trough of the U depends on how large of a second wave is experienced and how much social restrictions need to be redeployed. We lean toward a U-Shaped due to COVID-19's low fatality rate and the adaptability of people. While COVID-19 is highly infectious, it lacks the fatality rate of other historic pandemics. Hence, we think people will be adaptable and creative, and find new ways to do business and enjoy their lives while also enhancing personal safety. Even as we lean toward a U-Shaped recovery, we expect substantial economic damage has been done, that many businesses will close, many bankruptcies will take place, longer workouts of existing loans will be needed, and higher unemployment, as a result of COVID-19.

In the long run, we are constructive on the U.S. economy, backed by our innovation and entrepreneurialism.

6 - Investment Themes SFERS Has Emphasized Will Accelerate

We think that the themes we have emphasized in investing – including technology, software, the digital economy, life sciences, and innovation – will accelerate and be pulled forward.

COVID-19 has shown business leaders the convenience and productivity of working remotely. Occupancy costs are one of businesses largest expenses. One investment company with 70,000 employees and offices worldwide has had more than 90% of their workforce working from home since mid-March. Their operations, including research, client service, communications, and administration, has been seamless.

COVID-19 has also highlighted the value of biotechs, as the value of medical research came more into focus. Digital consultations with doctors became commonplace during the crisis, saving both patients and doctors valuable time.

COVID-19 provides a unique opportunity to develop blueprints for government, business and universities to work together to bring long-range solutions to important issues and to educate the young for the needs of the future.

The recent trend against globalization may intensify. Developing more secure supply chains within the U.S. in many ways is desirable. Due to COVID-19, we learned we import most of our penicillin from China. By bringing supply chains back home we may pay higher prices, but more jobs would be available as well.

We believe the Science and Technology Revolution that began more than 40 years ago will accelerate as a result of our recent experience. COVID-19 crisis will accelerate the move from the physical world to the digital, and pull forward technological improvements in finance, transportation, energy, productivity, convenience, entertainment, and human health.

The rapid response of industry during COVID-19 to furnish personal protective equipment to health care workers showed us the value and what is possible when we combine critical needs with clear priorities.

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SFERS
San Francisco Employees' Retirement System

City and County of San Francisco
Employees' Retirement System

RETIREMENT BOARD CALENDAR SHEET
Retirement Board Meeting of May 13, 2020

To: Retirement Board

Through: Jay Huish
Executive Director

William J. Coaker, Jr. – CFA, MBA
Chief Investment Officer

From: Tiffany Dong
Investment Analyst

Date: May 13, 2020

Re: Chief Investment Officer's Report – Plan Value

Best available data as of April 30, 2020

	Value[1] (000)	Weight (%)	MTD (%)	QTD (%)	YTD (%)	FYTD (%)
SFERS TOTAL FUND	**25,867,630**	**100.0**	**4.29**	**4.29**	**-3.75**	**1.37**
Public Equity	8,198,155	31.7	12.09	12.09	-10.37	-2.82
Private Equity	5,835,602	22.6	0.23	0.23	5.04	11.50
GROWTH ASSETS	**14,033,756**	**54.3**				
Real Assets	4,142,252	16.0	-0.46	-0.46	-0.28	2.19
Absolute Return[2]	3,650,316	14.1	2.50	2.50	-8.71	-6.22
DIVERSIFYING ASSETS	**7,792,568**	**30.1**				
Private Credit	1,283,541	5.0	-0.87	-0.87	1.38	5.47
Fixed Income	1,513,250	5.8	0.95	0.95	-0.73	1.40
INCOME GENERATING ASSETS	**2,796,791**	**10.8**				
Cash ex Overlay	**724,135**	**2.8**	---	---	---	---
Cash Overlay[3]	**520,379**	**2.0**	---	---	---	---

[1] Valuations are preliminary and are reported gross of fees. The reported returns are based on prior month-end values that have been audited and adjusted by SFERS' Custody Bank since the last report. For non-daily priced vehicles, performance may include estimates or be proxied using benchmark performance.

[2] Absolute Return performance for most recent month is estimated through manager-provided numbers.

[3] Cash Overlay performance is reflected in Total Fund Performance.

SFERS - Asset Allocation Summary Report | As of April 30, 2020

	3/31/2020	Cash In	Cash Out	MV Δ[1]	4/30/2020	Current	LT Target	Range	6/30/2020 Projection			Unfunded
	----------- ($ Mn) -----------					----- Weight (%) -----			Expected Δ[2]	End $	End %	($ Mn)
GROWTH ASSETS	**13,469.9**	**123.4**	**509.9**	**950.3**	**14,033.8**	**54.3**	**49**	**40 - 60**	**0.0**	**14,033.8**	**54.7**	**2,547.8**
Public Equity	7,748.8	0.1	487.6	937.0	8,198.2	31.7	31	25 - 50	-100.0	8,098.2	31.6	
United States	*3,536.3*	*0.0*	*205.6*	*497.8*	*3,828.5*	*14.8*						
Developed Ex-US	*961.1*	*0.0*	*230.4*	*70.8*	*801.6*	*3.1*						
Emerging	*1,346.0*	*0.0*	*51.6*	*133.7*	*1,428.1*	*5.5*						
Global	*1,905.5*	*0.0*	*0.1*	*234.6*	*2,140.0*	*8.3*						
Private Equity	*5,721.1*	123.3	22.2	13.4	5,835.6	22.6	18	13 - 23	100.0	5,935.6	23.1	2,547.8[3]
DIVERSIFYING ASSETS	**7,567.8**	**227.6**	**70.4**	**67.7**	**7,792.6**	**30.1**	**32**	**19 - 37**	**70.0**	**7,862.6**	**30.6**	**2,356.9**
Real Assets	*4,111.9*	69.6	20.4	-18.7	4,142.3	16.0	17	12 - 22	70.0	4,212.3	16.4	2,119.3[3]
Absolute Return	*3,455.9*	158.0	50.0	86.4	3,650.3	14.1	15	5 - 17	0.0	3,650.3	14.2	237.6
INCOME ASSETS	**2,037.7**	**139.4**	**215.0**	**6.0**	**1,968.2**	**7.6**	**13**	**5 - 25**	**150.0**	**2,118.2**	**8.3**	**1,365.4**
Liquid Credit	*867.1*	0.0	198.7	16.2	*684.6*	2.6	3	0 - 10	0.0	684.6	2.7	
Private Credit	*1,170.6*	139.4	16.3	-10.2	1,283.5	5.0	10	3 - 15	150.0	1,433.5	5.6	1,365.4[3]
CAPITAL PRESERVATION	**1,818.2**	**1,220.4**	**1,010.4**	**45.0**	**2,073.1**	**8.0**	**6**	**3 - 15**	**-420.0**	**1,653.1**	**6.4**	**0.0**
Treasuries	*1,051.9*	0.0	225.3	2.0	*828.6*	3.2	6	3 - 10	0.0	828.6	3.2	
Cash	766.2	1,220.4	785.1	43.0	1,244.5	4.8	0	0 - 5	-420.0	824.5	3.2	
Investment Cash	*243.9*	1,020.6	690.1	43.0	*617.4*	*2.4*			-420.0	197.4	0.8	
Dedicated Cash	*21.7*	180.0	95.0	0.0	*106.7*	*0.4*			0.0	106.7	0.4	
Secondary Receivables	*384.8*	0.0	0.0	0.0	*384.8*	*1.5*			0.0	384.8	1.5	
Cash Overlay	*115.9*	19.7	0.0	0.0	*135.6*	*0.5*			0.0	135.6	0.5	
TOTAL PORTFOLIO	**24,893.6**	**0.0**	**95.0**	**1,069.0**	**25,867.6**	**100.0**	**100**		**-200.0**	**25,667.6**	**100.0**	**6,270.2**

Notes: Target allocations and ranges were approved by the Board in September 2017 and October 2017, respectively. Beginning and Ending Asset Balances are based on 'Entry Dates'.

[1] For non-daily priced vehicles, performance may include estimates or be proxied using benchmark performance.

[2] Expected Changes include Staff's planned rebalancing activity (for Liquid and Semi-Liquid asset classes) and capital call and distribution projections provided by Torrey Cove (for Illiquid asset classes).

[3] Unfunded commitment estimates for private markets are provided by Burgiss as of the current month end and include only active funds.

San Francisco City and County Employees' Retirement System
Cash Activities and Projections
As of April 30, 2020

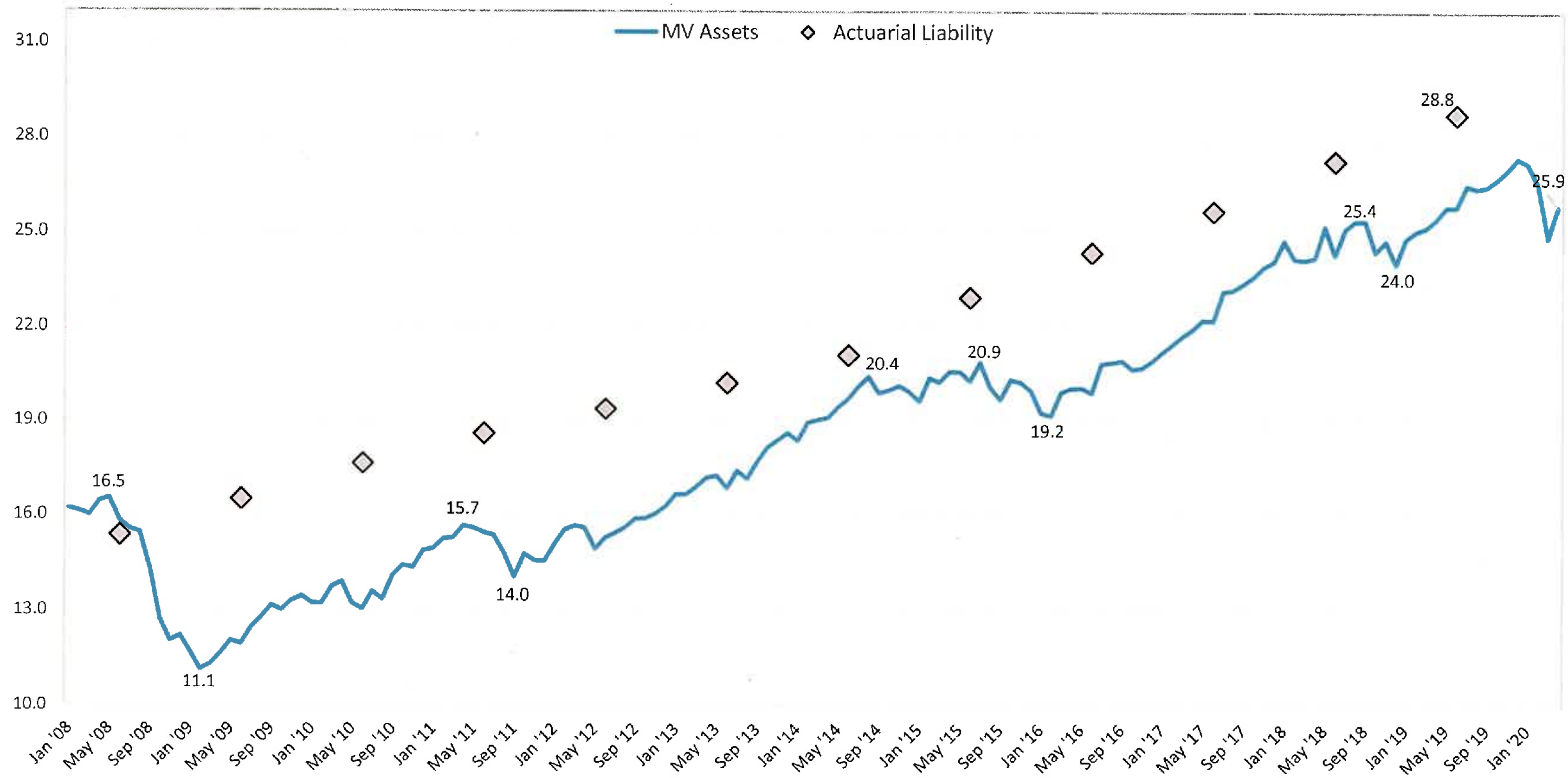
Private Equity

Investment Cash Account (In $ Million)	
Beginning Balance as of April 1, 2020	**243.9**
Public Equity Net Flows	487.6
Private Equity Net Flows	-101.1
Real Assets Net Flows	-49.1
Absolute Return Net Flows	-108.0
Liquid Credit Net Flows	198.7
Private Credit Net Flows	-123.2
Treasuries Net Flows	225.3
Funds to Dedicated Cash	-180.0
Funds to Cash Overlay	-19.7
Misc. Cash Receipts	43.0
Ending Balance as of April 30, 2020	**617.4**
2 Month Forward Projections	
Public Equity Estimated Flows	100.0
Private Equity Estimated Flows	-100.0
Real Assets Estimated Flows	-70.0
Absolute Return Estimated Flows	0.0
Liquid Credit Estimated Flows	0.0
Private Credit Estimated Flows	-150.0
Treasuries Estimated Flows	0.0
Transfer to Dedicated Cash	-200.0
Projected Ending Balance as of June 30, 2020	**197.4**

Dedicated Cash Account (In $ Million)	
Beginning Balance as of April 1, 2020	**21.7**
Benefit Payment for April 2020	-95.0
Received from Investment Cash	180.0
Misc. Cash Receipts	0.0
Ending Balance as of April 30, 2020	**106.7**
2 Month Forward Projections	
Benefit Payment Reserve for May 2020 and June 2020	-200.0
Received from Investment Cash	200.0
Projected Ending Balance as of June 30, 2020	**106.7**

Note: Positive sign denotes an inflow into the cash account and a negative sign denotes an outflow from the cash account.

SFERS - Monthly Assets



SFERS
San Francisco Employees' Retirement System

Notes: Data from January 31, 2008 through April 30, 2020. Total Plan market values through December 2019 are provided by NEPC. Data starting January 2020 is provided by BNY Mellon and should be considered preliminary.