DRS Advisory Committee
April 29, 2020

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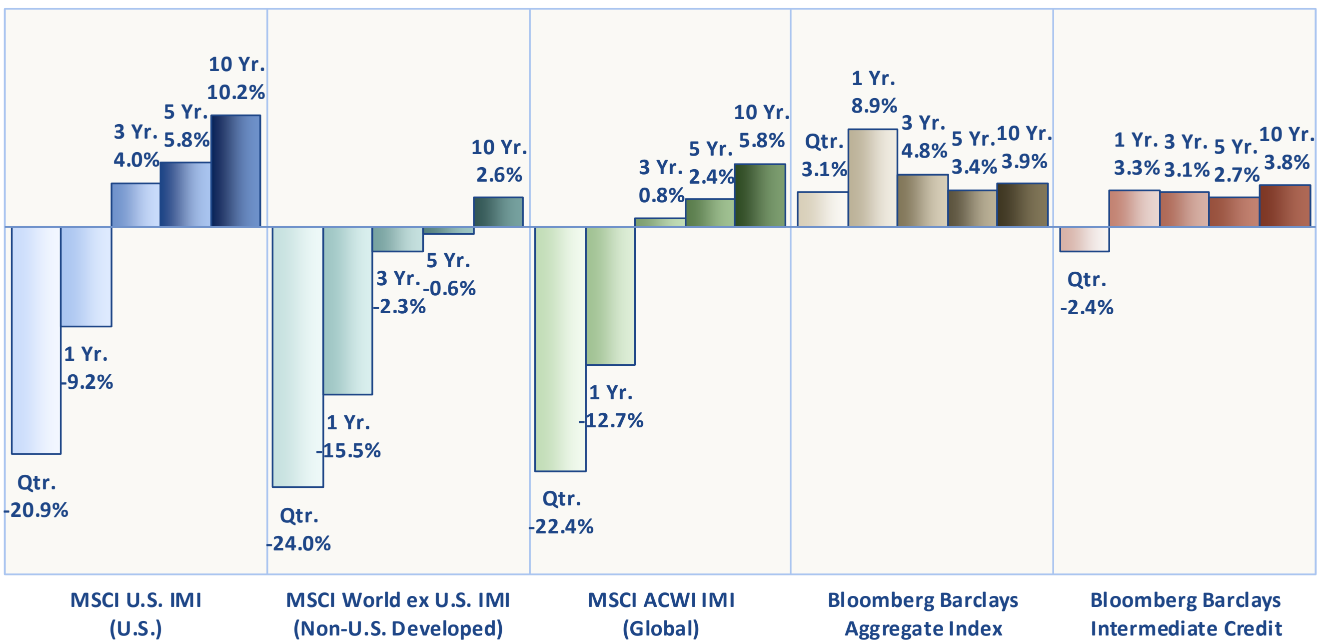
Key Takeaways:

- Global equities plunged and volatility exploded in the first quarter of 2020 amid concerns over the coronavirus and its impact on the global economy. Economies around the world were brought to a screeching halt after governments ordered individuals to shelter-in-place in order to slow the spread of the virus.
- Fixed income markets outperformed equities as investors sought the shelter of less risky asset classes on fears there could be a protracted global recession.
- Countries around the world unveiled massive stimulus programs in efforts to prop up flagging economies and prevent large scale business failures. The sheer size of the fiscal and monetary responses dwarfed even that which was undertaken in 2008/09 during the Global Financial Crisis.
- The economic outlook is highly uncertain and will depend in large part on the path that the virus will take and how quickly economies can be fully reopened.

Market Performance as of March 31, 2020



Commentary:

Global equities sharply fell and volatility spiked in the first quarter of 2020 amid heightened anxieties around the coronavirus (COVID-19) and its impact on the global economy. The sell-off which began in late February continued through March as the number of cases continued to surge globally. The collapse in the price of oil further compounded investor uncertainties following Russia's decision to walk away from talks with Saudi Arabia and other OPEC countries over coordinated oil production targets. At their nadir, global equity markets traded 30+ percent off of their highs from the start of the year before ending the quarter down 22 percent. In the US, the longest bull run in history came to an end after posting the worst quarterly loss since 2008 (down 21 percent). US equity markets fared modestly better than non-US equities as a whole (down 24 percent in the quarter); though, select non-US markets such as China (down 10 percent in the quarter) held up better during the downturn.[1] In fixed income markets, aggressive monetary easing coupled with a flight to safety by investors fearing a global recession pushed bond yields to historic lows, and in a number of countries, plunged deeper into negative territory. Falling yields caused fixed income markets to strongly outperform equities in this volatile environment. 'Safe haven' government treasuries posted the largest gains while corporate bonds lagged due to widening credit spreads and an elevated risk of ratings downgrades or default. The longer-duration Bloomberg Barclays Aggregate Index remained positive (up 3.1 percent) benefitting most from the drop in rates, while the shorter-maturity Intermediate Credit Index posted negative returns for the quarter (down 2.4 percent). Over a longer time horizon, global equity markets continued to offer attractive returns, outperforming the fixed income benchmark by more than 600 basis points over a 10 year period, although with much higher volatility.

Market Outlook

Recent economic data releases for Q1 are beginning to show just how damaging the COVID-19 pandemic has been for global economy with jobless claims skyrocketing and manufacturing and industrial production coming to a halt. Current forecasts for the US project unemployment rates to top 13 percent and GDP to contract by nearly 26 percent on an annualized basis in Q2. Major central banks have responded to the collapse in economic activity by introducing unprecedented levels of monetary stimulus and quantitative easing. In the US, the Federal Reserve issued two emergency rate cuts and began aggressively purchasing Treasuries to prevent a liquidity crisis. Moreover, the Fed pledged to buy unlimited amounts of government securities and even venture into corporate debt if necessary. On the fiscal side, the US federal government unveiled a $2+ trillion fiscal stimulus package to prevent large-scale business failures and prop up a flagging economy. Similar stimulus packages have been seen in other countries across Europe and Asia. These fiscal and monetary responses have been a crucial factor in the stabilization of financial markets through April.

The COVID-19 pandemic is far from over in the developed world, but there are encouraging signs that it may be reaching a peak in most of Europe and in some US hotspots. The United States – which has been the worst hit country in terms of absolute number of cases and fatalities – is now following a trajectory that only weeks ago was viewed as a best-case scenario, lifting hopes that the more dire outcomes could be avoided. However, expectations of an early return to normalcy may be disappointed. Despite the heavy economic toll caused by lockdowns, governments may choose to be slow in relaxing restrictions fearing that a premature end to public health controls could lead to a second wave of infections. As a result, lockdowns will likely be eased gradually and in stages. If this cautious approach plays out, the recovery over the rest of 2020 will be slow and partial, with European and US economies continuing to operate at less than full capacity well into the third quarter. However, there is such a high margin of error for these forecasts: a few weeks in either direction of the point when restrictions are lifted could mean the difference between a V-shaped recovery and a more drawn out recession. Given this level of uncertainty, 2020 is sure to be a volatile year for public markets.

Looking ahead, there may be lasting geopolitical impacts resulting from the pandemic. US-China relations in particular are bound to deteriorate further, especially given that this an election year in the US. China's handling of the early stages of the pandemic has strengthened impressions in Washington that Beijing misled the world about the true dangers of the virus and the President Trump is likely to deflect blame towards China. The future points to heightened strategic competition and the increasing unravelling of globalization.

[1] These include the returns to local non-U.S. markets as well as currency effects.

NAV Changes During the Quarter Ended March 31, 2020

TRS:

	% of Assets	Option	Market Value	Quarterly Change
	65.05%	WSIB TAP Fund	$5,995,997,712	($371,453,054)
	0.93%	Socially Responsible Balanced Fund	85,393,930	(14,024,405)
17.10%	0.34%	Retirement Maturity Strategy Fund	31,086,133	(2,692,031)
	0.47%	Retirement Strategy Fund 2010	42,933,773	(3,693,897)
	1.10%	Retirement Strategy Fund 2015	101,639,813	(18,894,902)
	2.99%	Retirement Strategy Fund 2020	275,945,168	(53,915,277)
	3.77%	Retirement Strategy Fund 2025	347,717,506	(71,668,838)
	2.97%	Retirement Strategy Fund 2030	273,917,660	(62,995,640)
	2.22%	Retirement Strategy Fund 2035	204,748,421	(52,994,044)
	1.35%	Retirement Strategy Fund 2040	124,328,467	(29,838,531)
	0.78%	Retirement Strategy Fund 2045	72,125,470	(17,659,115)
	0.55%	Retirement Strategy Fund 2050	50,983,804	(11,686,388)
	0.43%	Retirement Strategy Fund 2055	39,726,980	(8,427,614)
	0.11%	Retirement Strategy Fund 2060	10,572,370	(1,507,861)
	0.01%	Retirement Strategy Fund 2065	707,221	707,221
	7.33%	U.S. Large Stock Fund	675,668,873	(176,044,740)
	1.09%	U.S. Small Value Stock Fund	100,195,205	(57,279,584)
	1.21%	Global Equity Fund	111,316,989	(33,490,093)
	0.46%	Emerging Markets Equity Fund	42,612,276	(15,162,555)
	3.55%	Bond Market Fund	327,150,059	1,941,643
	3.28%	Short Term Investment Fund	302,253,158	21,049,158
		Total	$9,217,020,990	($979,730,547)

Commentary:

The biggest declines in end of period market values among target date funds came from the 2025 and 2030 vintages, falling -$71.7 million and -$63.0 million, respectively. These vintages were negatively impacted by adverse market movements during the first quarter. Despite the notable contractions in NAVs, the 2025 and 2030 vintages actually outperformed later dated vintages during the quarter given their lower allocations to public equities and greater focus on capital preservation. Later vintages continued to see robust inflows, with inflows into the newly introduced 2065 Strategy Fund actually offsetting sharply negative quarterly performance in equities during the quarter. The market downturn was broadly felt across all dedicated equity funds, with each ending the quarter with double digit declines. The Short-Term Investment Fund and Bond Market Fund experienced modestly positive changes in NAVs resulting from positive quarterly returns. The TAP Fund continued to make up the largest proportion of TRS Plan 3 assets, at 65% of total funds, and experienced largest decrease in value during the quarter at -$371 million[2], again due to negative returns in the quarter.

[2] The TAP contains a significant portion of non-liquid assets and changes in the value of these assets are slower to be reflected in the quarterly return numbers. The lagged reporting of private market investments should be taken into consideration when reviewing any short-term performance.

SERS:

	% of Assets	Option	Market Value	Quarterly Change
	76.49%	WSIB TAP Fund	$1,588,843,452	($107,980,356)
	0.57%	Socially Responsible Balanced Fund	11,753,741	(1,898,715)
13.05%	0.27%	Retirement Maturity Strategy Fund	5,508,055	(404,960)
	0.61%	Retirement Strategy Fund 2010	12,705,151	(795,115)
	1.10%	Retirement Strategy Fund 2015	22,857,601	(4,787,363)
	2.57%	Retirement Strategy Fund 2020	53,485,576	(11,734,192)
	2.77%	Retirement Strategy Fund 2025	57,562,645	(12,885,543)
	1.53%	Retirement Strategy Fund 2030	31,682,284	(7,561,309)
	1.31%	Retirement Strategy Fund 2035	27,192,630	(5,789,991)
	0.84%	Retirement Strategy Fund 2040	17,539,484	(3,753,756)
	0.67%	Retirement Strategy Fund 2045	13,878,107	(3,033,707)
	0.57%	Retirement Strategy Fund 2050	11,769,251	(2,559,705)
	0.56%	Retirement Strategy Fund 2055	11,713,721	(2,363,706)
	0.25%	Retirement Strategy Fund 2060	5,209,891	(903,364)
	0.00%	Retirement Strategy Fund 2065	50,270	50,270
	3.27%	U.S. Large Stock Fund	67,996,491	(20,309,221)
	0.52%	U.S. Small Value Stock Fund	10,764,898	(6,766,813)
	0.49%	Global Equity Fund	10,109,627	(3,635,109)
	0.18%	Emerging Markets Equity Fund	3,727,390	(1,238,735)
	1.67%	Bond Market Fund	34,719,963	2,628,101
	3.77%	Short Term Investment Fund	78,216,447	3,731,764
		Total	$2,077,286,676	($191,991,525)

Commentary:

The biggest declines in end of period market values among target date funds came from the 2020 and 2025 vintages, falling -$11.7 million and -$12.9 million, respectively. These vintages were negatively impacted by adverse market movements during the first quarter. Despite the notable contractions in NAVs, the 2020 and 2025 vintages actually outperformed later dated vintages during the quarter given their lower allocations to public equities and greater focus on capital preservation. Later vintages continued to see robust inflows, with inflows into the newly introduced 2065 Strategy Fund actually offsetting sharply negative quarterly performance in equities during the quarter. The market downturn was broadly felt across all dedicated equity funds, with each ending the quarter with double digit declines. The Short-Term Investment Fund and Bond Market Fund showed strength in the period with modestly positive changes to NAVs resulting from positive quarterly returns. The TAP Fund continued to make up the largest proportion of TRS Plan 3 assets, at 76% of total funds, and experienced largest decrease in value during the quarter at -$107 million[3], again due to negative returns in the quarter.

[3] The TAP contains a significant portion of non-liquid assets and changes in the value of these assets are slower to be reflected in the quarterly return numbers. The lagged reporting of private market investments should be taken into consideration when reviewing any short-term performance.

PERS:

	% of Assets	Option	Market Value	Quarterly Change
	62.84%	WSIB TAP Fund	$2,026,157,384	($119,657,244)
	1.08%	Socially Responsible Balanced Fund	34,862,814	(6,097,941)
19.73%	0.43%	Retirement Maturity Strategy Fund	13,774,436	(4,847,549)
	0.60%	Retirement Strategy Fund 2010	19,256,823	(2,261,843)
	1.17%	Retirement Strategy Fund 2015	37,789,552	(6,658,555)
	2.59%	Retirement Strategy Fund 2020	83,394,500	(18,314,854)
	3.77%	Retirement Strategy Fund 2025	121,571,638	(27,344,722)
	2.80%	Retirement Strategy Fund 2030	90,229,628	(21,768,746)
	2.43%	Retirement Strategy Fund 2035	78,466,096	(19,341,331)
	1.64%	Retirement Strategy Fund 2040	52,940,273	(13,058,880)
	1.53%	Retirement Strategy Fund 2045	49,255,347	(11,444,602)
	1.30%	Retirement Strategy Fund 2050	41,998,085	(10,406,962)
	1.08%	Retirement Strategy Fund 2055	34,849,263	(7,412,726)
	0.37%	Retirement Strategy Fund 2060	11,814,287	(2,670,543)
	0.03%	Retirement Strategy Fund 2065	841,390	841,390
	5.84%	U.S. Large Stock Fund	188,408,721	(51,952,777)
	1.37%	U.S. Small Value Stock Fund	44,164,768	(24,817,236)
	1.14%	Global Equity Fund	36,843,159	(12,093,846)
	0.48%	Emerging Markets Equity Fund	15,591,757	(6,929,476)
	2.46%	Bond Market Fund	79,223,486	2,598,335
	5.05%	Short Term Investment Fund	162,879,367	10,133,934
		Total	$3,224,312,772	($353,506,173)

Commentary:

The biggest declines in end of period market values among target date funds came from the 2025 and 2030 vintages, falling -$27.3 million and -$21.8 million, respectively. These vintages were negatively impacted by adverse market movements during the first quarter. Despite the notable contractions in NAVs, the 2025 and 2030 vintages actually outperformed later dated vintages during the quarter given their lower allocations to public equities and greater focus on capital preservation. Later vintages continued to see robust inflows, with inflows into the newly introduced 2065 Strategy Fund actually offsetting sharply negative quarterly performance in equities during the quarter. The market downturn was broadly felt across all dedicated equity funds, with each ending the quarter with double digit declines. The Short-Term Investment Fund and Bond Market Fund showed strength in the period with modestly positive changes to NAVs resulting from positive quarterly returns. The TAP Fund continued to make up the largest proportion of TRS Plan 3 assets, at 63% of total funds, and experienced largest decrease in value during the quarter at -$120 million[4], again due to negative returns in the quarter.

[4] The TAP contains a significant portion of non-liquid assets and changes in the value of these assets are slower to be reflected in the quarterly return numbers. The lagged reporting of private market investments should be taken into consideration when reviewing any short-term performance.

DCP:

	% of Assets	Option	Market Value	Quarterly Change
48.90%	1.53%	Retirement Maturity Strategy Fund	$65,730,201	($5,348,120)
	2.11%	Retirement Strategy Fund 2010	90,848,980	(11,449,918)
	5.39%	Retirement Strategy Fund 2015	232,069,752	(49,319,036)
	9.89%	Retirement Strategy Fund 2020	425,368,207	(106,740,819)
	10.56%	Retirement Strategy Fund 2025	454,143,688	(102,027,081)
	7.36%	Retirement Strategy Fund 2030	316,832,116	(75,120,888)
	5.11%	Retirement Strategy Fund 2035	219,914,048	(50,169,495)
	3.10%	Retirement Strategy Fund 2040	133,514,634	(30,178,219)
	1.94%	Retirement Strategy Fund 2045	83,410,117	(17,239,752)
	0.94%	Retirement Strategy Fund 2050	40,569,632	(7,621,033)
	0.59%	Retirement Strategy Fund 2055	25,481,351	(4,938,866)
	0.34%	Retirement Strategy Fund 2060	14,735,522	(3,383,627)
	0.02%	Retirement Strategy Fund 2065	972,322	972,322
	3.78%	Socially Responsible Balanced Fund	162,673,273	(28,321,389)
	10.90%	U.S. Large Stock Fund	469,086,660	(127,374,485)
	3.30%	U.S. Small Value Stock Fund	142,084,437	(84,651,695)
	3.19%	Global Equity Fund	137,066,484	(46,614,017)
	1.30%	Emerging Markets Equity Fund	56,136,515	(22,577,864)
	6.52%	Bond Market Fund	280,476,357	(3,993,739)
	22.10%	Savings Pool	950,950,486	62,354,153
		Total	$4,302,064,784	($713,743,567)

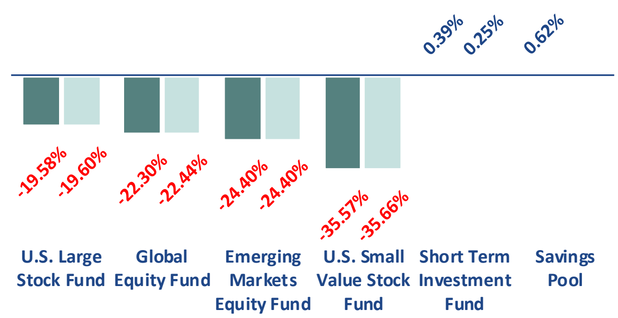
Commentary:

The biggest declines in end of period market values among target date funds came from the 2020 and 2025 vintages, falling -$106 million and -$102 million, respectively. These vintages were negatively impacted by adverse market movements during the first quarter. Despite the notable contractions in NAVs, the 2020 and 2025 vintages actually outperformed later dated vintages during the quarter given their lower allocations to public equities and greater focus on capital preservation. Later vintages continued to see robust inflows, with inflows into the newly introduced 2065 Strategy Fund actually offsetting sharply negative quarterly performance in equities during the quarter. The market downturn was broadly felt across all dedicated equity funds, with each ending the quarter with double digit declines. The Short-Term Investment Fund and Bond Market Fund showed strength in the period with modestly positive changes to NAVs resulting from positive quarterly returns. The TAP is not an investment option for the DCP. DCP participants dedicated a higher proportion of funds to the Socially Responsible Balanced Fund than other Plans 3 participants at 3.78%.

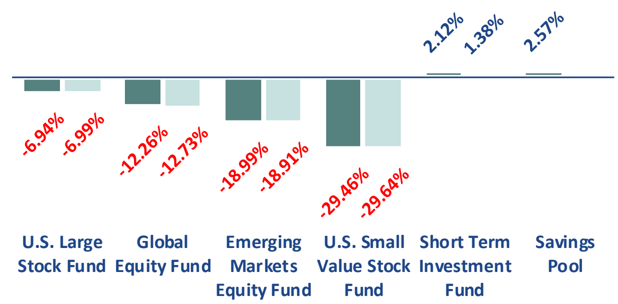
Plan Market Performance

Fund Benchmark

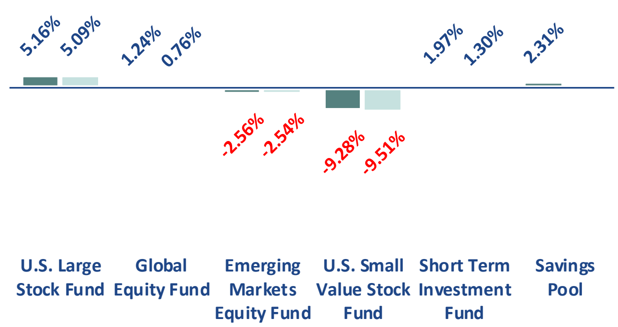
Quarter



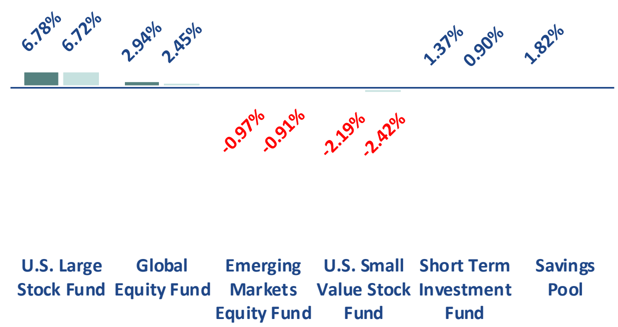
1 Year



3 Year

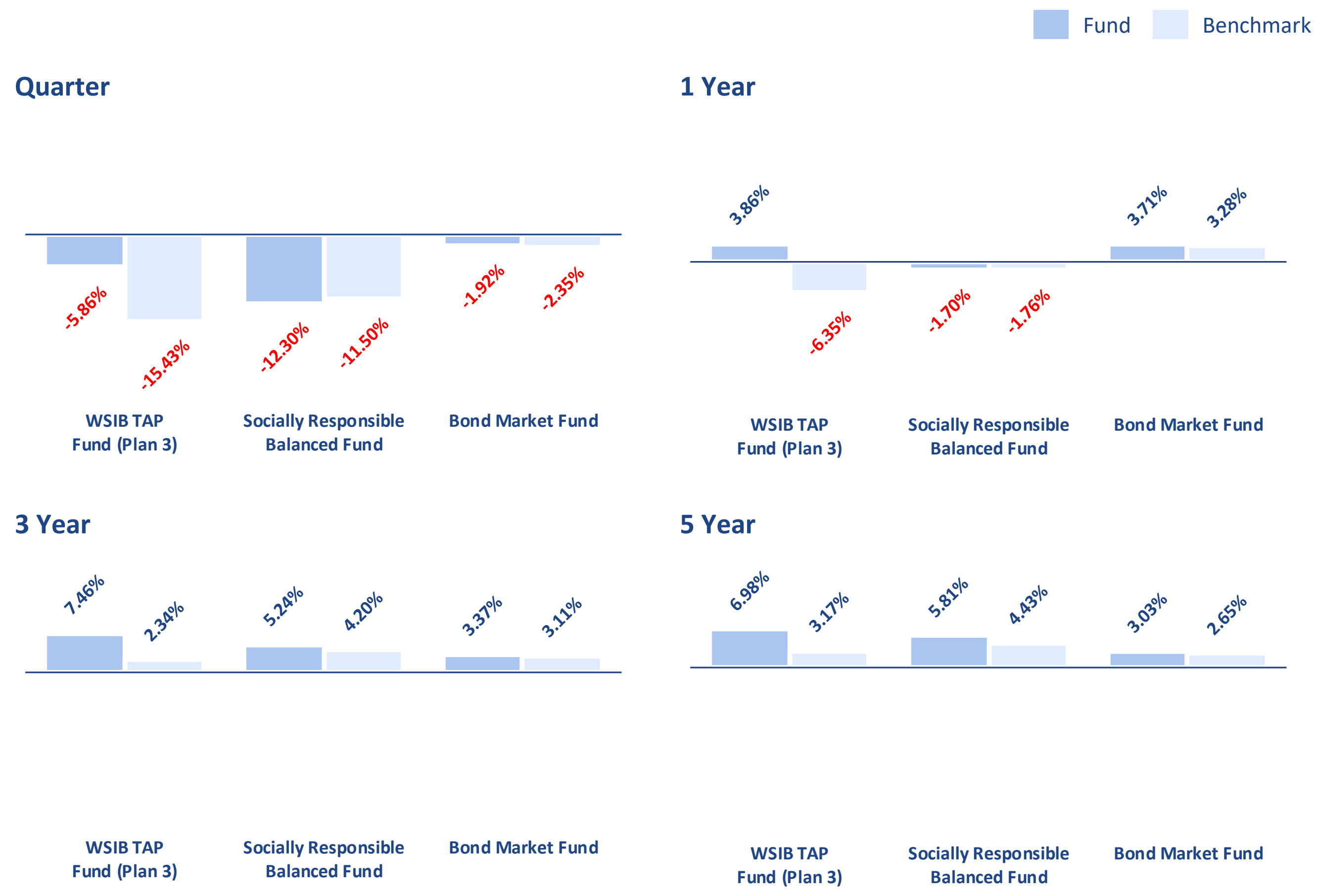


5 Year



Commentary:

Longer-term returns are more meaningful than short-term market gyrations; however, the current downturn shows us that bear markets can quickly overwhelm medium-term gains. Longer-term returns (e.g. ten-year returns), while not shown above, were also affected although not as much. The US Small Cap Value Fund posted the worst returns of the group during the 1st quarter, at -36 percent – though each dedicated equity fund suffered double digit declines in the period. On a 5-year basis, the US Large Stock and Global Equity Funds remained positive, while the EM and US Small Value Funds dipped into negative territory on an annualized basis. All of the standalone equity options are passively managed and therefore show returns that closely match their benchmarks. With interest rates continuing to be very low, both the short and long term returns for the Short-term Investment Fund and Savings Pool were modest, albeit positive. The U.S. Large Stock Fund returned close to 7 percent per annum over the last five years, outperforming all other investment options in this peer set.



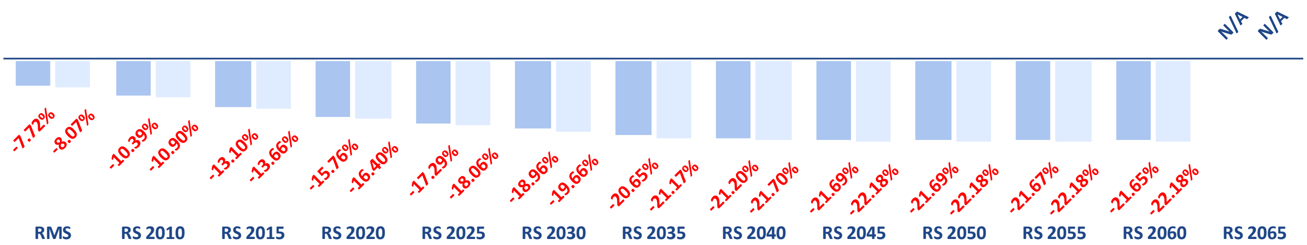
Commentary:

While recent returns are always of interest, longer-term returns are more meaningful. The Bond Market Fund returns surpassed each dedicated equity fund option amid falling interest rates and a rotation out of equities and into safer fixed income markets. Over a longer time horizon, the reverse held true for US Large Cap markets. The two balanced fund options – the TAP[5] and the Socially Responsible Fund – have both delivered positive absolute returns over a five-year period and have both outperformed their benchmarks.

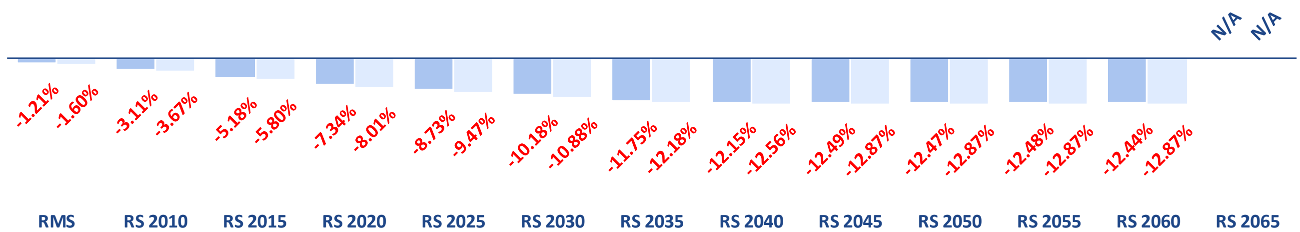
[5] The TAP contains a significant portion of non-liquid assets and changes in the value of these assets are slower to be reflected in the quarterly return numbers. The lagged reporting of private market investments should be taken into consideration when reviewing any short-term performance.

Fund Benchmark

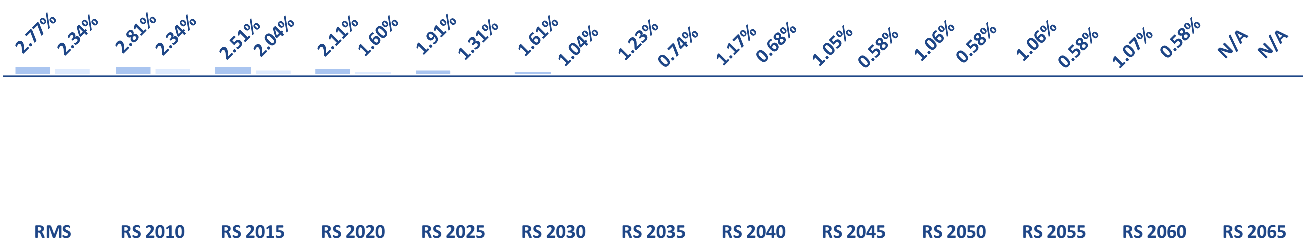
Quarter



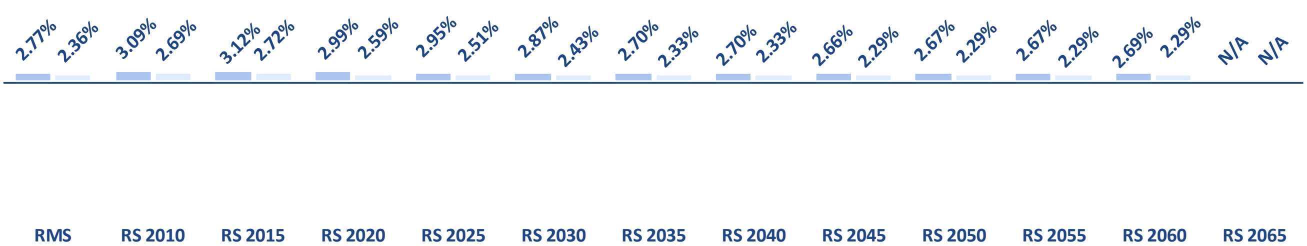
1 Year



3 Year



5 Year



Commentary:

Each of the target date fund vintages outperformed their respective benchmarks every time period presented here. Earlier dated vintages outperformed later dated vintages during the quarter given their smaller allocations to equities, which had posted sharply negative returns during the period. Over a longer time horizon, annualized returns were roughly even across all vintages as near-term losses offset longer-term gains from higher allocations to equity.