HERITAGE AND STABILISATION FUND (HSF)

QUARTERLY INVESTMENT REPORT

JANUARY TO MARCH 2022

TABLE OF CONTENTS

[1] This section includes economic data available as at April 19, 2022.

EXECUTIVE SUMMARY

- The recovery of the global economy was proceeding apace towards the end 2021 but entered a period of intense uncertainty following Russia's invasion of Ukraine in February 2022. The immediate fall-out from the invasion was a sharp spike in the rate of inflation in both developed and developing countries and a downward revision of 2022 growth projections by virtually all the international agencies and reputable global research organisations.

- During the quarter, inflation in the United States and Europe was on steady upward drift as savings from the sizeable COVID-19 support programmes spilled over to consumption as lockdown measures were removed. Despite the removal of the measures, the disruption they caused to the global supply chain was far too severe for a quick recovery. In February, the Russia's invasion of Ukraine and the subsequent sanctions disrupted global trade in commodity and added to the already stretched supply chain. As a result, food and energy prices surged causing inflation expectations to become unanchored. China's zero tolerance COVID-19 policy exacerbated near-term inflationary pressures and increased growth uncertainty.

- Against this backdrop, most major developed central banks accelerated plans to tighten monetary policy. The Bank of England (BOE) raised its key interest rate by 25 basis points in March to 0.75 per cent, marking its third consecutive increase, and began to shrink its close to £875 billion government bond balance sheet. The US Federal Reserve (Fed) implemented its first rate hike since 2018 and outlined projections to rapidly reduce accommodation through further rate increases as well as reductions in its almost US$9.0 trillion bond holdings. Meanwhile, the European Central Bank (ECB) left rates unchanged but indicated asset purchases would end during the third calendar quarter of 2022 with the possibility of rate increases shortly thereafter. Conversely, the Bank of Japan (BOJ) maintained its easy monetary policy stance citing the country's relatively lower level of inflation and the need to continue to support the economic recovery.

- Heightened fears around inflation and monetary policy drove both global developed equity and fixed income markets sharply lower. Market volatility spiked higher with

Russia's invasion of Ukraine in February and the increasingly uncertain outlook added to the risk-off sentiment. Developed equity markets sold-off on the prospect of higher interest rates and slower growth expectations. The S&P 500 index lost 4.60 per cent while other developed markets, as represented by the MSCI EAFE index, declined by 5.80 per cent. Meanwhile, central bank policies pushed sovereign bond yields higher with safe haven demand helping to temper the move in longer-dated maturities. The US investment grade bond market, as represented by the Bloomberg Barclays US Aggregate, fell by 5.93 per cent largely due to the rising rate environment. The 2-year US Treasury yield increased by 160 basis points to 2.33 per cent while the 10-year yield rose 83 basis points to 2.34 per cent.

- During the quarter, the HSF returned -5.69 per cent due to negative performance across both fixed income and equity mandates (see Table 1). The fixed income and equity mandates detracted 2.46 per cent and 3.30 per cent, respectively (see Table 2).

- When compared to its Strategic Asset Allocation (SAA) benchmark, which lost 5.44 per cent, the Fund underperformed by 25 basis points (see Table 2 and Appendix I). The HSF's overweight allocation to equities and corresponding underweight to fixed income, relative to its SAA benchmark, was the main driver of negative excess returns. Collectively, asset manager strategies positively contributed to relative performance.

- As at the end of March 2022, the total net asset value of the HSF was **US$5,299.5 million,** approximately US$323.63 million lower than the previous quarter's closing value of US$5,623.2 million.

Table 1
Absolute Quarterly Returns
For the period Jan – Mar 2022
/per cent/

	Absolute Return HSF	Absolute Return Benchmark
Composite Portfolio	**-5.69**	**-5.44**
US Short Duration Fixed Income	-2.76	-3.16
US Core Domestic Fixed Income	-6.06	-5.93
US Core Domestic Equity	-6.24	-6.49
Non-US Core International Equity	-6.77	-6.71

Table 2
Contributions to Quarterly Returns
For the period Jan – Mar 2022
/per cent/

	3 Months Portfolio Weighted Return to 31-Mar-2022	
	HSF	**Benchmark**
Composite Portfolio	**-5.69**	**-5.44**
US Short Duration Fixed Income	-0.52	-0.80
US Core Domestic Fixed Income	-1.94	-2.40
US Core Domestic Equity	-1.63	-1.12
Non-US Core International Equity	-1.67	-1.18

NB: Differences in totals are due to rounding.

SECTION 1 – INTERNATIONAL ECONOMIC ENVIRONMENT

The global economic recovery from the pandemic was set to continue into 2022, albeit at a more moderate pace given downside risks from high inflationary pressures and the gradual tightening of global financial conditions. Within developed economies, activity quickly rebounded from the most recent wave of infections stemming from the Omicron Covid-19 variant. The widespread removal of virus restrictions over the quarter helped boost demand. However, soaring commodity prices and additional supply chain shortages following Russia's invasion of Ukraine in late February threatened to undermine economic growth. To ease the burden of the rising cost of living, some governments provided support to households through targeted tax cuts and subsidies. Meanwhile, Western nations imposed several rounds of increasingly severe sanctions against Russia in an effort to swiftly end the conflict and limit the extent of the humanitarian crisis and economic toll. Towards the end of the quarter, a resurgence of the virus in China lead to lockdowns in key manufacturing and financial hubs, which further hindered global supply chains. Against this backdrop, most major developed central banks signaled plans to reduce monetary policy accommodation at an accelerated pace as policymakers balanced rising inflation expectations against projections for slower growth.

In the US, economic activity slowed in January due to the Omicron Covid-19 variant outbreak but quickly rebounded as successful immunisation programmes provided some protection from virus disruptions. The Markit U.S. Composite PMI edged higher to 57.7 points in March from 57.0 points in December. The manufacturing industry was resilient despite higher input costs and ongoing supply chain delays, while the Markit U.S. Services PMI recovered from a low of 51.2 points in January to end the quarter at 58.0 points. The uptick in business activity supported continued improvements in the labour market. More people returned to the work force and strong jobs growth pushed the unemployment rate near pre-pandemic lows at 3.6 per cent in March from 3.9 per cent in December 2021. Wages grew by 6.7 per cent but failed to keep pace with the rising cost of living. Inflation surged to a new forty-year high in March with the Consumer Price Index (CPI) soaring to 8.5 per cent from 7.0 per cent in December 2021. To address rising fuel costs, President Biden announced plans to release 1.0 million barrels per day of oil from the Strategic Petroleum Reserves (SPR) in an effort to lower prices.

The United Kingdom's economy expanded at a weaker pace as raw material delays and rising prices hampered output, particularly within the manufacturing sector. The Markit/CIPS UK Manufacturing PMI fell from 57.9 points in December to 55.2 points in March 2022. Business surveys showed weak new order demand while ongoing supply issues continued to curtail production. Meanwhile, consumer-facing services benefitted from the government's removal of the remaining Covid-19 controls. Businesses related to tourism, hospitality and entertainment saw an uptick in demand. The Markit/CIPS UK Services PMI rose from 53.6 points in December to 62.6 points in March 2022. The most recent data showed continued improvement in the labour market with the unemployment rate declining to 3.8 per cent in February from 4.1 per cent at the end of 2021. Higher transport and energy costs pushed inflation to 7.0 per cent in March from 5.4 per cent in December. With fuel costs expected to surge even higher following the expiration of the energy price cap in April, the UK government announced a package of tax cuts and support payments to help ease the burden on households.

Similarly, the near-term outlook for the euro zone economies weakened given the downside risks stemming from the Russia-Ukraine war. Manufacturing production declined with the Markit Euro Area Manufacturing sector PMI declining from 58.0 points in December to 56.5 points in March 2022. Business sentiment slumped on rising geopolitical tensions and soaring input costs. The war and China's strict Covid-19 policies added to already lengthy supply chain delays. However, the further easing of Covid-19 restrictions in the Euro region helped boost service sector activity. The Markit Euro Area Service sector PMI increased from 53.1 points in December to 55.6 points in March 2022. Despite strong labour market conditions, consumer confidence waned as rising prices placed households in a worse financial position. In March, rising energy costs largely accounted for the 7.4 per cent year-on-year rise in consumer inflation.

In contrast to its peers, Japan's economic output was constrained by repeated lockdowns directed at curbing the wave of Omicron infections. The Nikkei/Markit Composite PMI fell from 52.5 points in December to 50.3 points March. Manufacturers signalled that order growth continued to slow and that shortages of semiconductors delayed the production of electronics and automobiles. The surveys also highlighted a rapid increase of input prices. The Producer Price Index rose 9.5 per cent in the twelve months to March. Consumer prices also increased but at a more measured pace, gaining 1.2 per cent in March when compared to 0.8 per cent in December 2021. However, excluding food and energy, prices continued to trend lower falling by 1.6 per cent in March.

Most major central banks shifted towards reducing stimulus amid intensifying pricing pressures while remaining cautious given the weaker growth outlook. For the first time since 2018, the US Federal Reserve (Fed) raised its key policy rate at the March Federal Open Market Committee (FOMC) meeting by 25 basis points to a target range of 0.25 per cent to 0.50 per cent. Committee members projected that additional rate hikes as well a quantitative tightening through the reduction of the Bank's close to US$9.0 trillion bond holdings would be warranted given persistent inflationary pressures. Similarly, the Bank of England's (BOE) Monetary Policy Committee voted to increase the Bank rate by 25 basis points to 0.75 per cent in March, representing its third consecutive rate hike. The Bank also began shrinking its almost £875 billion government bond balance sheet but softened its tone towards further tightening highlighting stronger downside risks. The European Central Bank (ECB) maintained its relatively accommodative stance. The Governing Council left rates unchanged on short-term lending facilities and outlined plans to end asset purchases in the third quarter of

2022 with the possibility of rate increases shortly thereafter. Conversely, the Bank of Japan (BOJ) restated its commitment to ultra-loose monetary policies, citing downward pressure on the economy from the covid-19 pandemic. At the March policy meeting, the BOJ upheld policy measures including negative short-term interest rates, 10-year yield targeting, and left the pace of asset purchases unchanged.

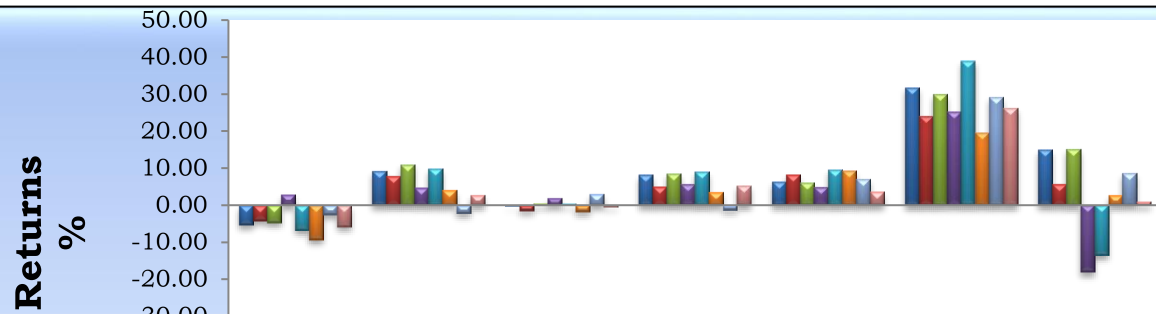
SECTION 2 – CAPITAL AND MONEY MARKET REVIEW

Global equity and fixed income markets tumbled on concerns around record inflation and faster than anticipated monetary policy tightening. Additional downside risks emerged with Russia's invasion of Ukraine as surging energy and commodity prices strengthened the case for major developed central banks to swiftly reduce accommodation. Market volatility spiked higher with the shock of the war and remained elevated amid heightened geopolitical tensions. The US Chicago Board Options Exchange Volatility Index (VIX) peaked in early March and averaged 25.31 points for the quarter when compared to an average of 19.24 points during the prior three months. Similarly, the European measure of investor anxiety, the Euro Stoxx 50 Volatility Index (VSTOXX) rose over the period, increasing on average by 8.80 points to 29.40 points for the quarter.

US equities faltered in January on the prospect of a faster than anticipated rate hiking cycle. The heightened uncertainty stemming from the Russia-Ukraine conflict upended markets and deepened stock losses. Peak to trough, the US Standard and Poor's (S&P) 500 index fell in excess of 13.0 per cent during the quarter. However, optimism around a potential peace deal helped markets to recover from its lows with the S&P 500 index declining by 4.60 for the period. At the sector level, energy stocks performed well bolstered by higher oil prices, which ended the quarter at US$100.28 per barrel (West Texas Intermediate Crude). Defensive sectors such as Utilities also outperformed the broader market while Consumer Discretionary lagged with concerns around a potential slowdown in spending given the rising cost-of-living. Technology stocks also fell as markets adjusted valuation levels down given the higher interest rate environment.

Non-US developed stock markets, as represented by the MSCI EAFE index, retreated 5.80 per cent, when measured in US dollars (see Figure 1). Exposure to local currencies contributed negatively to performance as the US dollar continued to appreciate over the quarter. UK equities outperformed other major gauges with the FTSE 100 index gaining 2.89 per cent due to its relatively larger exposure to oil and mining companies as these shares performed well alongside rising commodity prices. Meanwhile, other European markets plummeted given the region's closer geographic proximity to the war as well as its stronger economic and trade relations with Russia. Germany's DAX index dropped 9.25 per cent as investors' weighed the country's heavy reliance on Russian oil and gas and the potential adverse impact of energy rationing plans on its key manufacturing and industrial sectors. In Asia, Japan's Nikkei 225 index held up relatively better with a loss of 2.50 per cent as a significantly weaker yen boosted the earnings outlook of export-driven firms.

Figure 1
Total Returns on Equity Indices
/Per cent/



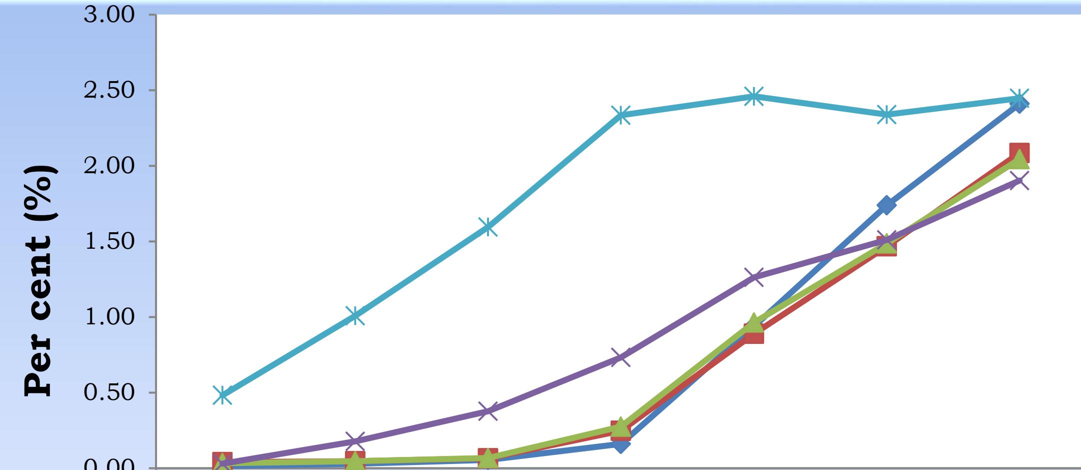
	QTR Ended Mar-22	QTR Ended Dec-21	QTR Ended Sep-21	QTR Ended Jun-21	QTR Ended Mar-21	FY 20/21	FY 19/20
Russell 3000	-5.28	9.27	-0.10	8.24	6.34	31.86	14.99
Dow Jones	-4.10	7.87	-1.46	5.08	8.29	24.15	5.70
S&P 500	-4.60	11.02	0.58	8.55	6.17	29.99	15.13
FTSE 100 - UK	2.89	4.75	1.94	5.63	4.97	25.31	-17.96
CAC 40 - France	-6.68	9.86	0.44	9.07	9.59	38.96	-13.41
DAX 30 - Germany	-9.25	4.09	-1.74	3.48	9.40	19.59	2.68
Nikkei 225 - Japan	-2.50	-2.10	3.02	-1.23	7.07	29.14	8.69
MSCI EAFE	-5.80	2.72	-0.34	5.34	3.62	26.27	0.95

Source: Bloomberg

In the US fixed income market, US treasury yields climbed higher across the curve with the largest increases concentrated in shorter maturities. During the quarter, the Fed embarked on its rate hiking cycle and signalled a willingness to tighten more aggressively to combat inflation. As a result, the 2-year yield moved sharply higher by

160 basis points to end at 2.33 per cent. Meanwhile, slow growth concerns and safe haven demand helped temper the increase on the longer-end of the curve. The 10-year yield added 83 basis points to close the quarter at 2.34 per cent. The difference between the 2-year and 10-year yield narrowed to less than one basis point and fuelled fears around a potential yield curve inversion, as similar events have preceded economic slowdowns in the past.

Figure 2
US Treasury Curve
/Per Cent/

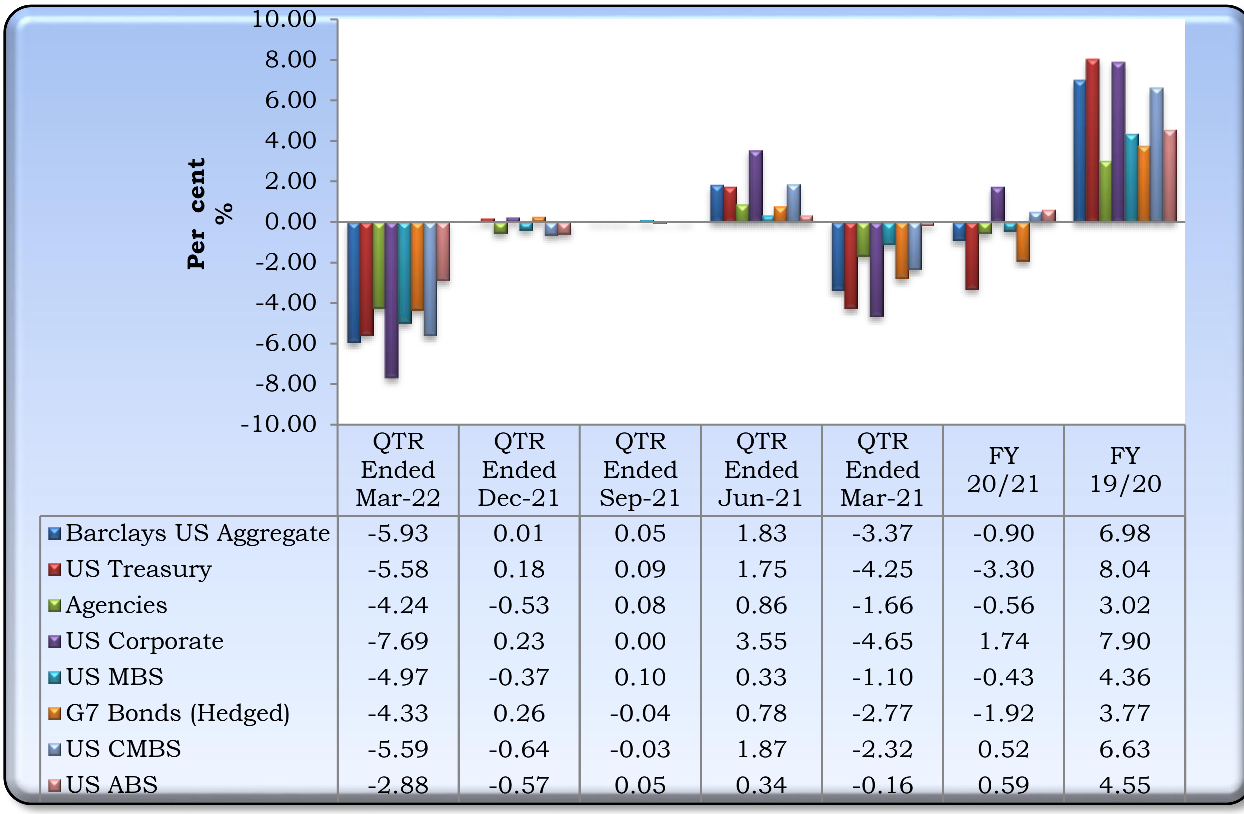


	3 Month	6 Month	1 Year	2 Year	5 Year	10 Year	30 Year
Mar-21	0.02	0.03	0.06	0.16	0.94	1.74	2.41
Jun-21	0.04	0.05	0.07	0.25	0.89	1.47	2.09
Sep-21	0.03	0.05	0.07	0.28	0.96	1.49	2.04
Dec-21	0.03	0.18	0.38	0.73	1.26	1.51	1.90
Mar-22	0.48	1.01	1.60	2.33	2.46	2.34	2.45

Source: Bloomberg

The broader US fixed income market, as represented by the Bloomberg Barclays US Aggregate Bond Index, fell by 5.93 per cent (see Figure 3) and recorded its worst quarterly return since 1980. Bond prices declined due to a combination of higher interest rates and wider credit spreads. Sub-sectors with lower interest rate risk such as Asset Backed Securities outperformed the index, declining by 2.88 per cent. Meanwhile, the US Corporate Bond sub-sector lost 7.69 per cent due to its longer duration profile and relatively larger increase in credit spreads. In the securitised sector, Commercial Mortgage Backed Securities (CMBS) and Mortgages Backed Securities (MBS) retreated 5.59 per cent and 4.97 per cent, respectively.

Figure 3
Returns on Fixed Income Indices
/Per Cent/

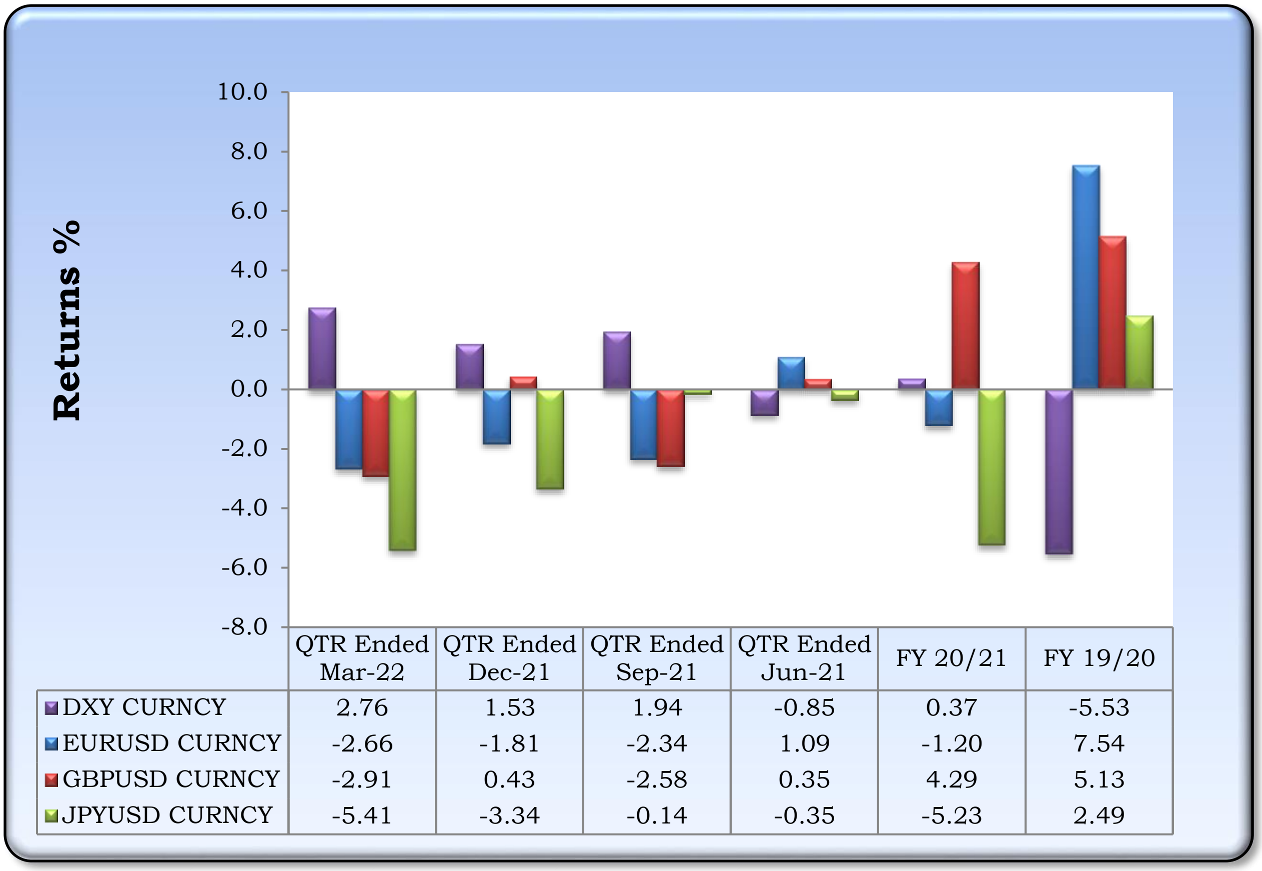


	QTR Ended Mar-22	QTR Ended Dec-21	QTR Ended Sep-21	QTR Ended Jun-21	QTR Ended Mar-21	FY 20/21	FY 19/20
Barclays US Aggregate	-5.93	0.01	0.05	1.83	-3.37	-0.90	6.98
US Treasury	-5.58	0.18	0.09	1.75	-4.25	-3.30	8.04
Agencies	-4.24	-0.53	0.08	0.86	-1.66	-0.56	3.02
US Corporate	-7.69	0.23	0.00	3.55	-4.65	1.74	7.90
US MBS	-4.97	-0.37	0.10	0.33	-1.10	-0.43	4.36
G7 Bonds (Hedged)	-4.33	0.26	-0.04	0.78	-2.77	-1.92	3.77
US CMBS	-5.59	-0.64	-0.03	1.87	-2.32	0.52	6.63
US ABS	-2.88	-0.57	0.05	0.34	-0.16	0.59	4.55

Source: Bloomberg

Expectations for US interest rates to rise faster than its peers drove the US dollar, as measured by the Dollar Spot Index (DXY), to appreciate by 2.76 per cent. The Japanese Yen depreciated 5.41 per cent against the dollar given the widening policy divergence between the BOJ and Fed. Similarly, the Euro and British Pound weakened 2.66 per cent and 2.91 per cent when compared against the US dollar. With greater uncertainties stemming from the war, officials from the ECB and BOE conveyed a more cautious approach towards balancing inflation and growth.

Figure 4
Foreign Exchange Returns for Major Currencies
vis-à-vis the US Dollar
/Per Cent/



	QTR Ended Mar-22	QTR Ended Dec-21	QTR Ended Sep-21	QTR Ended Jun-21	FY 20/21	FY 19/20
DXY CURNCY	2.76	1.53	1.94	-0.85	0.37	-5.53
EURUSD CURNCY	-2.66	-1.81	-2.34	1.09	-1.20	7.54
GBPUSD CURNCY	-2.91	0.43	-2.58	0.35	4.29	5.13
JPYUSD CURNCY	-5.41	-3.34	-0.14	-0.35	-5.23	2.49

Source: Bloomberg

SECTION 3 – PORTFOLIO PERFORMANCE

Strategic Asset Allocation

Table 3 reports the actual mandate weights of the HSF's Investment Portfolio relative to its approved SAA for the quarter ended March 2022 and the previous three (3) quarters.

Table 3
Portfolio Composition relative to the Approved SAA[2]
/per cent/

Portfolio Weights	Asset Class		Jun-21	Sep-21	Dec-21	Mar-22
		Target Weight SAA	Actual % of Fund	Actual % of Fund	Actual % of Fund	Actual % of Fund
	US Short Duration Fixed Income	25.00	18.28	18.69	18.05	18.63
	US Core Domestic Fixed Income	40.00	33.23	32.15	31.25	31.10
	US Core Domestic Equity	17.50	24.01	24.55	26.21	26.08
	Non-US Core International Equity	17.50	24.48	24.60	24.49	24.20

Totals may not sum to 100 due to rounding.

During the three months ending March 2022, movement in the market values of the HSF's assets drove modest changes in the mandate weights. As at the end of the quarter, the HSF maintained its overall underweight allocation to fixed income securities and corresponding overweight to equities. At the mandate level, the US Core Fixed Income mandate held the largest underweight position of 8.90 per cent, while the US Core Domestic Equity mandate had the largest overweight position of 8.58 per cent (see Table 3).

Following continuous reviews, the Board took a tactical decision not to rebalance the Fund and thus, allowed the Fund's asset allocation to deviate from the approved +/-5.0 per cent limit. The Board assessed that the overweight exposure to equity markets would continue to benefit the Fund's performance given expectations for equities to provide

[2] The Board's approved investment policy allow the mandate weights to deviate from the approved SAA weights by +/- 5 per cent.

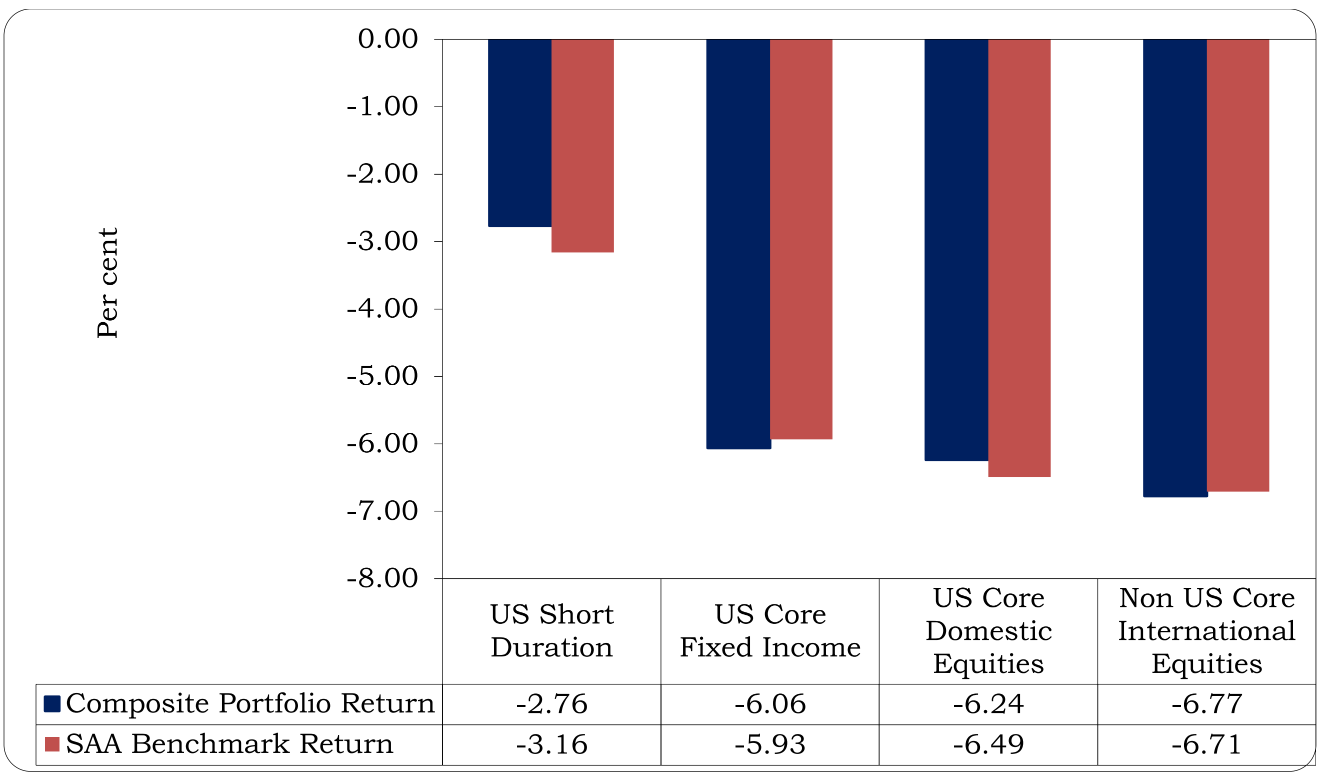
better risk-adjusted performance than fixed income over the near-term. The Board maintained that it would continue to conduct a monthly assessment of its decision.

The total net asset value of the Fund as at the end of March 2022 was **US$5,299.5 million**, compared to US$5,623.2 million at the end of the previous quarter. Of this total, the Investment Portfolio was valued at US$5,297.1 million, while the remaining portion was held in operating cash accounts to meet the day-to-day expenses that arise from the management of the Fund.

Performance of the Investment Portfolio

During the second fiscal quarter of 2022, the HSF's Investment Portfolio returned -5.69 per cent due to negative performance across both the fixed income and equity mandates (see Figure 5).

Figure 5
Absolute Returns by Mandate
For the period Jan - Mar 2022
/per cent/



	US Short Duration	US Core Fixed Income	US Core Domestic Equities	Non US Core International Equities
Composite Portfolio Return	-2.76	-6.06	-6.24	-6.77
SAA Benchmark Return	-3.16	-5.93	-6.49	-6.71

When compared with its SAA benchmark[3], which declined by 5.44 per cent, the HSF underperformed by 25 basis points. The main driver of negative excess returns was the Fund's overweight allocation to equities and corresponding underweight to fixed income relative to its SAA benchmark. Collectively, asset manager strategies incrementally added to returns and helped to reduce relative losses. Over the quarter, positive contributions from managers in the US Core Domestic Equity and US Short Duration mandates outweighed the underperformance of managers in the Non-US Core International Equity and US Core Fixed Income mandates.

The **US Core Domestic Equity** mandate lost 6.24 per cent and outperformed its benchmark, the Russell 3000 ex Energy index, by 25 basis points over the quarter (see Figure 5). The mandate's outperformance was driven by positive stock selection decisions. Relative positioning within health care, financials and industrials sectors added to returns. The mandate's net asset value as at March 31, 2022 was **US$1,381.2 million**, down from US$1,473.5 million at the end of the prior quarter.

The **Non-US Core International Equity** mandate retreated 6.77 per cent over the quarter ending March 2022. This compares to a decline of 6.71 per cent for its benchmark, the MSCI EAFE ex Energy index. Positive stock decisions in Europe and Canada were largely offset by poor relative positioning choices in Japan and the UK. Meanwhile, the combined effect of currency hedging and country allocation detracted over the period. During the quarter, the mandate's net asset value decreased by $95.3 million to **US$1,281.7 million** as at the end of March 2022.

The **US Short Duration Fixed Income** mandate returned -2.76 per cent over the second quarter of the financial year. The mandate outperformed the benchmark, Bank of America Merrill Lynch US Treasury 1-5 year index, by 40 basis points. Positive excess returns were driven by the portfolio's short duration positioning relative to the benchmark, while the portfolio's exposure to high quality credit sectors modestly detracted as spreads widened over the period due to heightened risk aversion in the

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[3] The SAA benchmark is a blended benchmark, which comprises of the Bank of America/Merrill Lynch US Treasury 1-5 Years Index (25%), Bloomberg Barclays US Aggregate Bond Index (40%), Russell 3000 ex Energy Index (17.5%), and MSCI EAFE ex Energy Index (17.5%).

market. The net asset value of the mandate as at March 31, 2022 was **US$986.8 million** compared to US$1,015.1 million three months earlier.

The longer duration **US Core Domestic Fixed Income** mandate fell by 6.06 per cent while the benchmark, the Bloomberg Barclays US Aggregate Bond index, declined by 5.93 per cent. The mandate's underperformance of 13 basis points resulted from overweight exposures to investment grade credit sectors. In particular, excess allocations to investment grade corporate bonds detracted as the broad risk-off environment led to significant spread widening. The net asset value of the mandate declined by $109.3 million to end March 2022 at **US$1,647.4 million**.

SECTION 4 – COMPLIANCE AND PORTFOLIO RISKS

Compliance

At the end of the quarter, one asset manager within the Non-US Core International Equity mandate continued to stand below the performance objectives outlined in the investment guidelines. Additionally, following extreme market events that transpired at the beginning of the pandemic in March 2020, the managers in the US Core Domestic Fixed Income mandate continued to operate above the risk target relative to the benchmark, as stated in the investment guidelines. The Central Bank, as manager of the Fund, aims to bring the managers back in compliance with the investment guidelines as soon as feasible. These managers continue to be closely monitored by the Central Bank and frequent discussions are held regarding the market environment and portfolio positioning.

During the quarter, market movements resulted in modest changes to the deviation of the mandate weights from the approved SAA. As at March 31, 2022, all the mandates continued to exceed the allowable +/- 5 per cent deviation (see Table 3). Based on the HSF Board's assessment, a decision was taken to defer the rebalancing of the Fund until a further examination is conducted at the quarter ending March 31, 2022. To support the review of its decision, the Board requested the Central Bank continue to provide monthly updates on the Fund's performance, asset class exposures as well as market outlook.

Portfolio Risks

The main risks for the HSF portfolio are credit, concentration, interest rate, and currency risks. The following paragraphs give a description of how these risks are mitigated.

Credit Risk

Within the **money market portion** of the Fund, credit risk is minimised by the strict adherence to the following standards: (i) all counterparties must have a minimum credit rating of either A-1 from the Standard and Poor's rating agency or P-1 from Moody's Investors Services; and (ii) a maximum exposure limit for counterparties of no more than 5.0 per cent of the market value of the portfolio.

For **fixed income instruments**, credit risk is mitigated by the use of credit concentration limits as well as minimum credit quality ratings. Bonds must have an investment grade rating as defined by Standard and Poor's, Moody's Investors Services or Fitch Ratings Incorporated. Should the required ratings on an existing fixed income security fall below the minimum standards, the security must be sold within an agreed upon timeframe. Table 4 below shows the average credit quality of the US Short Duration and US Core Fixed Income Portfolios as at March 31, 2022.

Table 4
Average Credit Rating

Mandate	Portfolio	Benchmark
US Short Duration	**AA+**	**AA+**
US Core Fixed Income	**A+**	**AA**

Concentration Risk

Concentration or diversification risk is minimised by investing across various asset types and holding a large number of positions within an asset class. The aim is to minimise risk and/or maximise return by investing in a wide cross-section of asset classes and positions that would each react differently to the same market event. As such, it is likely that when one has strong returns, another may have lower returns to the same market event.

The portfolio is currently invested across four asset groupings as follows: US Short Duration Fixed Income; US Core Domestic Fixed Income; US Core Domestic Equity; and Non-US Core International Equity. In addition, concentration risk is minimised within asset groups by approved market exposure and issuer holding limits. For the **equity portfolios**, this risk is managed by imposing a maximum percentage holding of 3.0 per cent of any security's outstanding shares, as well as a maximum sector deviation relative to the benchmark of 5.0 per cent.

Interest Rate Risk

Interest rate risk is managed using a weighted average effective duration limit on the respective portfolios. For the US Short Duration Fixed Income mandate, the allowable range is six months longer or shorter than the weighted average duration of its respective benchmark. While the US Core Domestic Fixed Income mandate has an allowable range of 12 months longer or shorter than the weighted average duration of its respective benchmark. Table 5 shows the weighted average duration for the US Short Duration and US Core Domestic Fixed Income portfolios as at March 31, 2022.

Table 5
Weighted Average Duration
/Years/

Mandate	Portfolio	Benchmark
US Short Duration	**2.28**	**2.61**
US Core Domestic Fixed Income	**6.77**	**6.58**

Currency Risk

Currency risk is managed by containing and managing the exposure to non-US dollar instruments. For the fixed income mandates, no more than 10 per cent of the market value of the portfolio can be invested in securities which are denominated in currencies other than the US Dollar. For these mandates, non-US dollar currency exposure is fully hedged into the US Dollar. However, the effectiveness of the hedge may vary depending on market conditions.

For the US Core Domestic Equity mandate, no more than 5 per cent of the market value of the portfolio can be invested in securities, which are denominated in currencies other than the US Dollar. The performance benchmark for the Non-US Core International Equity portfolio is the custom MSCI EAFE ex-energy Index. The index comprises of equity securities of issuers domiciled in developed markets countries, excluding the US and Canada. Where benchmark securities are quoted in currencies other than the US dollar, the Fund accepts the currency risk. For this mandate, however, managers can hedge up to 15 per cent of the market value of their currency exposure into the US dollar, the base reporting currency for the HSF. At the end of March 2022, the currency exposure for this portfolio was 97 per cent of its market value. During the quarter, all the portfolios were within their respective limits.

Appendix I

HSF Portfolio - Historical Performance

Quarter End	Current Returns			Financial YTD			Annualised Return Since Inception		
	Portfolio	Benchmark	Excess	Portfolio	Benchmark	Excess	Portfolio	Benchmark	Excess
	%	%	bps	%	%	bps	%	%	bps
FY 2010									
December	0.96	0.89	6.65	0.96	0.89	6.65	3.72	3.78	-6.16
March	1.61	1.68	-6.20	2.59	2.58	0.49	3.95	4.03	-7.76
June	-1.83	-1.89	6.05	0.71	0.64	6.69	3.07	3.12	-5.18
September	5.33	5.08	24.73	6.07	5.75	31.93	4.37	4.35	2.06
FY 2011									
December	2.29	2.21	8.15	2.29	2.21	8.15	4.70	4.65	4.13
March	1.62	1.54	7.24	3.94	3.79	15.68	4.81	4.76	5.72
June	1.88	1.81	6.68	5.89	5.67	22.91	4.98	4.91	7.00
September	-4.82	-4.28	-53.66	0.79	1.14	-34.89	3.57	3.63	-6.29
FY 2012									
December	2.74	3.03	-28.52	2.74	3.03	-28.52	3.97	4.08	-12.00
March	5.04	4.46	57.50	7.92	7.63	29.29	4.78	4.78	-0.08
June	-0.90	-0.60	-30.42	6.95	6.98	-3.72	4.37	4.43	-6.13
September	3.53	2.98	55.03	10.73	10.18	55.02	4.68	4.65	2.07
FY 2013									
December	1.49	1.45	4.11	1.49	1.45	4.11	4.88	4.83	4.76
March	3.29	2.90	39.19	4.82	4.38	44.01	5.23	5.12	11.20
June	-0.30	-0.69	39.05	4.51	3.66	84.64	4.97	4.80	17.26
September	3.95	3.47	47.35	8.63	7.26	137.06	5.40	5.16	24.01
FY 2014									
December	3.95	2.66	129.38	3.95	2.66	129.38	5.80	5.37	42.67
March	1.46	1.30	16.28	5.47	4.00	147.73	5.80	5.37	43.52
June	2.56	2.30	25.90	8.17	6.38	178.44	5.96	5.51	45.76
September	-0.48	-0.73	25.31	7.65	5.60	204.51	5.69	5.22	47.69
FY 2015									
December	2.25	1.63	62.27	2.25	1.63	62.27	5.81	5.26	54.46
March	2.29	2.25	3.95	4.60	3.92	67.71	5.92	5.39	53.34
June	-0.02	-0.51	49.43	4.58	3.39	119.07	5.74	5.16	57.93
September	-2.02	-2.19	16.83	2.47	1.13	134.06	5.31	4.73	58.12

Quarter End	Current Returns			Financial YTD			Annualised Return Since Inception		
	Portfolio	Benchmark	Excess	Portfolio	Benchmark	Excess	Portfolio	Benchmark	Excess
	%	%	bps	%	%	bps	%	%	bps
FY 2016									
December	1.68	1.67	0.22	1.68	1.67	0.22	5.36	4.79	56.52
March	0.80	1.26	-46.14	2.48	2.95	-46.70	5.30	4.80	49.64
June	0.80	1.11	-30.92	3.30	4.09	-78.90	5.24	4.79	44.83
September	2.45	2.12	32.85	5.83	6.29	-45.72	5.37	4.89	47.33
FY 2017									
December	-0.46	-0.98	51.92	-0.46	-0.98	51.92	5.17	4.66	51.64
March	3.17	2.92	24.41	2.69	1.91	77.74	5.37	4.84	52.92
June	2.74	2.44	30.00	5.50	4.40	110.45	5.51	4.97	54.69
September	2.61	2.06	54.78	8.25	6.55	170.48	5.64	5.05	58.79
FY 2018									
December	2.24	1.83	40.22	2.24	1.83	40.22	5.72	5.11	61.32
March	-0.55	-0.94	38.21	1.67	0.88	78.91	5.53	4.90	63.49
June	0.26	0.21	5.36	1.94	1.09	84.52	5.43	4.81	62.52
September	1.81	1.54	27.02	3.79	2.65	113.37	5.47	4.84	63.61
FY 2019									
December	-4.69	-3.54	-114.99	-4.69	-3.54	-114.99	4.93	4.41	51.33
March	5.93	5.61	31.25	0.96	1.88	-91.66	5.33	4.79	53.03
June	3.01	3.26	-25.10	4.00	5.20	-119.99	5.47	4.97	49.95
September	1.05	1.27	-21.70	5.10	6.54	-144.08	5.44	4.97	47.15
FY 2020									
December	3.62	3.20	41.90	3.62	3.20	41.90	5.63	5.13	49.64
March	-7.33	-5.51	-182.43	-3.98	-2.48	-149.43	4.90	4.58	32.73
June	8.62	7.57	104.53	4.30	4.90	-60.38	5.46	5.06	39.94
September	3.74	2.98	76.36	8.20	8.03	17.42	5.65	5.20	45.01

Quarter End	Current Returns			Financial YTD			Annualised Return Since Inception		
	Portfolio	**Benchmark**	**Excess**	**Portfolio**	**Benchmark**	**Excess**	**Portfolio**	**Benchmark**	**Excess**
	%	**%**	**bps**	**%**	**%**	**bps**	**%**	**%**	**bps**
FY 2021									
December	6.43	5.50	93.52	6.43	5.50	93.52	6.02	5.51	51.10
March	1.28	0.08	119.45	7.79	5.58	220.73	6.00	5.41	59.10
June	4.00	3.09	90.18	12.10	8.85	324.76	6.19	5.54	64.60
September	-0.31	-0.09	-22.00	11.75	8.75	299.80	6.05	5.44	61.82
FY 2022									
December	2.97	1.98	99.31	2.97	1.98	99.31	6.16	5.48	67.75
March	-5.69	-5.44	-25.12	-2.89	-3.57	68.04	5.64	5.00	64.44

Notes:

(1) Differences in totals are due to rounding.
(2) In August 2009, International Equities and Fixed Income Securities were added to the HSF portfolio. The performance benchmark for the HSF portfolio became a blended benchmark which comprise, Bank of America/Merrill Lynch US Treasury 1-5 Years Index, US One-month LIBID Index, Barclays US Aggregate, Russell 3000 ex Energy, and MSCI EAFE ex Energy.
(3) In January 2011, the HSF Portfolio achieved its Strategic Asset Allocation where the portfolio was invested in four assets classes. US Short Duration Fixed Income (25), US Core Fixed Income (40), US Equity (17.5) and Non-US International Equity (17.5).
(4) With effect from the quarter ended December 2012, the Annualised Returns Since Inception were computed using a geometric average and not the previously used arithmetic average. For comparative purposes, prior period annualized returns since inception shown above were computing using a geometric average.

Appendix II

Heritage and Stabilisation Fund

Portfolio Valuation (USD)

Valuation Date	Net Asset Value	Total Comprehensive Income	Accumulated Surplus & Unrealized Capital Gains/Losses	Contributions / (Withdrawals)
Annual Portfolio Valuation				
September 30,2007	1,766,200,701	41,966,361	41,966,361	321,706,043
September 30,2008	2,888,421,556	68,412,770	110,379,131	1,054,174,457
September 30,2009	2,964,686,478	76,248,691	186,755,766	-
September 30,2010	3,621,984,041	177,645,460	364,361,226	477,344,263
September 30,2011	4,084,016,158	9,715,841	374,074,067	451,400,519
September 30,2012	4,712,376,278	420,693,705	794,770,772	207,550,846
September 30,2013	5,154,027,747	399,007,950	1,193,778,722	42,414,251
September 30,2014	5,533,425,248	379,167,024	1,572,945,746	-
September 30,2015	5,655,143,565	120,639,605	1,693,585,351	-
September 30,2016	5,584,246,290	305,452,096	1,999,037,447	(375,050,860)
September 30, 2017	5,762,544,777	429,475,446	2,428,512,893	(252,548,048)
September 30, 2018	5,965,847,092	203,717,910	2,632,230,803	-
September 30, 2019	6,255,349,599	288,837,111	2,921,067,914	-
September 30, 2020	5,731,799,397	457,090,777	3,378,158,691	(979,853,158)
Quarterly Portfolio Valuation				
December 31, 2014	5,653,895,156	120,509,077	1,693,454,823	-
March 31, 2015	5,779,420,631	125,471,133	1,818,925,956	-
June 30, 2015	5,774,951,169	(4,765,278)	1,814,160,678	-
September 30, 2015	5,655,143,565	(120,575,327)	1,693,585,351	-
December 31, 2015	5,744,963,957	90,833,573	1,784,418,924	-
March 31, 2016	5,787,343,363	42,134,260	1,826,553,184	-
June 30, 2016	5,454,568,405	42,838,704	1,869,391,888	(375,050,860)
September 30, 2016	5,584,246,290	129,645,559	1,999,037,447	-
December 31, 2016	5,555,039,859	(29,605,256)	1,969,432,191	-
March 31, 2017	5,473,047,983	170,609,885	2,140,042,076	(252,548,048)
June 30, 2017	5,619,311,033	146,006,897	2,286,048,973	-

Appendix II

Heritage and Stabilisation Fund

Portfolio Valuation (USD)

Valuation Date	Net Asset Value	Total Comprehensive Income	Accumulated Surplus & Unrealized Capital Gains/Losses	Contributions / (Withdrawals)
Quarterly Portfolio Valuation				
September 30, 2017	5,762,544,777	142,463,920	2,428,512,893	-
December 31, 2017	5,888,599,170	124,900,387	2,553,413,280	-
March 31, 2018	5,852,789,288	(36,468,342)	2,516,944,938	-
June 30, 2018	5,863,070,206	12,336,541	2,529,281,479	-
September 30,2018	5,965,847,092	102,949,324	2,632,230,803	-
December 31,2018	5,683,219,683	(486,810,763)	2,349,137,950	-
March 31, 2019	6,016,429,263	333,123,750	2,682,261,700	-
June 30, 2019	6,194,328,757	177,424,921	2,859,686,621	-
September 30, 2019	6,255,349,599	61,381,293	2,921,067,914	-
December 31, 2019	6,478,340,872	222,180,512	3,143,248,426	-
March 31, 2020	5,925,283,653	(473,394,404)	2,669,854,022	(79,853,158)
June 30, 2020	5,817,072,795	493,393,358	3,163,247,380	(600,000,000)
September 30, 2020	5,731,799,397	214,911,311	3,378,158,691	(300,000,000)
December 31, 2020	5,888,114,410	355,398,920	3,733,557,611	(198,943,283)
March 31, 2021	5,661,689,420	67,788,202	3,801,345,814	(293,771,250)
June 30, 2021[4]	5,583,193,276	220,867,117	4,022,212,931	(300,000,000)
September 30, 2021[4]	5,463,893,835	(19,875,791)	4,002,337,140	(100,000,000)
December 31, 2021	5,623,159,544	158,986,912	4,161,324,052	-
March 31, 2022	5,299,527,705	(323,446,707)	3,837,877,345	-

[4] The reported figures for June 2021 and September 2021 were amended to reflect revisions made to the financial statements as at June 2021. The corrected line items resulted in a US$17.3 million reduction to the Total Comprehensive Income and Accumulated Surplus accounts for June 2021. The changes also impacted the Total Comprehensive Income for September 2021, which was adjusted lower by US$17.3 million.

Appendix III

Summary Characteristics of Composite Benchmarks

Fixed Income Benchmarks

Key Characteristics	Bloomberg Barclays US Aggregate Index	Merrill Lynch 1-5 Index
Total Holdings	12,393	154
Coupon (%)	2.44	1.38
Duration (Years)	6.58	2.61
Average Life (Years)	8.77	2.69
Yield to Maturity (%)	2.92	2.32
Option Adjusted Spread (bps)	41	2
Average Rating (S&P)	AA	AA+
Minimum Rating (S&P)	BBB	AA+

Equity Benchmarks

Key Characteristics	Russell 3000 (ex-Energy)	MSCI EAFE (ex-Energy)
Total Holdings	2,915	795
Earnings Per Share (EPS Growth 3-5yr fwd.)	13.9	9.7
Price Earnings (P/E fwd.)	20.2	14.6
Price / Book (P/B)	4.0	1.8
Weighted Average Market Capitalisation* (Bn)	567.8	87.3

*Market capitalisation is a measurement of the size of a company (share price x the number of outstanding shares). The weighted average market capitalisation of a stock market index represents the average size of the firms comprising the index where each is weighted according to its market capitalisation.

Appendix IV

Summary of the Fund’s Net Asset Value by Mandate

/US$ Million/

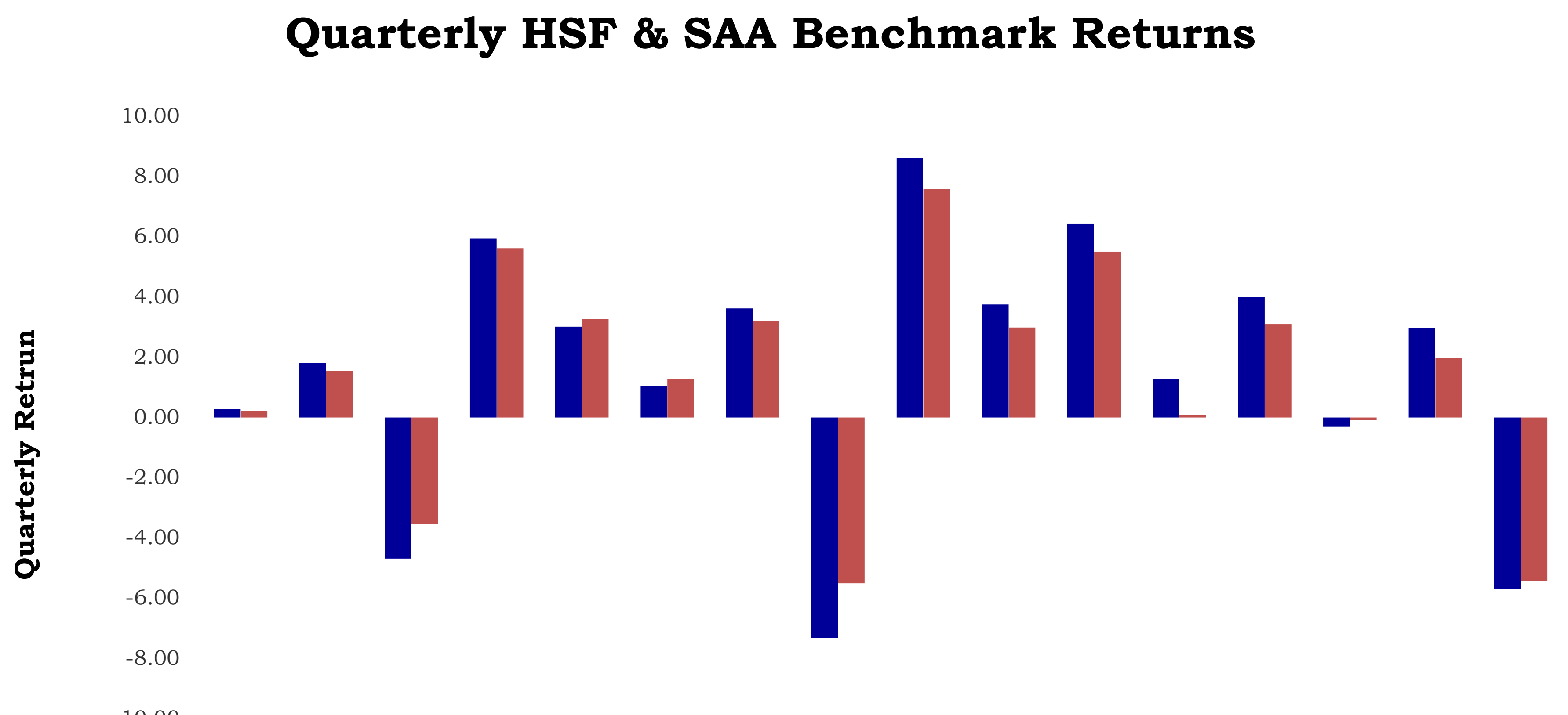
	Mar -21	Jun -21	Sep-21	Dec-21	Mar-22
Total Fund Value	**5,662**	**5,583.2**	**5,463.9**	**5,623.2**	**5,299.5**
Total Value of Equity	**2,630**	**2,707**	**2,685**	**2,850**	**2,663**
US Core Domestic Equity	1,333	1,340	1,341	1,474	1,381
Non-US Core International Equity	1,297	1,367	1,344	1,377	1,282
Total Value of Fixed Income	**3,030**	**2,875**	**2,778**	**2,772**	**2,634**
US Short Duration Fixed Income	1,118	1,020	1,021	1,015	987
US Core Domestic Fixed Income	1,912	1,855	1,757	1,757	1,647
Total Value of Cash or Cash Equivalents	**1**	**1**	**1**	**1**	**2**

NB: Differences in totals are due to rounding.

Appendix V

HSF Portfolio and SAA Benchmark Quarterly Returns

/per cent/



	FY2018 Q3	FY2018 Q4	FY2019 Q1	FY2019 Q2	FY2019 Q3	FY2019 Q4	FY2020 Q1	FY2020 Q2	FY2020 Q3	FY2020 Q4	FY2021 Q1	FY2021 Q2	FY2021 Q3	FY2021 Q4	FY2022 Q1	FY2022 Q2
Series1	0.26	1.81	-4.69	5.93	3.01	1.05	3.62	-7.33	8.62	3.74	6.43	1.28	4.00	-0.31	2.97	-5.69
Series2	0.21	1.54	-3.54	5.61	3.26	1.27	3.20	-5.51	7.57	2.98	5.50	0.08	3.09	-0.09	1.98	-5.44