

2020 Calendar Year Review

Fund Evaluation Report



Agenda

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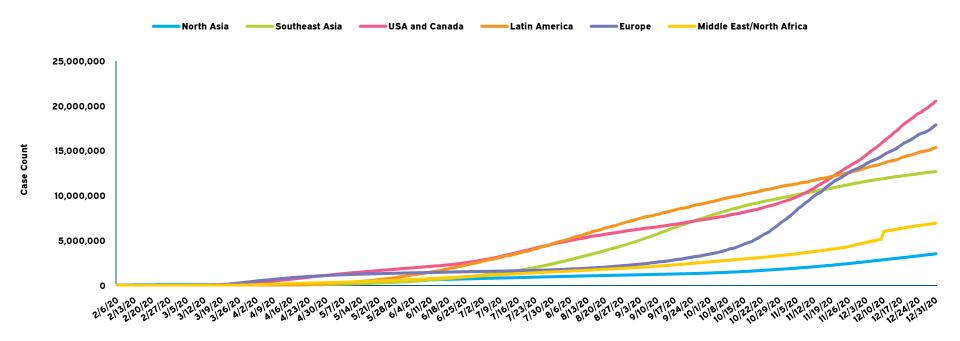
Economic and Market Update

Data as of December 31, 2020









- Cases of COVID-19 continue to grow globally, with over 95 million reported cases across 191 countries.
- The US still has the highest number of infections, with Europe collectively following given the recent spike in cases there. India and Brazil also continue to struggle with the virus.

¹ Source: Bloomberg. Data is as of December 31, 2020.

² North Asia: China, Hong Kong, Japan, Russia, South Korea, and Taiwan. Southeast Asia: Singapore, India, Indonesia, Malaysia, Pakistan, Philippines, Thailand, Bangladesh, Sri Lanka, and Vietnam. Europe: Austria, Belarus, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Hungary, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, United Kingdom, Switzerland, and Ukraine. Latin America: Chile, Brazil, Mexico, Argentina, Colombia, Peru, Venezuela, Ecuador, Panama, Paraguay, Costa Rica, Bolivia, Uruguay, El Salvador, Honduras, Cuba, Dominican Republic, Haiti, and Nicaragua. Middle East/North Africa: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Turkey, Tunisia, United Arab Emirates, and Yemen.



Market Returns¹

Indices	December	1 Year	3 Year	5 Year	10 Year
S&P 500	3.8%	18.4%	14.1%	15.2%	13.9%
MSCI EAFE	4.7%	7.8%	4.3%	7.4%	5.5%
MSCI Emerging Markets	7.4%	18.3%	6.2%	12.8%	3.6%
MSCI China	2.8%	29.5%	9.1%	15.1%	7.6%
Bloomberg Barclays Aggregate	0.1%	7.5%	5.3%	4.4%	3.8%
Bloomberg Barclays TIPS	1.2%	11.0%	5.9%	5.1%	3.8%
Bloomberg Barclays High Yield	1.9%	7.1%	6.2%	8.6%	6.8%
10-year US Treasury	-0.6%	10.6%	6.6%	4.1%	4.4%
30-year US Treasury	-1.5%	18.7%	10.9%	7.8%	8.3%

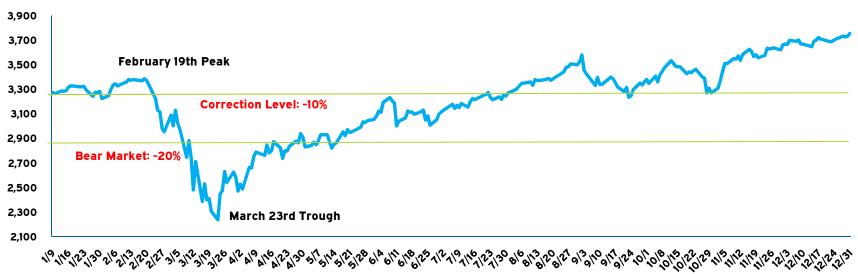
- In December, equities, particularly emerging markets, continued to do well given progress on a US fiscal package, the passing of the US presidential election, and positive developments regarding a COVID-19 vaccine.
 The yield curve steepened, weighing on Treasury prices.
- For the year, global risk assets recovered meaningfully from their declines to finish in strong positive territory, largely driven by record fiscal and monetary policy stimulus and much more certainty related to the containment of the virus.
- US equities and longer-dated Treasuries performed particularly well in 2020 given policy support. Equities in China likewise performed well as China contained the virus and consequently started the reopening of their economy earlier than others. European and Japanese equity markets lagged behind the US and emerging markets.

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¹ Source: InvestorForce and Bloomberg. Data is as of December 31, 2020.





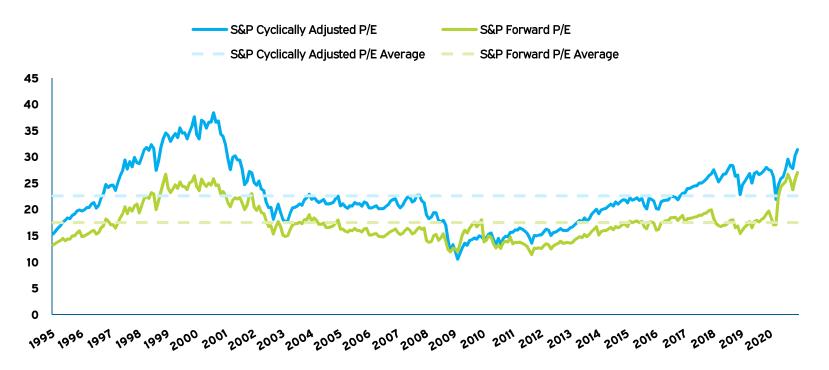


- Given the anticipated economic disruption surrounding the pandemic, US stocks declined from a February peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 plunged 34% in just 24 trading days.
- After quickly rebounding from its lows and finishing above pre-COVID levels by August, the market appreciated 3.8% in December, bringing its year-to-date gain to 18.4%.
- A key risk going forward remains that a spike in COVID-19 cases could slow, or reverse, reopening plans. The distribution process of the vaccine and people's willingness to take it will be important as well.

¹ Source: Bloomberg. Data is as of December 31, 2020.



S&P Equity Valuations¹



- With positive developments regarding COVID vaccines, valuations based on both forward- and backward-looking earnings rose to levels not seen since 2001.
- Many are looking to expected improvements in earnings growth, as the US economy continues to reopen,
 to justify market levels, with historically low interest rates also providing support.

¹ Source: Bloomberg. Data is as of December 31, 2020.



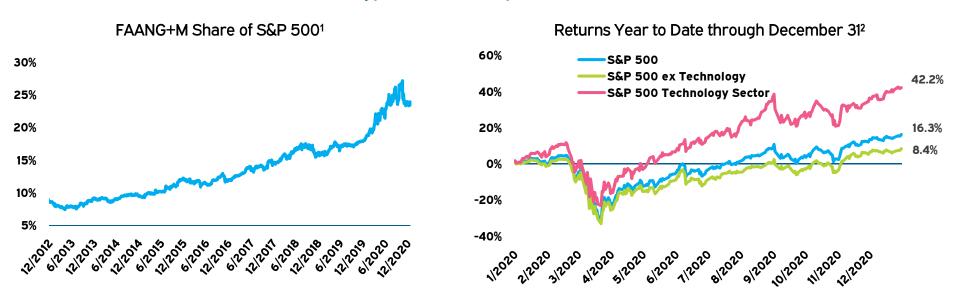


- With the recent development of mutiple vaccines, there have been signs of a rotation into more cyclical stocks, but stay-at-home focused areas performed best in 2020.
- Information technology was the best performing sector, with a narrow group of companies including Amazon and Netflix driving market gains. The outperformance was due to consumers moving to online purchases and streaming services.
- The consumer discretionary sector also experienced gains as the economy reopened, people returned to work, and stimulus checks were spent.
- Energy was the sector with the greatest 2020 decline, triggered by the plunge in oil prices. Financials also struggled in this slow growth environment with demand for loans down and low interest rates weighing on loan revenue.

¹ Source: Bloomberg. Data is as of December 31, 2020.



Technology has led the way in the Rebound



- The market recovery was largely been driven by a few technology companies that benefited from the stay-at-home environment related to the virus.
- In 2020, the S&P 500 technology sector returned +42.2%, compared to +8.4% for the S&P 500 ex-technology index, with Amazon (+76%), Netflix (+67%), and Apple (+81%) posting especially strong results.
- The outsized relative returns of these companies caused them to comprise an increasingly large portion (23%) of the S&P 500, though this trend reversed in the finals months of 2020.

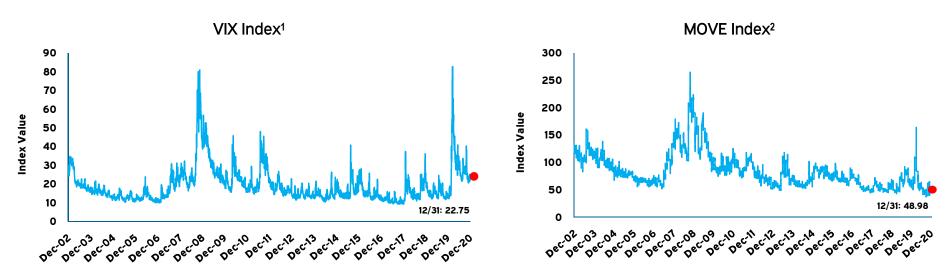
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¹ FAANG+M = Facebook, Amazon, Apple, Netflix, Google (Alphabet), and Microsoft. The percentage represents the aggregate market capitalization of the 6 companies compared to the total market capitalization of the S&P 500 as of December 31, 2020.

² Each data point represents the price change relative to the 12/31/2019 starting value.



Volatility has Declined



- Expectations of short-term equity volatility, as measured by the VIX index, finished the year much lower than the record levels experienced in March.
- At the March peak, the VIX reached 82.7, surpassing the pinnacle of volatility during the GFC, thus showing the magnitude of the crisis and of investor fear.
- Expectations of volatility within fixed income, as represented by the MOVE index, also spiked earlier in 2020, then dropped to historic lows, helped by the broad level of monetary support and forward guidance by the Fed. Volatility expectations in fixed income increased slightly in December, with the uncertainty around the Georgia Senate race looming in early January.

¹ Source: Chicago Board of Exchange. Data is as of December 31, 2020.

² Source: Bloomberg. Data is as of December 31, 2020.



Key Elements of the Next Round of US Fiscal Stimulus

	Joint Proposal
Status	Final (voted on by house, senate and signed by President)
Direct Payments	Up to \$600 for individuals or \$1,200 for married couples and up to \$600 for each qualifying child.
Enhanced Unemployment	\$300 per week until mid-March
Vaccines, testing and tracing	\$69 billion
School aid	\$82 billion
Transportation	\$45 billion
Food / Agriculture aid	\$26 billion
Rental Assistance	\$25 billion
Refital Assistance	Extends the eviction moratorium now in effect until Jan. 31.
State and Local Aid/Liability Protections	Excluded
Small Business Relief	\$325 billion (\$284 billion in paycheck protection)
Total	\$900 billion

- Another round of fiscal stimulus totaling ~\$900 billion, representing the second largest package in history, was finalized in late December.
- It includes direct payments to individuals, enhanced unemployment benefits, small business support, and a variety of other allocations.
- The relief was much needed for the many who lost their jobs and for businesses, particularly services like restaurants, trying to survive.
- A further \$1.9 trillion in stimulus has been outlined by the incoming Biden Administration. The package includes additional direct payments, enhanced unemployment benefits, a \$15 dollar minimum wage, extending further the eviction moratorium, and state and local aid.

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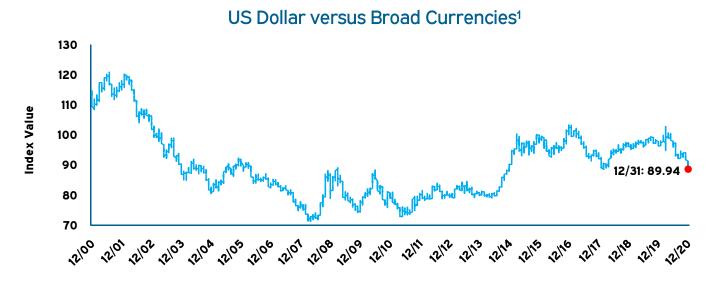
Election Results Lead to a Narrowly Democratic Majority

		Result	Change from Previous	Potential Implications
Presidency	•	Democratic victory.	Donald Trump, Republican, left office January 20th.	 Day one executive actions announced to set new 12 person COVID-19 task force, rejoin the WHO, repeal Muslim travel ban, reinstate DACA program, and rejoin Paris climate accord.
				 Biden listed other priorities on the campaign trail that include addressing systemic racism, climate change, and expanding protections for union employees.
				 Additional plans include bills for infrastructure, trade, foreign policy, and tax increases, that all seem more likely given the results of the recent senate elections in Georgia.
Senate	•	50 seats for the Democrats. 50 seats for the Republicans.	 Democrats picked up 4 seats. Democrats won an unlikely, double run off in Georgia and obtained an effective majority with Vice President Harris casting the tiebreaking vote. 	Biden's agenda is particularly impacted by a united Senate and Congress in a few key areas, namely the next round of fiscal stimulus (greater amount), cabinet appointments (more liberal), tax reform (more rollbacks of Trump cuts), and infrastructure spending (more green, higher in amount).
House	•	Democratic majority maintained. As of January 13th 222 seats for Democrats, 211 seats for Republicans, and 2 undecided.	 Heading into the November 3, 2020, election, Democrats held a 232-197 advantage in the US House. Libertarians held one seat, and five seats were vacant. 	 While the Democrats maintained their majority and therefore control of the agenda, Republicans gained ground, setting up a battle for the midterms in 2022. Nancy Pelosi remains Speaker of the House.

- After much turmoil, including a storming of the US Capitol, Joe Biden was confirmed by Congress as the winner of the presidential election.
- Two run-off elections in Georgia took place in January, with Democrats winning both seats and taking a narrow Senate majority (Vice President Kamala Harris will cast the deciding vote).
- The Democratic majority sets the stage for a decidedly more liberal agenda with a higher likelihood of a large fiscal stimulus package in the coming months.

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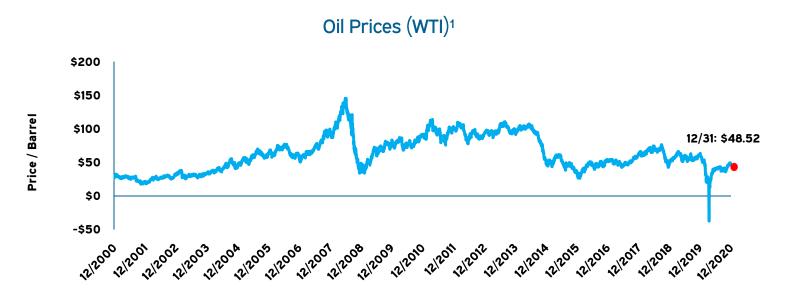


- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills.
- Recently we have seen some weakness in the dollar as the US struggles with containing the virus and investors seek higher growth non-US assets, particularly in emerging markets. This has created pressures on already stressed export-focused countries.
- Going forward, the dollar's safe haven quality and the relatively higher rates in the US could provide support.

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¹ Source: Bloomberg. Represents the DXY Index. Data is as of December 31, 2020.





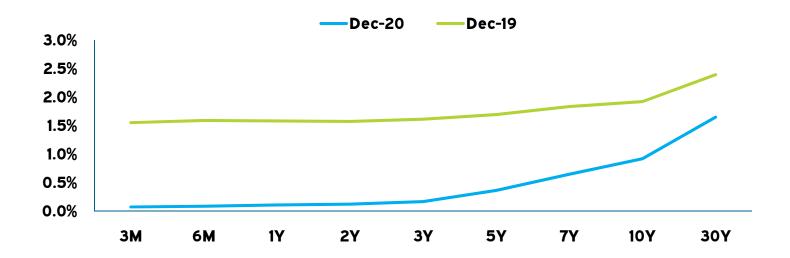
- While global oil prices rallied from April lows, they remain below their pre-pandemic level.
- In a surprise early January announcement, Saudi Arabia agreed to cut oil production by 1 million barrels/day in February and March. Other OPEC+ countries will continue production at current levels, with the exception of Russia and Kazakhstan, which will slightly increase output.
- Looking forward, global economies slowly reopening in 2021, a weaker US dollar, and production cuts should be supportive for prices. However, oil could experience renewed downward pressure in the short-term, with the increasing virus spread potentially weighing on demand.

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¹ Source: Bloomberg. Represents WTI first available futures contract. Data is as of December 31, 2020.





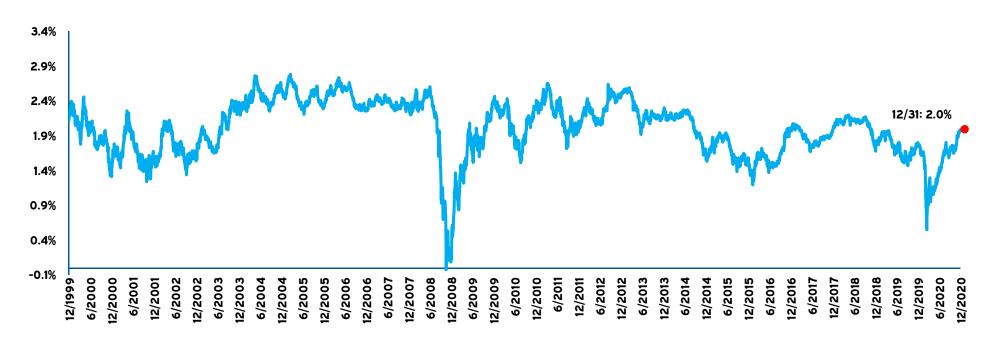


- The US Treasury yield curve declined materially during 2020, driven by safe-haven demand, Federal Reserve polices (policy rate cuts and the quantitative easing program), and weak US economic fundamentals.
- Over the last few months, the curve steepened on gradual signs of economic improvement, vaccine developments, and expectations for longer-dated Treasury issuance to support additional fiscal stimulus in the coming months.
- Higher yields relative to other countries and the Fed potentially extending the duration of their purchases could counterbalance steepening trends.

¹ Source: Bloomberg. Data is as of December 31, 2020.



10-Year Breakeven Inflation¹

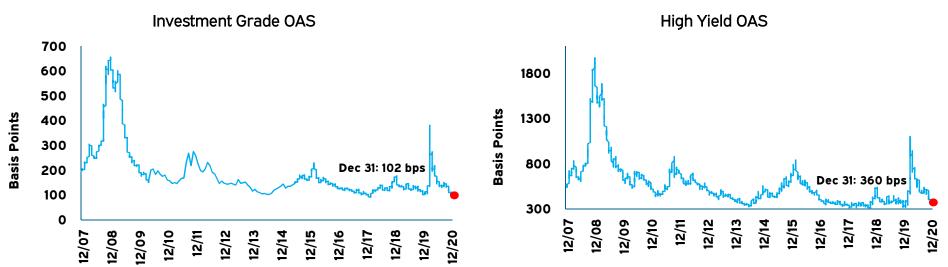


- Inflation breakeven rates initially declined sharply, due to a combination of lower growth and inflation expectations, as well as liquidity dynamics in TIPS during the height of market volatility.
- Liquidity eventually improved and breakeven rates increased as deflationary concerns moderated. Recently, inflation expectations continued to increase given the vaccine announcements.
- Looking forward, the track of economic growth and the inflationary effects of the unprecedented US fiscal response will be key issues.

¹ Source: Bloomberg. Data is as of December 31, 2020.







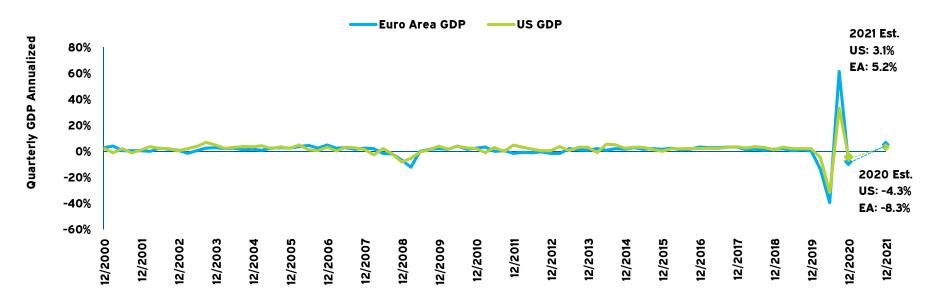
- Credit spreads (the spread above a comparable Treasury) for investment grade and high yield corporate debt widened sharply at the start of the pandemic as investors sought safety.
- Investment grade bonds held up better than high yield bonds. The Federal Reserve's corporate debt purchase
 program for investment grade and certain high yield securities recently downgraded from investment grade,
 was well received by investors. The policy support and the search for yield in the low rate environment led to
 a decline in spreads to below long-term averages.
- Overall, corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true in the energy sector, which represents over 10% of the high yield bond market.

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¹ Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of December 31, 2020.



GDP Data Shows Impact of the Pandemic¹



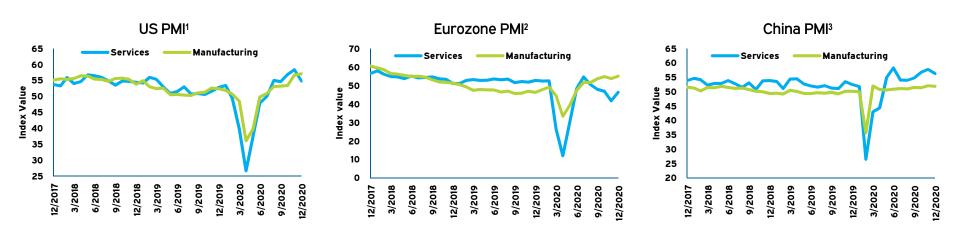
- The global economy faced major recessionary pressures this year, but optimism remains for improvements in 2021, as economies are expected to gradually reopen despite the recent spike in virus cases.
- Historic declines in growth in the US and Europe during the second quarter were followed by record increases in the third quarter, due to pent up demand from the lockdown measures earlier in the year.
- Recently, GDPNow from the Atlanta Fed estimated that fourth quarter US GDP growth could be 7.4% (QoQ annualized), down from original estimates. Full year US GDP growth is forecasted to decline by 4.3% by the IMF.

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Source: Bloomberg, Atlanta FED and IMF. Q3 2020 data represents the second estimate of GDP for the Euro Area and United States. Euro Area figures annualized by Meketa. Projections via October 2020 IMF World Economic Outlook and represent annual numbers.







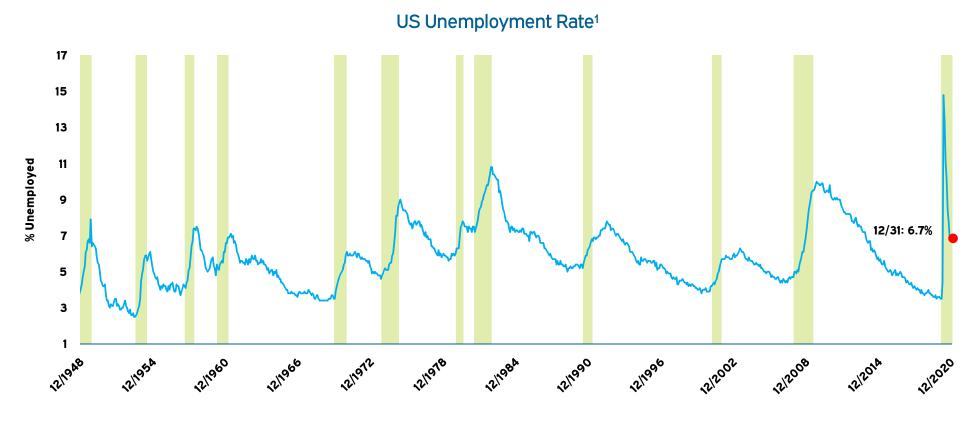
- Purchasing Managers Indices (PMI), based on surveys of private sector companies, initially collapsed across the world to record lows, as closed economies depressed output, new orders, production, and employment.
- Readings below 50 represent contractions across underlying components are a leading indicator of economic activity, including the future paths of GDP, employment, and industrial production.
- The services sector was particularly hard hit by stay-at-home restrictions in many places.
- As the Chinese economy reopened, their PMIs, particularly in the service sector, recovered materially. In the US, the indices have also improved from their lows to above contraction levels. In Europe, manufacturing has largely recovered, but services continue to show weakness due to increased lockdowns.

¹ Source: Bloomberg. US Markit Services and Manufacturing PMI. Data is as of December 2020.

² Source: Bloomberg. Eurozone Markit Services and Manufacturing PMI. Data is as of December 2020.

 $^{^3}$ Source: Bloomberg. Caixin Services and Manufacturing PMI. Data is as of December 2020



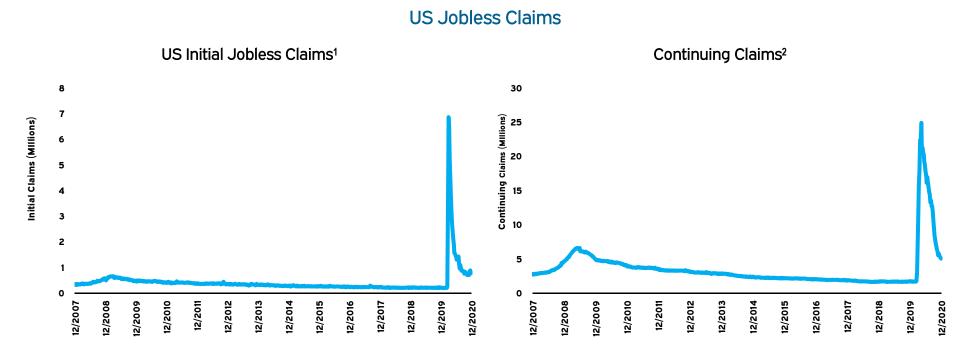


- In December, the unemployment rate continued its decline from the recent April 14.7% peak, falling to 6.7%.
- Despite the improvement, unemployment levels remain well above pre-virus readings and are likely higher than reported, as some workers appear misclassified. According to the Bureau of Labor Statistics, absent the misclassification issue, the December unemployment rate would be higher by 0.6%.

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¹ Source: Bloomberg. Data is as of December 31, 2020. Bars represent recessions.





- Over the last 41 weeks, roughly 73 million people filed for initial unemployment. This level is well over three
 times the 22 million jobs added since the GFC, highlighting the unprecedented impact of the virus.
- Despite the continued decline in initial jobless claims to below one million per week, levels remain many multiples above the worst reading during the Global Financial Crisis.
- Continuing jobless claims (i.e., those currently receiving benefits) have also declined from record levels, but remain elevated at 5.1 million.

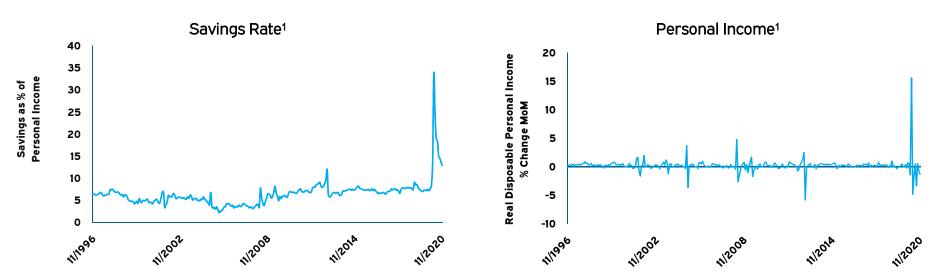
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¹ Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of December 25, 2020.

² Source: Bloomberg. US Continuing Jobless Claims SA. Data is as of December 25, 2020.



Savings and Spending

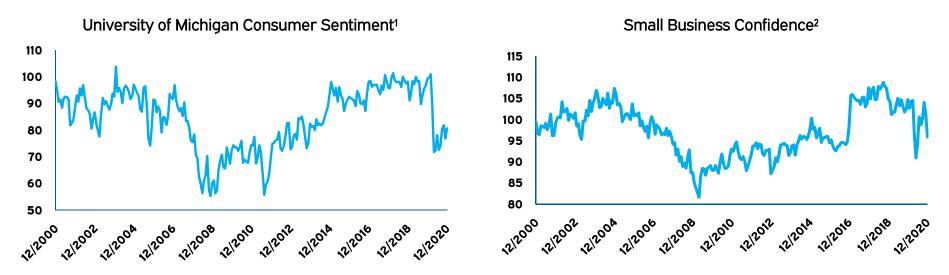


- Fiscal programs including stimulus checks, enhanced unemployment benefits, and loans to small businesses through the Paycheck Protection Program (PPP) have largely supported income levels through the shutdown. The growth in income declined dramatically as fiscal support waned.
- Despite the income support, the savings rate increased due to the decline in consumer spending, driven by the initial lock-down of the economy, and by uncertainties related to the future of the job market and stimulus programs.
- More recently, the savings rate declined from its peak as spending increased with the economy slowly reopening. Going forward, questions remain about how consumers will make use of the recently announced stimulus programs.

¹ Source: Bloomberg. Latest data is as of November 2020.



Sentiment Indicators



- The attitudes of businesses and consumers are useful indicators of future economic activity.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of economic growth. Additionally, small businesses generate around half of US GDP, making sentiment in that segment important.
- Sentiment indicators have shown improvements as the economy re-opens, but increasing cases and greater restrictions could weigh on short-term sentiment.

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¹ Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of December 31, 2020.

² Source: Bloomberg. NFIB Small Business Optimism Index. Latest data is as of December 31, 2020.

Executive Summary



Executive Summary

Executive Summary

- The System finished the year with a market value of \$212.0 million, which represents an increase of over \$50 million from the low 3/31/2020 market value.
- The System's calendar year 2020 return is 14.2%, outperforming the balanced global stock and bond markets benchmarks.
- The 14.2% return places the System in the top 39% of the Public Pension peer group with market values between
 \$50 million to \$250 million.
- The System returned 11.2% during Q4 2020, finishing the year very strong. The Q4 return is in the 28th percentile of the System's peer group.
- Due to the additional equities bought during the downturn and the high returns from equities, the current targets are all within the New Policy Step 2 Targets.
- The estimated investment management fee the System pays is low at approximately 30 basis points per year.
- We will be asking the Board for approval to conduct searches to meet PERAC regulations as well as new investments in private investments such as real estate, infrastructure, and private equity.

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Retirement System Summary As of December 31, 2020

Retirement System Summary



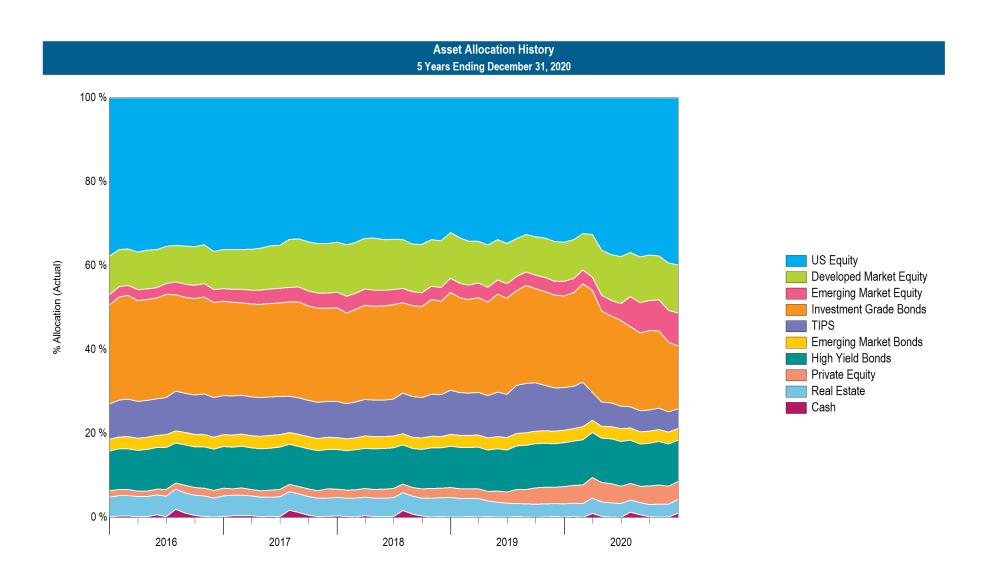
Total Retirement System | As of December 31, 2020

	Allocation vs	. Targets and	Policy			
	Current Balance	Old Policy	Current Allocation	New Policy Step 1	New Policy Step 2	New Policy Range
US Equity	\$84,490,367	33%	40%	34%	38%	28% - 42%
Developed Market Equity	\$24,227,425	9%	11%	10%	12%	5% - 15%
Emerging Market Equity	\$16,620,945	3%	8%	8%	10%	1% - 12%
Investment Grade Bonds	\$31,718,765	22%	15%	18%	12%	10% - 25%
TIPS	\$9,998,408	10%	5%	2%	0%	0% - 10%
Emerging Market Bonds	\$5,928,109	3%	3%	3%	2%	1% - 5%
High Yield Bonds	\$20,864,203	10%	10%	7%	5%	5% - 12%
Private Equity	\$8,989,306	5%	4%	5%	5%	3% - 7%
Real Estate	\$7,070,475	5%	3%	7%	7%	2% - 10%
Infrastructure		0%		2%	5%	0% - 5%
Private Debt		0%		4%	4%	0% - 5%
Cash	\$2,113,138	0%	1%	0%	0%	0% - 5%
Total	\$212,021,140	100%	100%	100%	100%	

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Total Retirement System | As of December 31, 2020





Total Retirement System | As of December 31, 2020

		0/	OTD-	42/	2 1/		10.1/	20.1/		
	Market Value	% of	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	20 Yrs	Inception	
	(\$)	Portfolio	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Total Retirement System (net)	212,021,140	100.0	11.2	14.2	8.6	9.5	8.0	6.7	7.9	Jul-88
55% MSCI World & 45% Barclays Aggregate			8.0	12.9	8.6	9.0	7.4	5.8	7.3	Jul-88
45% MSCI World & 55% Barclays Aggregate			6.6	12.1	8.1	8.2	6.8	5.7	7.1	Jul-88
InvMetrics Public DB \$50mm-\$250mm Net Median			10.1	13.3	9.2	9.8	8.2	6.4	8.2	Jul-88
Domestic Equity Assets (net)	84,490,367	39.8	16.5	13.4	10.4	13.1	12.2	6.8	8.8	Oct-06
Russell 3000			14.7	20.9	14.5	15.4	13.8	7.8	9.9	Oct-06
PRIT Domestic Equity			15.3	18.9	13.8	14.9	13.4	7.3	8.8	Oct-06
International Developed Markets Equity Assets (net)	24,227,425	11.4	16.0	7.9	4.5	7.7	4.6		3.4	Oct-06
MSCI EAFE			16.0	7.8	4.3	7.4	5.5	4.5	3.7	Oct-06
International Emerging Markets Equity Assets (net)	16,620,945	7.8	19.9	21.1	7.3	13.6			8.7	Jan-15
MSCI Emerging Markets			19.7	18.3	6.2	12.8	3.6	9.6	7.6	Jan-15
Investment Grade Bonds Assets (net)	31,718,765	15.0	0.6	7.5	5.3	4.4	3.8	4.8	6.2	Jul-88
BBgBarc US Aggregate TR			0.7	7.5	5.3	4.4	3.8	4.8	6.2	Jul-88
PRIT Core Fixed Income			0.1	12.0	7.3	6.2	5.4	5.6	7.0	Jul-88
High Yield Bond Assets (net)	20,864,203	9.8	5.7	6.3	6.0	7.4	6.2		6.8	Sep-03
BBgBarc US High Yield TR			6.5	7.1	6.2	8.6	6.8	7.8	7.8	Sep-03
PRIT Public Value-Added Fixed Income			5.7	4.4	4.1	6.3	4.1		6.3	Sep-03
TIPS Assets (net)	9,998,408	4.7	1.6	10.9	5.8	5.0	3.8		4.2	Oct-05
BBgBarc US TIPS TR			1.6	11.0	5.9	5.1	3.8	5.4	4.2	Oct-05
Emerging Market Debt Assets (net)	5,928,109	2.8	7.7	6.2	4.8	7.5			6.1	Jan-15
JP Morgan EMBI Global Diversified			5.8	5.3	5.0	7.1	6.2	8.5	6.1	Jan-15
Open-Ended Real Estate (net)	5,710,836	2.7	2.0	2.2	6.0	7.0	10.6	6.8	7.9	Oct-95
NCREIF ODCE			1.3	1.2	4.9	6.2	9.9	7.5	8.7	Oct-95
Total Closed End Real Estate (net)	1,359,639	0.6	0.0	-5.3	-16.8	-6.2			2.4	Jan-13
Private Equity Assets (net)	8,989,306	4.2	16.2	23.2	16.9	8.0	7.9		6.6	Oct-06
Cash (net)	2,113,138	1.0								

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Total Retirement System | As of December 31, 2020

		Trailing F	Performa	ince							
	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
Total Retirement System	212,021,140	100.0		11.2	14.2	8.6	9.5	8.0	6.7	7.9	Jul-88
55% MSCI World & 45% Barclays Aggregate				8.0	12.9	8.6	9.0	7.4	5.8	7.3	Jul-88
45% MSCI World & 55% Barclays Aggregate				6.6	12.1	8.1	8.2	6.8	5.7	7.1	Jul-88
InvMetrics Public DB \$50mm-\$250mm Net Median				10.1	13.3	9.2	9.8	8.2	6.4	8.2	Jul-88
Domestic Equity Assets	84,490,367	39.8	39.8	16.5	13.4	10.4	13.1	12.2	6.8	8.8	Oct-06
Russell 3000				14.7	20.9	14.5	15.4	13.8	7.8	9.9	Oct-06
PRIT Domestic Equity				15.3	18.9	13.8	14.9	13.4	7.3	8.8	Oct-06
RhumbLine S&P 500 Index	34,266,967	16.2	40.6	12.1	18.3	14.1	15.2	13.8	7.5	7.3	Mar-99
S&P 500				12.1	18.4	14.2	15.2	13.9	7.5	7.2	Mar-99
eV US Passive S&P 500 Equity Net Median				12.1	18.3	14.1	15.1	13.8	7.3	7.2	Mar-99
Frontier Capital Appreciation	22,387,325	10.6	26.5	30.4	18.1	9.4	13.5			12.9	Feb-13
Russell 2500 Growth				25.9	40.5	19.9	18.7	15.0	9.5	16.3	Feb-13
eV US Small-Mid Cap Growth Equity Net Median				22.7	40.3	22.4	18.9	14.5	10.0	16.4	Feb-13
RhumbLine HEDI	27,836,075	13.1	32.9							13.2	Nov-20
Russell 1000 HEDI Moderate GR USD				10.6	18.5	15.9	16.5	15.5	9.8	13.3	Nov-20
eV US Large Cap Core Equity Gross Median				12.0	15.9	13.2	14.3	13.5	8.3	14.9	Nov-20

RhumbLine HEDI funded on 10/5/2020. Performance will be reflected after first full quarter.

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Total Retirement System | As of December 31, 2020

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
International Developed Markets Equity Assets	24,227,425	11.4	11.4	16.0	7.9	4.5	7.7	4.6		3.4	Oct-06
MSCI EAFE				16.0	7.8	4.3	7.4	5.5	4.5	3.7	Oct-06
RhumbLine MSCI EAFE Index	24,227,425	11.4	100.0	16.0	7.9	4.5	7.7			4.5	Aug-14
MSCI EAFE				16.0	7.8	4.3	7.4	5.5	4.5	4.4	Aug-14
eV EAFE All Cap Equity Net Median				14.9	8.4	4.6	7.7	6.4	5.9	5.2	Aug-14
International Emerging Markets Equity Assets	16,620,945	7.8	7.8	19.9	21.1	7.3	13.6			8.7	Jan-15
MSCI Emerging Markets				19.7	18.3	6.2	12.8	3.6	9.6	7.6	Jan-15
DFA Emerging Markets	8,814,950	4.2	53.0	21.2	13.9	3.8	11.4			6.5	Jan-15
MSCI Emerging Markets				19.7	18.3	6.2	12.8	3.6	9.6	7.6	Jan-15
eV Emg Mkts All Cap Equity Net Median				19.9	18.3	6.8	13.3	4.3	10.2	8.2	Jan-15
Driehaus Emerging Market Equity	7,805,995	3.7	47.0	18.3	28.0	10.6	15.6			10.7	Jan-15
MSCI Emerging Markets				19.7	18.3	6.2	12.8	3.6	9.6	7.6	Jan-15
eV Emg Mkts All Cap Equity Net Median				19.9	18.3	6.8	13.3	4.3	10.2	8.2	Jan-15
Investment Grade Bonds Assets	31,718,765	15.0	15.0	0.6	7.5	5.3	4.4	3.8	4.8	6.2	Jul-88
BBgBarc US Aggregate TR				0.7	7.5	5.3	4.4	3.8	4.8	6.2	Jul-88
PRIT Core Fixed Income				0.1	12.0	7.3	6.2	5.4	5.6	7.0	Jul-88
SSgA U.S. Aggregate Bond Index	31,718,765	15.0	100.0	0.6	7.5	5.3	4.4	3.8		4.8	May-01
BBgBarc US Aggregate TR				0.7	7.5	5.3	4.4	3.8	4.8	4.8	May-01
eV US Core Fixed Inc Net Median				1.0	8.2	5.6	4.7	4.1	5.1	5.0	May-01

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Total Retirement System | As of December 31, 2020

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
High Yield Bond Assets	20,864,203	9.8	9.8	5.7	6.3	6.0	7.4	6.2		6.8	Sep-03
BBgBarc US High Yield TR				6.5	7.1	6.2	8.6	6.8	7.8	7.8	Sep-03
PRIT Public Value-Added Fixed Income				5.7	4.4	4.1	6.3	4.1		6.3	Sep-03
Shenkman Capital	20,864,203	9.8	100.0	5.7	6.3	6.0	7.4	6.2		6.8	Apr-06
BBgBarc US High Yield TR				6.5	7.1	6.2	8.6	6.8	7.8	7.4	Apr-06
eV US High Yield Fixed Inc Net Median				5.8	5.8	5.4	7.5	6.3	7.3	6.8	Apr-06
TIPS Assets	9,998,408	4.7	4.7	1.6	10.9	5.8	5.0	3.8		4.2	Oct-05
BBgBarc US TIPS TR				1.6	11.0	5.9	5.1	3.8	5.4	4.2	Oct-05
SSgA TIPS Index-NL	9,998,408	4.7	100.0	1.6	10.9	5.8	5.0	3.8		4.2	Oct-05
BBgBarc US TIPS TR				1.6	11.0	5.9	5.1	3.8	5.4	4.2	Oct-05
eV US TIPS / Inflation Fixed Inc Net Median				1.8	10.6	5.9	5.1	3.8	5.6	4.3	Oct-05
Emerging Market Debt Assets	5,928,109	2.8	2.8	7.7	6.2	4.8	7.5			6.1	Jan-15
JP Morgan EMBI Global Diversified				5.8	5.3	5.0	7.1	6.2	8.5	6.1	Jan-15
Payden Emerging Market Bond	5,928,109	2.8	100.0	7.7	6.2	4.8	7.5			6.1	Jan-15
JP Morgan EMBI Global Diversified				5.8	5.3	5.0	7.1	6.2	8.5	6.1	Jan-15
Open-Ended Real Estate	5,710,836	2.7	2.7	2.0	2.2	6.0	7.0	10.6	6.8	7.9	Oct-95
NCREIF ODCE				1.3	1.2	4.9	6.2	9.9	7.5	8.7	Oct-95
Clarion Partners	5,710,836	2.7	100.0	2.0	2.2	6.0	7.0	10.6		7.1	Oct-02
NCREIF ODCE				1.3	1.2	4.9	6.2	9.9	7.5	7.7	Oct-02
US Real Estate Equity Median				9.8	-4.5	5.5	6.0	9.5	10.8	10.7	Oct-02

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Total Retirement System | As of December 31, 2020

	Market Value (\$)	% of Portfolio	% of Sector	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
Total Closed End Real Estate	1,359,639	0.6	0.6	0.0	-5.3	-16.8	-6.2			2.4	Jan-13
Colony Realty Partners IV	22,227	0.0	1.6	0.0	-12.2	-17.2	-6.5				Jan-13
US Real Estate Equity Median				9.8	-4.5	5.5	6.0	9.5	10.8	8.2	Jan-13
Rockwood Capital Real Estate Partners Fund XI, L.P.	1,337,412	0.6	98.4	0.0	0.0					0.0	Dec-19
US Real Estate Equity Median				9.8	-4.5	5.5	6.0	9.5	10.8	-5.0	Dec-19
Private Equity Assets	8,989,306	4.2	4.2	16.2	23.2	16.9	8.0	7.9		6.6	Oct-06
North American Strategic Partners 2006	368,799	0.2	4.1								
Ironsides Partnership Fund IV	2,428,143	1.1	27.0								
Ironsides Direct Investment Fund IV	1,932,178	0.9	21.5								
Ironsides Partnership Fund V, L.P.	300,497	0.1	3.3								
Ironsides Direct Investment Fund V, L.P.	2,276,887	1.1	25.3								
HarbourVest 2019 Global Fund	1,682,802	0.8	18.7								
Cash	2,113,138	1.0	1.0								

Colony Realty Partners market value is based on September 30, 2020 data.

Private Equity market values are as of September 30, 2020 and adjusted for subsequent flows.

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Total Retirement System | As of December 31, 2020

	Calendar Y	ear Perf	ormance	9						
	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011
Total Retirement System	14.2	17.5	-4.5	13.0	8.7	-0.2	6.3	14.0	10.9	2.4
55% MSCI World & 45% Barclays Aggregate	12.9	19.1	-4.6	13.6	5.5	0.0	5.5	13.0	10.7	0.7
45% MSCI World & 55% Barclays Aggregate	12.1	17.2	-3.8	11.7	5.0	0.2	5.6	10.1	9.5	2.0
Domestic Equity Assets	13.4	27.6	-6.9	20.1	14.6	-1.6	13.1	33.1	15.3	0.0
Russell 3000	20.9	31.0	-5.2	21.1	12.7	0.5	12.6	33.6	16.4	1.0
PRIT Domestic Equity	18.9	30.5	-5.1	20.7	12.8	0.1	11.6	33.6	16.8	1.0
RhumbLine S&P 500 Index	18.3	31.4	-4.4	21.8	11.9	1.4	13.6	32.2	16.0	2.1
S&P 500	18.4	31.5	-4.4	21.8	12.0	1.4	13.7	32.4	16.0	2.1
Frontier Capital Appreciation	18.1	28.9	-13.9	19.1	20.5	-6.5	12.4			
Russell 2500 Growth	40.5	32.7	-7.5	24.5	9.7	-0.2	7.1	40.6	16.1	-1.6
RhumbLine HEDI										
Russell 1000 HEDI Moderate GR USD	18.5	32.7	-0.9	23.4	11.4	4.8	15.4	30.9	13.9	9.0
International Developed Markets Equity Assets	7.9	22.3	-13.5	24.9	1.4	-0.8	-8.7	21.2	15.0	-14.1
MSCI EAFE	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1
RhumbLine MSCI EAFE Index	7.9	22.3	-13.5	24.9	1.4	-0.8				
MSCI EAFE	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.8	17.3	-12.1

RhumbLine HEDI funded on 10/5/2020. Performance will be reflected after first full calendar year.

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Total Retirement System | As of December 31, 2020

	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)
International Emerging Markets Equity Assets	21.1	20.7	-15.4	39.7	9.4	-12.7				
MSCI Emerging Markets	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6	18.2	-18.4
DFA Emerging Markets	13.9	16.0	-15.2	36.6	12.4	-14.9				
MSCI Emerging Markets	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6	18.2	-18.4
Driehaus Emerging Market Equity	28.0	25.3	-15.6	43.0	6.5	-10.6				
MSCI Emerging Markets	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6	18.2	-18.4
Investment Grade Bonds Assets	7.5	8.7	0.0	3.6	2.6	0.6	6.0	-2.0	4.3	7.8
BBgBarc US Aggregate TR	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8
PRIT Core Fixed Income	12.0	11.2	-0.9	5.3	3.9	-2.0	15.1	-2.9	6.2	8.0
SSgA U.S. Aggregate Bond Index	7.5	8.7	0.0	3.6	2.6	0.6	6.0	-2.0	4.3	7.8
BBgBarc US Aggregate TR	7.5	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8
High Yield Bond Assets	6.3	14.0	-1.8	6.5	12.6	-2.3	2.9	6.4	12.4	6.0
BBgBarc US High Yield TR	7.1	14.3	-2.1	7.5	17.1	-4.5	2.5	7.4	15.8	5.0
PRIT Public Value-Added Fixed Income	4.4	10.7	-2.5	8.5	11.2	-5.2	-0.7	-2.0	14.2	4.8
Shenkman Capital	6.3	14.0	-1.8	6.5	12.6	-2.3	2.9	6.4	12.4	6.0
BBgBarc US High Yield TR	7.1	14.3	-2.1	7.5	17.1	-4.5	2.5	7.4	15.8	5.0
TIPS Assets	10.9	8.4	-1.4	3.0	4.7	-1.4	3.6	-8.6	6.9	13.5
BBgBarc US TIPS TR	11.0	8.4	-1.3	3.0	4.7	-1.4	3.6	-8.6	7.0	13.6
SSgA TIPS Index-NL	10.9	8.4	-1.4	3.0	4.7	-1.4	3.6	-8.6	6.9	13.5
BBgBarc US TIPS TR	11.0	8.4	-1.3	3.0	4.7	-1.4	3.6	-8.6	7.0	13.6

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Total Retirement System | As of December 31, 2020

	2020 (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011
Emerging Market Debt Assets	6.2	16.5	-7.0	12.0	11.5	-0.8				
JP Morgan EMBI Global Diversified	5.3	15.0	-4.3	10.3	10.2	1.2	7.4	-5.3	17.4	7.3
Payden Emerging Market Bond	6.2	16.5	-7.0	12.0	11.5	-0.8				
JP Morgan EMBI Global Diversified	5.3	15.0	-4.3	10.3	10.2	1.2	7.4	-5.3	17.4	7.3
Open-Ended Real Estate	2.2	7.3	8.6	7.9	9.1	15.7	13.2	12.8	10.9	18.7
NCREIF ODCE	1.2	5.3	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0
Clarion Partners	2.2	7.3	8.6	7.9	9.1	15.7	13.2	12.8	10.9	18.7
NCREIF ODCE	1.2	5.3	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0
Total Closed End Real Estate	-5.3	-38.2	-1.8	15.1	9.5	23.8	13.3	18.8		
Colony Realty Partners IV	-12.2	-34.2	-1.8	15.1	9.5	23.8	13.3			
Rockwood Capital Real Estate Partners Fund XI, L.P.	0.0									
Private Equity Assets	23.2	17.7	10.2	-5.3	-2.8	8.6	5.5	9.1	12.2	3.6

North American Strategic Partners 2006

Ironsides Partnership Fund IV

Ironsides Direct Investment Fund IV

Ironsides Partnership Fund V, L.P.

Ironsides Direct Investment Fund V, L.P.

HarbourVest 2019 Global Fund

Cash

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Total Retirement System | As of December 31, 2020



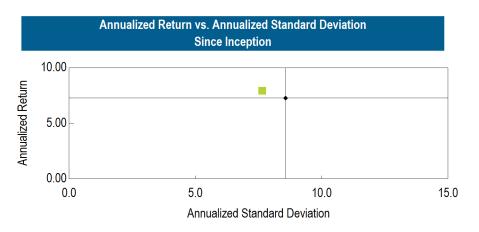
- Total Retirement System
- 55% MSCI World & 45% Barclays Aggregate



- Total Retirement System
- ◆ 55% MSCI World & 45% Barclays Aggregate



- Total Retirement System
- ◆ 55% MSCI World & 45% Barclays Aggregate

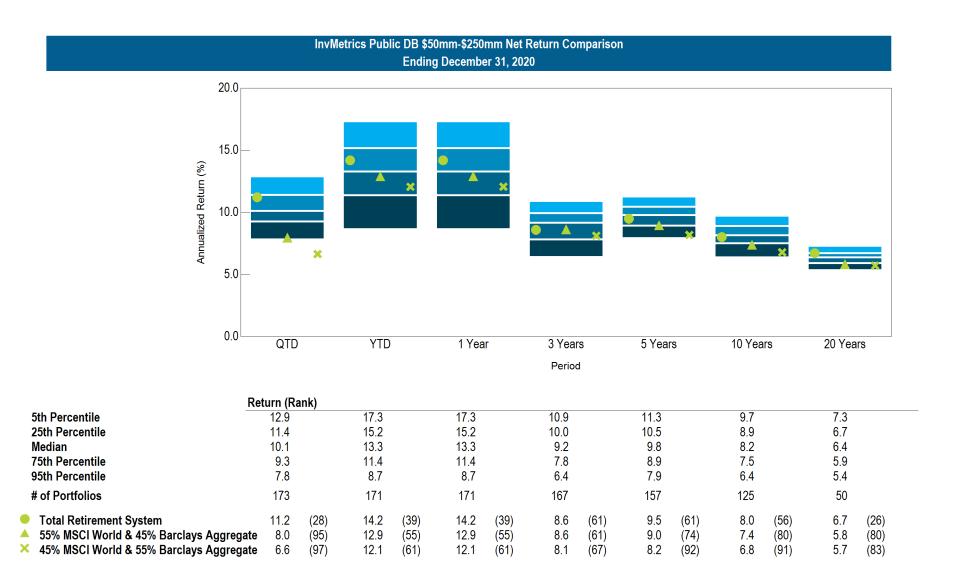


- Total Retirement System
- ◆ 55% MSCI World & 45% Barclays Aggregate

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Total Retirement System | As of December 31, 2020





Total Retirement System | As of December 31, 2020

Statistics Summary							
5 Years Ending December 31, 2020							
	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error	
Total Retirement System	9.5%	8.7%	0.3	1.0	1.0	1.7%	
55% MSCI World & 45% Barclays Aggregate	9.0%	8.5%		1.0	0.9	0.0%	
Equity Assets	12.0%	15.8%	-1.1	1.0	0.7	3.1%	
Russell 3000	15.4%	16.0%		1.0	0.9	0.0%	
Domestic Equity Assets	13.1%	16.6%	-0.9	1.0	0.7	2.7%	
Russell 3000	15.4%	16.0%		1.0	0.9	0.0%	
RhumbLine S&P 500 Index	15.2%	15.2%	-1.0	1.0	0.9	0.0%	
S&P 500	15.2%	15.3%		1.0	0.9	0.0%	
Frontier Capital Appreciation	13.5%	23.4%	-0.8	1.1	0.5	6.5%	
Russell 2500 Growth	18.7%	20.3%		1.0	0.9	0.0%	
RhumbLine HEDI							
Russell 1000 HEDI Moderate GR USD	16.5%	13.8%		1.0	1.1	0.0%	
International Developed Markets Equity Assets	7.7%	15.3%	0.8	1.0	0.4	0.2%	
MSCI EAFE	7.4%	15.4%		1.0	0.4	0.0%	
RhumbLine MSCI EAFE Index	7.7%	15.3%	0.9	1.0	0.4	0.2%	
MSCI EAFE	7.4%	15.4%		1.0	0.4	0.0%	
International Emerging Markets Equity Assets	13.6%	17.1%	0.3	1.0	0.7	2.9%	
MSCI Emerging Markets	12.8%	17.6%		1.0	0.7	0.0%	

RhumbLine HEDI funded on 10/5/2020. Statistics will be reflected after first full calendar year.

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Total Retirement System | As of December 31, 2020

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
DFA Emerging Markets	11.4%	18.6%	-0.4	1.0	0.6	3.5%
MSCI Emerging Markets	12.8%	17.6%		1.0	0.7	0.0%
Driehaus Emerging Market Equity	15.6%	16.0%	0.6	0.9	0.9	4.6%
MSCI Emerging Markets	12.8%	17.6%		1.0	0.7	0.0%
Investment Grade Bonds Assets	4.4%	3.2%	0.0	1.0	1.0	0.1%
BBgBarc US Aggregate TR	4.4%	3.2%		1.0	1.0	0.0%
SSgA U.S. Aggregate Bond Index	4.4%	3.2%	0.0	1.0	1.0	0.1%
BBgBarc US Aggregate TR	4.4%	3.2%		1.0	1.0	0.0%
High Yield Bond Assets	7.4%	6.9%	-1.0	0.9	0.9	1.2%
BBgBarc US High Yield TR	8.6%	7.8%		1.0	1.0	0.0%
Shenkman Capital	7.4%	6.9%	-1.0	0.9	0.9	1.2%
BBgBarc US High Yield TR	8.6%	7.8%		1.0	1.0	0.0%
TIPS Assets	5.0%	3.6%	-1.1	1.0	1.1	0.1%
BBgBarc US TIPS TR	5.1%	3.6%		1.0	1.1	0.0%
SSgA TIPS Index-NL	5.0%	3.6%	-1.1	1.0	1.1	0.1%
BBgBarc US TIPS TR	5.1%	3.6%		1.0	1.1	0.0%
Emerging Market Debt Assets	7.5%	10.3%	0.2	1.1	0.6	2.1%
JP Morgan EMBI Global Diversified	7.1%	9.0%		1.0	0.7	0.0%
Payden Emerging Market Bond	7.5%	10.3%	0.2	1.1	0.6	2.1%
JP Morgan EMBI Global Diversified	7.1%	9.0%		1.0	0.7	0.0%

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Total Retirement System | As of December 31, 2020

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Open-Ended Real Estate	7.0%	3.4%	0.8	1.1	1.7	0.9%
NCREIF ODCE	6.2%	3.0%		1.0	1.7	0.0%
Clarion Partners	7.0%	3.4%	0.8	1.1	1.7	0.9%
NCREIF ODCE	6.2%	3.0%		1.0	1.7	0.0%
Total Closed End Real Estate	-6.2%	21.6%	-0.6	0.6	-0.3	21.6%
NCREIF ODCE	6.2%	3.0%		1.0	1.7	0.0%
Colony Realty Partners IV	-6.5%	22.7%	-0.6	0.8	-0.3	22.6%
NCREIF ODCE	6.2%	3.0%		1.0	1.7	0.0%
Rockwood Capital Real Estate Partners Fund XI, L.P.						
NCREIF-ODCE	6.2%	3.0%		1.0	1.7	0.0%
Comerica Short Term Fund	0.5%	0.2%	-2.0	-0.1	-3.1	0.3%
91 Day T-Bills	1.1%	0.2%		1.0	0.0	0.0%

Rockwood Capital XI statistics will be reflected after first full calendar year.

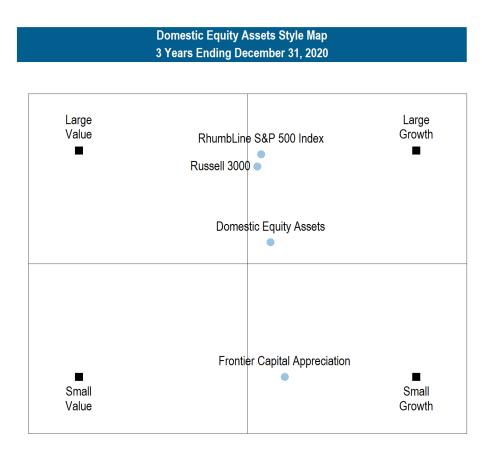
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Retirement System Detail



Domestic Equity Assets | As of December 31, 2020

Asset Allocation on December 31, 2020						
Actual Actua						
Frontier Capital Appreciation	\$22,387,325	26.5%				
RhumbLine HEDI	\$27,836,075	32.9%				
RhumbLine S&P 500 Index	\$34,266,967	40.6%				
Total	\$84,490,367	100.0%				

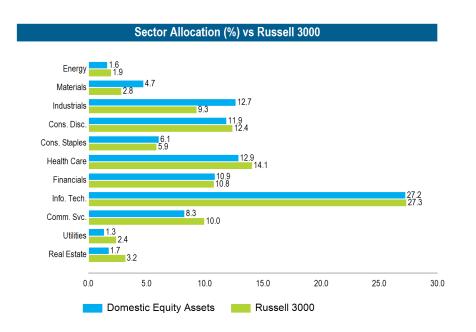


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Domestic Equity Assets | As of December 31, 2020

	Domestic Equity Assets	Characteristics	
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	84.5		72.5
Number Of Holdings	684	3058	638
Characteristics			
Weighted Avg. Market Cap. (\$B)	345.7	407.2	286.7
Median Market Cap (\$B)	22.1	2.0	15.6
P/E Ratio	29.4	29.1	22.5
Yield	1.2	1.4	1.4
EPS Growth - 5 Yrs.	13.7	13.3	19.9
Price to Book	4.3	4.4	3.9



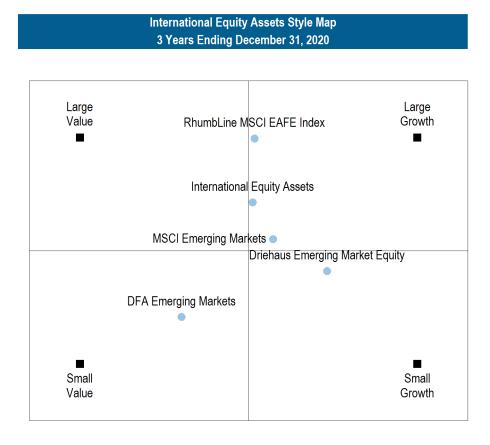
Top 10 Holdings	
APPLE INC	4.8%
MICROSOFT CORP	3.8%
AMAZON.COM INC	3.1%
FACEBOOK INC	1.5%
ALPHABET INC	1.3%
ALPHABET INC	1.2%
JOHNSON & JOHNSON	1.0%
VISA INC	0.9%
BERKSHIRE HATHAWAY INC	0.9%
MASTERCARD INC	0.9%
Total	19.4%

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City of Marlborough Contributory Retirement System International Equity Assets | As of December 31, 2020

Asset Allocation on December 31, 2020					
	Actual	Actual			
DFA Emerging Markets	\$8,814,950	21.6%			
Driehaus Emerging Market Equity	\$7,805,995	19.1%			
RhumbLine MSCI EAFE Index	\$24,227,425	59.3%			
Total	\$40,848,370	100.0%			

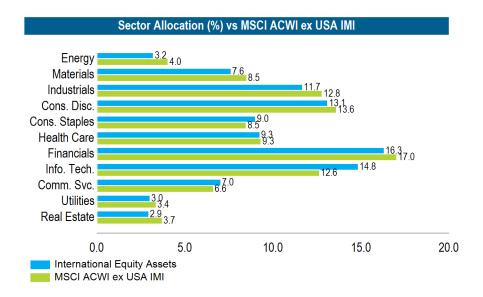


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International Equity Assets | As of December 31, 2020

	International Equity Cl	naracteristics	
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	40.8		34.8
Number Of Holdings	6356	6605	6377
Characteristics			
Weighted Avg. Market Cap. (\$B)	103.3	87.1	98.2
Median Market Cap (\$B)	1.0	1.8	1.1
P/E Ratio	21.7	20.6	17.3
Yield	2.1	2.3	2.4
EPS Growth - 5 Yrs.	7.0	5.3	7.2
Price to Book	3.0	2.7	3.1



Top 10 Holdings	
TENCENT HOLDINGS LTD	2.2%
SAMSUNG ELECTRONICS CO LTD	2.0%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.6%
NESTLE SA, CHAM UND VEVEY	1.3%
ALIBABA GROUP HOLDING LTD	1.1%
NORTHERN INSTITUTIONAL U.S. GOVERNMENT SELECT PORTFOLIO	1.0%
ROCHE HOLDING AG	0.9%
ASML HOLDING NV	0.9%
NOVARTIS AG	0.8%
AIA GROUP LTD	0.8%
Total	12.5%

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International Equity Assets | As of December 31, 2020

Country Allocation Report					
	As of 12/31/2020				
Region	% of Total	% of Bench	% Diff		
North America ex U.S.	0.0%	6.3%	-6.3%		
United States	2.2%	0.0%	2.2%		
Europe Ex U.K.	30.7%	29.8%	0.9%		
United Kingdom	7.1%	9.3%	-2.2%		
Pacific Basin Ex Japan	9.5%	7.6%	1.8%		
Japan	15.2%	16.4%	-1.3%		
Emerging Markets	34.2%	29.7%	4.5%		
Other	1.2%	0.8%	0.4%		
Total	100.0%	100.0%	0.0%		

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International Equity Assets | As of December 31, 2020

International Equity Country Allocation							
vs MSCI ACWI ex USA IMI							
Country % of % of							
Country	Total	Bench	% Diff				
ARGENTINA	0.3%	0.1%	0.2%				
AUSTRALIA	4.2%	4.7%	-0.5%				
AUSTRIA	O.1%	0.2%	-0.1%				
BAHRAIN	0.0%	0.0%	0.0%				
BANGLADESH	0.0%	0.0%	0.0%				
BELGIUM	0.5%	0.7%	-0.1%				
BRAZIL	2.0%	1.6%	0.4%				
CANADA	0.0%	6.3%	-6.3%				
CHILE	0.2%	0.2%	0.0%				
CHINA	11.2%	10.9%	0.3%				
COLOMBIA	0.1%	0.1%	0.0%				
CROATIA	0.0%	0.0%	0.0%				
CZECH REPUBLIC	0.0%	0.0%	0.0%				
DENMARK	1.5%	1.5%	0.0%				
EGYPT	0.1%	0.0%	0.1%				
ESTONIA	0.0%	0.0%	0.0%				
FINLAND	0.7%	0.7%	0.0%				
FRANCE	6.4%	6.3%	0.1%				
GERMANY	5.8%	5.6%	0.2%				
GREECE	0.0%	0.1%	0.0%				
HONG KONG	4.3%	1.9%	2.4%				
HUNGARY	0.2%	0.1%	0.1%				
INDIA	4.9%	3.0%	2.0%				
INDONESIA	0.7%	0.4%	0.2%				

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International Equity Assets | As of December 31, 2020

Country	% of	% of	0/
· · · · · · · · · · · · · · · · · · ·	Total	Bench	% Diff
IRELAND	0.6%	0.4%	0.2%
ISRAEL	0.4%	0.6%	-0.2%
ITALY	1.3%	1.6%	-0.2%
JAPAN	15.2%	16.4%	-1.3%
JORDAN	0.0%	0.0%	0.0%
KAZAKHSTAN	0.0%	0.0%	0.0%
KENYA	0.0%	0.0%	0.0%
KOREA	5.0%	4.2%	0.8%
KUWAIT	0.0%	0.2%	-0.2%
LEBANON	0.0%	0.0%	0.0%
LITHUANIA	0.0%	0.0%	0.0%
LUXEMBOURG	O.1%	0.0%	0.1%
MALAYSIA	0.5%	0.5%	-0.1%
MAURITIUS	0.0%	0.0%	0.0%
MEXICO	0.7%	0.5%	0.2%
MOROCCO	0.0%	0.0%	0.0%
NETHERLANDS	3.5%	2.3%	1.2%
NEW ZEALAND	0.2%	0.3%	0.0%
NIGERIA	0.0%	0.0%	0.0%
NORWAY	0.4%	0.5%	-0.2%
OMAN	0.0%	0.0%	0.0%
OTHER	0.5%	0.0%	0.5%
PAKISTAN	0.0%	0.0%	0.0%
PERU	0.0%	0.1%	-0.1%
PHILIPPINES	0.2%	0.2%	0.0%
POLAND	0.3%	0.2%	0.1%
PORTUGAL	0.1%	0.1%	0.0%

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International Equity Assets | As of December 31, 2020

Country	% of Total	% of Bench	% Diff
QATAR	0.0%	0.2%	-0.2%
ROMANIA	0.0%	0.0%	0.0%
RUSSIA	0.5%	0.7%	-0.3%
SAUDI ARABIA	0.3%	0.7%	-0.4%
SERBIA	0.0%	0.0%	0.0%
SINGAPORE	0.7%	0.7%	0.0%
SLOVENIA	0.0%	0.0%	0.0%
SOUTH AFRICA	1.0%	1.0%	0.0%
SPAIN	1.5%	1.5%	0.0%
SRI LANKA	0.0%	0.0%	0.0%
SWEDEN	1.9%	2.5%	-0.6%
SWITZERLAND	6.1%	5.7%	0.4%
TAIWAN	5.6%	4.1%	1.5%
THAILAND	0.4%	0.6%	-0.2%
TUNISIA	0.0%	0.0%	0.0%
TURKEY	0.2%	O.1%	0.0%
UNITED ARAB EMIRATES	0.0%	0.2%	-0.1%
UNITED KINGDOM	7.1%	9.3%	-2.2%
UNITED STATES	2.2%	0.0%	2.2%
VIETNAM	0.0%	0.0%	0.0%
Total	100.0%	100.0%	0.0%

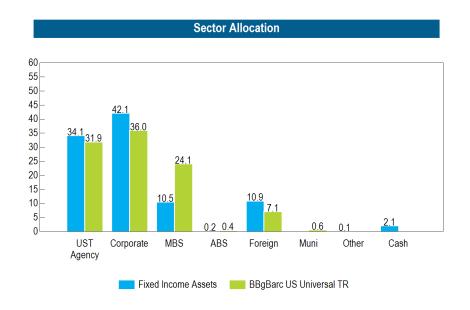
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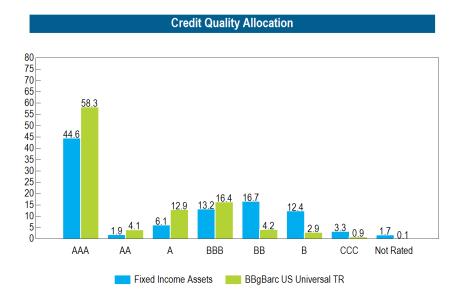


Fixed Income Assets | As of December 31, 2020

Asset Allocation on December 31, 2020					
	Actual	Actual			
Payden Emerging Market Bond	\$5,928,109	8.7%			
Shenkman Capital	\$20,864,203	30.5%			
SSgA TIPS Index-NL	\$9,998,408	14.6%			
SSgA U.S. Aggregate Bond Index	\$31,718,765	46.3%			
Total	\$68,509,485	100.0%			

Fixed Income Characteristics vs. BBgBarc US Universal TR						
	Portfolio	Index	Portfolio			
	Q4-20	Q4-20	Q3-20			
Fixed Income Characteristics						
Yield to Maturity	2.4	1.4	2.7			
Average Duration	5.8	6.2	5.3			
Average Quality	А	AA	А			
Weighted Average Maturity	8.3	8.2	7.9			





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Portfolio Reviews



RhumbLine S&P 500 Index | As of December 31, 2020

Account Information				
Account Name	RhumbLine S&P 500 Index			
Account Structure	Commingled Fund			
Investment Style	Passive			
Inception Date	3/01/99			
Account Type	US Equity			
Benchmark	S&P 500			
Universe	eV US Passive S&P 500 Equity Net			

Portfolio Performance Summary								
	QTD	YTD				10 Yrs		
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
RhumbLine S&P 500 Index	12.1	18.3	18.3	14.1	15.2	13.8	7.3	Mar-99
S&P 500	12.1	18.4	18.4	14.2	15.2	13.9	7.2	Mar-99

Top 10 Holdings	
APPLE INC	6.7%
MICROSOFT CORP	5.3%
AMAZON.COM INC	4.4%
FACEBOOK INC	2.1%
TESLA INC	1.7%
ALPHABET INC	1.7%
ALPHABET INC	1.6%
BERKSHIRE HATHAWAY INC	1.4%
JOHNSON & JOHNSON	1.3%
JPMORGAN CHASE & CO	1.2%
Total	27.4%

RhumbLine S&	P 500 Index	Equity Characte	ristics
	vs S&P 5	00	
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	34.3		30.6
Number Of Holdings	506	505	507
Characteristics			
Weighted Avg. Market Cap. (\$B)	483.3	491.3	441.9
Median Market Cap (\$B)	26.9	26.9	22.9
P/E Ratio	29.6	29.7	23.8
Yield	1.5	1.5	1.7
EPS Growth - 5 Yrs.	13.3	13.4	20.4
Price to Book	4.6	4.6	4.4
Sector Distribution			
Energy	2.3	2.2	2.0
Materials	2.6	2.6	2.6
Industrials	8.4	8.3	8.2
Consumer Discretionary	12.7	13.4	11.5
Consumer Staples	6.5	7.1	7.0
Health Care	13.5	13.0	14.2
Financials	10.5	10.6	10.1
Information Technology	27.6	27.0	28.0
Communication Services	10.8	10.8	10.7
Utilities	2.8	2.6	3.0
Real Estate	2.4	2.3	2.6

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RhumbLine HEDI | As of December 31, 2020

Account Information				
Account Name	RhumbLine HEDI			
Account Structure	Separate Account			
Investment Style	Passive			
Inception Date	11/01/20			
Account Type	US Equity			
Benchmark	Russell 1000 HEDI Moderate GR USD			
Universe	eV US Large Cap Core Equity Gross			

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
RhumbLine HEDI							13.2	Nov-20
Russell 1000 HEDI Moderate GR USD	10.6	18.5	18.5	15.9	16.5	15.5	13.3	Nov-20

Top 10 Holdings	
APPLE INC	6.2%
MICROSOFT CORP	5.1%
AMAZON.COM INC	3.9%
FACEBOOK INC	2.1%
ALPHABET INC	1.9%
ALPHABET INC	1.7%
JOHNSON & JOHNSON	1.4%
MASTERCARD INC	1.4%
VISA INC	1.4%
PROCTER & GAMBLE CO (THE)	1.2%
Total	26.2%

Rhumbline HEDI Characteristics	
	Portfolio
	Q4-20
Market Value	
Market Value (\$M)	27.8
Number Of Holdings	225
Characteristics	
Weighted Avg. Market Cap. (\$B)	441.3
Median Market Cap (\$B)	34.0
P/E Ratio	30.5
Yield	1.4
EPS Growth - 5 Yrs.	13.1
Price to Book	5.8
Sector Distribution	
Energy	0.8
Materials	3.1
Industrials	12.4
Consumer Discretionary	10.9
Consumer Staples	9.2
Health Care	13.2
Financials	10.8
Information Technology	27.5
Communication Services	10.2
Utilities	0.7
Real Estate	1.0

RhumbLine HEDI funded on 10/5/2020. Performance will be reflected after first full quarter.



Frontier Capital Appreciation | As of December 31, 2020

Account Information						
Account Name	Frontier Capital Appreciation					
Account Structure	Commingled Fund					
Investment Style	Active					
Inception Date	2/01/13					
Account Type	US Equity					
Benchmark	Russell 2500 Growth					
Universe	eV US Small-Mid Cap Growth Equity Net					

Portfolio Performance Summary								
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Frontier Capital Appreciation Russell 2500 Growth	30.4	18.1	18.1	9.4	13.5		12.9	Feb-13
	<i>25.9</i>	<i>40.5</i>	<i>40.5</i>	19.9	<i>18.7</i>	15.0	<i>16.3</i>	<i>Feb-13</i>

Top 10 Holdings	
PAN AMERICAN SILVER CORP	2.2%
CREE INC.	2.2%
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	1.9%
TUTOR PERINI CORP	1.8%
INSULET CORP	1.8%
DANA INC	1.8%
CASH - USD	1.8%
NUANCE COMMUNICATIONS INC	1.7%
FMC CORP.	1.6%
CONTROLADORA VUELA COMPANIA DE AVIACION SA DE CV	1.6%
Total	18.3%

Frontier Capi	tal Appreciat	ion Characteris	tics
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	22.4		17.2
Number Of Holdings	148	1325	149
Characteristics			
Weighted Avg. Market Cap. (\$B)	6.8	7.6	6.2
Median Market Cap (\$B)	3.8	1.5	2.7
P/E Ratio	26.6	38.3	19.8
Yield	0.6	0.4	0.8
EPS Growth - 5 Yrs.	15.7	17.5	21.6
Price to Book	3.1	6.7	3.1
Sector Distribution			
Energy	1.7	0.1	2.6
Materials	10.0	2.9	10.5
Industrials	19.6	11.9	19.1
Consumer Discretionary	11.7	11.8	11.5
Consumer Staples	1.4	2.7	1.3
Health Care	11.6	29.1	13.3
Financials	11.4	4.0	10.5
Information Technology	26.4	31.4	25.6
Communication Services	2.1	2.5	2.1
Utilities	0.0	1.0	0.0
Real Estate	1.6	2.6	1.8

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RhumbLine MSCI EAFE Index | As of December 31, 2020

Account Information						
Account Name	RhumbLine MSCI EAFE Index					
Account Structure	Commingled Fund					
Investment Style	Passive					
Inception Date	8/01/14					
Account Type	Non-US Stock Developed					
Benchmark	MSCI EAFE					
Universe	eV EAFE All Cap Equity Net					

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
RhumbLine MSCI EAFE Index	16.0	7.9	7.9	4.5	7.7		4.5	Aug-14
MSCI EAFE	16.0	7.8	7.8	4.3	7.4	5.5	4.4	Aug-14

Top 10 Holdings	
NESTLE SA, CHAM UND VEVEY	2.1%
ROCHE HOLDING AG	1.5%
NOVARTIS AG	1.3%
ASML HOLDING NV	1.3%
LVMH MOET HENNESSY LOUIS VUITTON SE	1.1%
TOYOTA MOTOR CORP	1.0%
AIA GROUP LTD	0.9%
SAP SE	0.9%
ASTRAZENECA PLC	0.8%
SONY CORP	0.8%
Total	11.8%

Rhumbline MSCI EAFE Index Characteristics							
	Portfolio	Index	Portfolio				
	Q4-20	Q4-20	Q3-20				
Market Value							
Market Value (\$M)	24.2		20.9				
Number Of Holdings	876	876	894				
Characteristics							
Weighted Avg. Market Cap. (\$B)	71.1	71.4	65.3				
Median Market Cap (\$B)	12.3	12.4	10.2				
P/E Ratio	22.3	22.2	19.4				
Yield	2.3	2.4	2.7				
EPS Growth - 5 Yrs.	3.0	2.9	3.8				
Price to Book	2.7	2.7	3.0				
Sector Distribution							
Energy	3.1	3.1	2.7				
Materials	7.8	7.9	7.5				
Industrials	15.0	15.2	15.2				
Consumer Discretionary	12.5	12.5	11.9				
Consumer Staples	10.3	10.9	11.9				
Health Care	12.8	12.9	14.3				
Financials	16.2	16.3	14.7				
Information Technology	8.8	8.9	8.4				
Communication Services	5.2	5.2	5.4				
Utilities	3.8	3.9	3.9				
Real Estate	3.0	3.1	3.1				

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DFA Emerging Markets | As of December 31, 2020

Account Information						
Account Name	DFA Emerging Markets					
Account Structure	Mutual Fund					
Investment Style	Active					
Inception Date	1/01/15					
Account Type	Non-US Stock Emerging					
Benchmark	MSCI Emerging Markets					
Universe	eV Emg Mkts All Cap Equity Net					

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
DFA Emerging Markets	21.2	13.9	13.9	3.8	11.4		6.5	Jan-15
MSCI Emerging Markets	19.7	18.3	18.3	6.2	12.8	3.6	7.6	Jan-15

Top 10 Holdings	
SAMSUNG ELECTRONICS CO LTD	4.7%
TENCENT HOLDINGS LTD	4.3%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	2.7%
ALIBABA GROUP HOLDING LTD	2.1%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.8%
PING AN INSURANCE GROUP	1.3%
VALE SA	1.0%
CHINA CONSTRUCTION BANK CORP	0.9%
RELIANCE INDUSTRIES LTD	0.9%
SK HYNIX INC	0.8%
Total	20.5%

DFA Emergi	ng Markets	Characteristics	S
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	8.8		7.3
Number Of Holdings	5454	1397	5464
Characteristics			
Weighted Avg. Market Cap. (\$B)	115.0	171.5	105.1
Median Market Cap (\$B)	0.6	6.9	0.7
P/E Ratio	15.9	19.1	13.1
Yield	2.3	2.0	2.7
EPS Growth - 5 Yrs.	10.1	9.4	9.2
Price to Book	2.6	3.1	2.6
Sector Distribution			
Energy	5.0	5.0	5.2
Materials	10.7	7.6	10.3
Industrials	7.7	4.2	7.5
Consumer Discretionary	13.1	18.4	13.3
Consumer Staples	6.3	5.8	6.7
Health Care	3.9	4.8	4.2
Financials	15.5	18.1	14.9
Information Technology	21.5	20.5	20.6
Communication Services	9.3	11.4	10.1
Utilities	2.9	2.0	2.8
Real Estate	3.9	2.1	4.4

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Driehaus Emerging Market Equity | As of December 31, 2020

	Account Information
Account Name	Driehaus Emerging Market Equity
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	1/01/15
Account Type	Non-US Stock Emerging
Benchmark	MSCI Emerging Markets
Universe	eV Emg Mkts All Cap Equity Net

	Portfolio Perf	orman	ce Sun	mary				
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Driehaus Emerging Market Equity	18.3	28.0	28.0	10.6	15.6		10.7	Jan-15
MSCI Emerging Markets	<i>19.7</i>	<i>18.3</i>	<i>18.3</i>	<i>6.2</i>	12.8	3.6	7.6	<i>Jan-15</i>

Top 10 Holdings	
TENCENT HOLDINGS LTD	6.9%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	6.5%
NORTHERN INSTITUTIONAL U.S. GOVERNMENT SELECT PORTFOLIO	5.3%
SAMSUNG ELECTRONICS CO LTD	5.1%
ALIBABA GROUP HOLDING LTD	3.3%
H D F C BANK LTD	2.2%
KWEICHOW MOUTAI CO LTD	2.1%
TATA CONSULTANCY SERVICES LTD	1.6%
NIKE INC	1.5%
RELIANCE INDUSTRIES LTD	1.5%
Total	35.9%

Driehaus Emer	aing Market I	Equity Characte	ristics
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Market Value			
Market Value (\$M)	7.8		6.6
Number Of Holdings	95	1397	102
Characteristics			
Weighted Avg. Market Cap. (\$B)	194.1	171.5	195.4
Median Market Cap (\$B)	31.6	6.9	22.0
P/E Ratio	34.8	19.1	22.0
Yield	0.9	2.0	1.3
EPS Growth - 5 Yrs.	14.2	9.4	15.8
Price to Book	5.0	3.1	5.0
Sector Distribution			
Energy	1.5	5.0	3.0
Materials	3.6	7.6	5.2
Industrials	5.7	4.2	3.4
Consumer Discretionary	15.1	18.4	17.0
Consumer Staples	8.0	5.8	11.0
Health Care	4.4	4.8	5.0
Financials	17.5	18.1	15.1
Information Technology	26.0	20.5	20.6
Communication Services	10.2	11.4	15.9
Utilities	0.5	2.0	0.4
Real Estate	1.5	2.1	0.5

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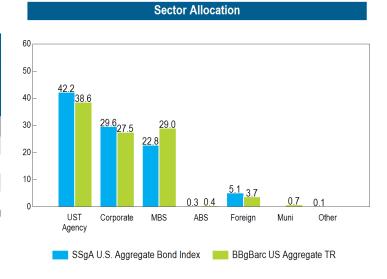
SSgA U.S. Aggregate Bond Index | As of December 31, 2020

	Account Information
Account Name	SSgA U.S. Aggregate Bond Index
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	5/01/01
Account Type	US Fixed Income Investment Grade
Benchmark	BBgBarc US Aggregate TR
Universe	eV US Core Fixed Inc Net

	Portfolio Perf	ormano	e Sum	mary				
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
SSgA U.S. Aggregate Bond Index BBgBarc US Aggregate TR	0.6	7.5	7.5	5.3	4.4	3.8	4.8	May-01
	<i>0.7</i>	<i>7.5</i>	<i>7.5</i>	<i>5.3</i>	<i>4.4</i>	<i>3.8</i>	4.8	<i>May-01</i>

			Credit Quality	Allocation	
30					
70	63.3	69.8			
0	-				
0	-				
0	-				
0	-				20.4
0	-			12.7 12.0	14.8
0	-		3.6 3.4		
υL	F	ΑA	AA	А	BBB
			SgA U.S. Aggre BgBarc US Agg	-	lex

SSgA U.S. Aggregate vs. BBgBard	Bond Index Chara US Aggregate TR	cteristics	
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Fixed Income Characteristics			
Yield to Maturity	1.1	1.0	1.2
Average Duration	6.7	6.4	6.1
Average Quality	AA	AA	AA
Weighted Average Maturity	8.7	8.3	8.0



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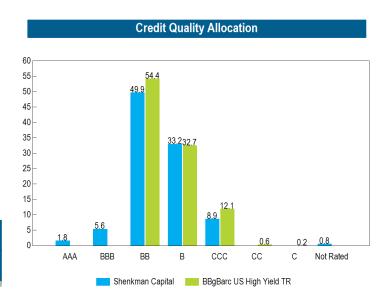


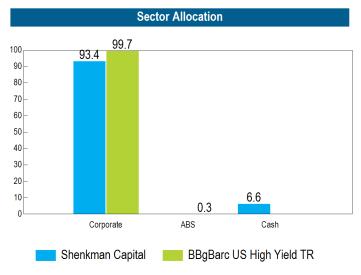
Shenkman Capital | As of December 31, 2020

	Account Information
Account Name	Shenkman Capital
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/01/06
Account Type	US Fixed Income High Yield
Benchmark	BBgBarc US High Yield TR
Universe	eV US High Yield Fixed Inc Net

	Portfolio Perf	ormanc	e Sum	mary				
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Shenkman Capital BBqBarc US High Yield TR	5.7 6.5	6.3 7.1	6.3 7.1	6.0	7.4 8.6	6.2 6.8	6.8 7.4	Apr-06 <i>Apr-06</i>

	ital Characteristi US High Yield TR	cs	
	Portfolio	Index	Portfolio
	Q4-20	Q4-20	Q3-20
Fixed Income Characteristics			
Yield to Maturity	4.6	4.9	5.5
Average Duration	3.2	5.1	3.2
Average Quality	BB	В	BB
Weighted Average Maturity	6.5	6.5	6.4







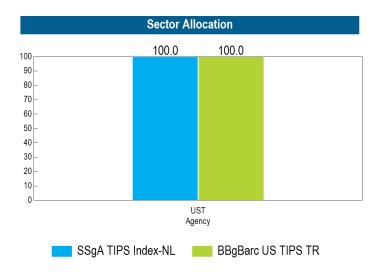
SSgA TIPS Index-NL | As of December 31, 2020

	Account Information
Account Name	SSgA TIPS Index-NL
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	10/01/05
Account Type	US Inflation Protected Fixed
Benchmark	BBgBarc US TIPS TR
Universe	eV US TIPS / Inflation Fixed Inc Net

Portfolio Performance Summary								
	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
SSgA TIPS Index-NL BBqBarc US TIPS TR	1.6 1.6	10.9 11.0	10.9 11.0	5.8 5.9	5.0 <i>5.1</i>	3.8 <i>3.8</i>	4.2 4.2	Oct-05

	Credit Quality Allocation					
100		100.0	100.0			
90 –						
80 –						
70 –						
60 –						
50 –						
40 –						
30 –						
20 –						
10 –						
0			AAA			
	SSgA TIPS	Index-NL	BBgBarc	US TIPS TR		

SSgA TIPS Index-NL Characteristics						
vs. BBgl	Barc US TIPS TR					
	Portfolio	Index	Portfolio			
	Q4-20	Q4-20	Q3-20			
Fixed Income Characteristics						
Yield to Maturity	0.6	0.6	0.7			
Average Duration	7.3	7.6	5.2			
Average Quality	AAA	AAA	AAA			
Weighted Average Maturity	8.1	8.1	8.4			



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Payden Emerging Market Bond | As of December 31, 2020

Account Information					
Account Name	Payden Emerging Market Bond				
Account Structure	Mutual Fund				
Investment Style	Active				
Inception Date	1/01/15				
Account Type	International Emerging Market Debt				
Benchmark	JP Morgan EMBI Global Diversified				
Universe					

Payden Emerging Market Bond Characteristics						
vs. JP Morgan EMBI	Global Dive	ersified				
	Portfolio	Index	Portfolio			
	Q4-20	Q4-20	Q3-20			
Fixed Income Characteristics						
Yield to Maturity	5.0	3.8	6.6			
Average Duration	8.1	8.2	7.8			
Average Quality	BB	BB	BB			
Weighted Average Maturity	12.7	12.9	12.0			

Portfolio Performance Summary								
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception II	nception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Payden Emerging Market Bond JP Morgan EMBI Global Diversified	7.7	6.2	6.2	4.8	7.5		6.1	Jan-15
	5.8	<i>5.3</i>	<i>5.3</i>	5.0	<i>7.1</i>	6.2	<i>6.1</i>	<i>Jan-15</i>

Fixed Income Sectors as of December 31, 2020	
GOVERNMENT	65.9%
MUNICIPAL	0.0%
CORPORATE	21.4%
SECURITIZED	0.0%
CASH & EQUIVALENTS	2.3%
DERIVATIVE	10.4%

Fund Characteristics as of December 31, 2020	
Versus JP Morgan EMBI Global Diversified	
Sharpe Ratio (3 Year)	0.3
Average Duration	8.1
Average Coupon	6.1%
Average Effective Maturity	12.7
R-Squared (3 Year)	1.0
Alpha (3 Year)	-0.1%
Beta (3 Year)	1.1

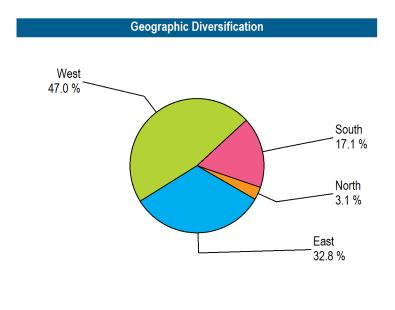
С	redit Quality as of December 31, 2020
AAA	0.0%
AA	5.0%
А	5.0%
BBB	26.0%
ВВ	23.0%
В	31.0%
Below B	8.0%
Not Rated	2.0%

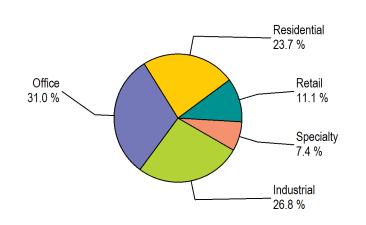


Clarion Partners | As of December 31, 2020

	Account Information
Account Name	Clarion Partners
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	10/01/02
Account Type	Real Estate
Benchmark	NCREIF ODCE
Universe	US Real Estate Equity

	Portfolio Perf	ormano	e Sum	mary				
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Clarion Partners	2.0	2.2	2.2	6.0	7.0	10.6	7.1	Oct-02
NCREIF ODCE	<i>1.</i> 3	1.2	1.2	<i>4.9</i>	<i>6.2</i>	<i>9.9</i>	7.7	<i>Oct-02</i>





Property Type Allocation

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Colony Realty Partners IV | As of December 31, 2020

Account Information				
Account Name	Colony Realty Partners IV			
Account Structure	Other			
Investment Style	Active			
Inception Date	1/01/13			
Account Type	Real Estate			
Benchmark	NCREIF ODCE			
Universe	US Real Estate Equity			

Colony Realty Partners IV no longer has any funds invested in properties. While there is a residual balance in the Fund, it no longer has control over any real estate.

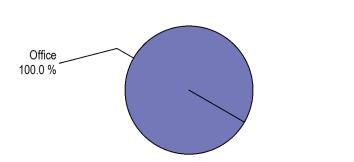


Rockwood Capital Real Estate Partners Fund XI, L.P. | As of December 31, 2020

Account Information						
Account Name	Rockwood Capital Real Estate Partners Fund XI, L.P.					
Account Structure	Mutual Fund					
Investment Style	Passive					
Inception Date	12/01/19					
Account Type	Real Estate					
Benchmark	NCREIF-ODCE					
Universe	US Real Estate Equity					

Geographic Diversification					
West 47.0 % East 53.0 %					

Portfolio Performance Summary								
	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Rockwood Capital Real Estate Partners Fund XI, L.P. US Real Estate Equity Median	0.0	0.0	0.0				0.0	Dec-19
	<i>9.8</i>	<i>-4.5</i>	<i>-4.5</i>	5.5	6.0	9.5	-5.0	<i>Dec-19</i>



Property Type Allocation

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Private Equity Assets | As of December 31, 2020

Non-Marketable Securities Overview As of December 31, 2020						
Account	Vintage Year	Commitment	Cumulative Takedown	Cumulative Distributions	Value (RV)	IRR (%)
North American Strategic Partners 2006	2006	\$4,539,998	\$4,411,659	\$2,448,408	\$368,799	6.4
Ironsides Partnership Fund IV	2015	\$2,500,000	\$1,343,006	\$0	\$2,428,143	27.9
Ironsides Direct Investment Fund IV	2015	\$2,500,000	\$2,419,534	\$2,246,746	\$1,932,178	23.2
Ironsides Partnership Fund V, L.P.	2020	\$2,000,000	\$296,552	\$0	\$300,497	
Ironsides Direct Investment Fund V, L.P.	2019	\$2,000,000	\$2,289,730	\$107,139	\$2,276,887	
HarbourVest 2019 Global Fund	2019	\$4,000,000	\$1,400,000	\$8,640	\$1,682,802	
Total Account		\$17,539,998	\$12,160,481	\$85,882	\$8,989,306	

IRRs for investments less than 2 years are not shown.

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Total Retirement System | As of December 31, 2020

Annual Investment Expense Analysis As Of December 31, 2020						
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee		
Equity Assets		\$125,338,737				
Domestic Equity Assets		\$84,490,367				
RhumbLine S&P 500 Index	0.07% of First 25.0 Mil, 0.05% of Next 25.0 Mil, 0.04% Thereafter	\$34,266,967	\$22,133	0.06%		
Frontier Capital Appreciation	0.79% of Assets	\$22,387,325	\$176,860	0.79%		
RhumbLine HEDI	0.05% of Assets	\$27,836,075	\$13,918	0.05%		
International Equity Assets		\$40,848,370				
International Developed Markets Equity Assets		\$24,227,425				
RhumbLine MSCI EAFE Index	0.08% of First 25.0 Mil, 0.07% of Next 25.0 Mil, 0.05% Thereafter	\$24,227,425	\$19,382	0.08%		
International Emerging Markets Equity Assets		\$16,620,945				
DFA Emerging Markets	0.52% of Assets	\$8,814,950	\$45,838	0.52%		
Driehaus Emerging Market Equity	0.90% of Assets	\$7,805,995	\$70,254	0.90%		
Fixed Income Assets		\$68,509,485				
Investment Grade Bonds Assets		\$31,718,765				
SSgA U.S. Aggregate Bond Index	0.04% of Assets	\$31,718,765	\$12,688	0.04%		
High Yield Bond Assets		\$20,864,203				
Shenkman Capital	0.45% of Assets	\$20,864,203	\$93,889	0.45%		
TIPS Assets		\$9,998,408				
SSgA TIPS Index-NL	0.04% of Assets	\$9,998,408	\$3,999	0.04%		
Emerging Market Debt Assets		\$5,928,109				
Payden Emerging Market Bond	0.69% of Assets	\$5,928,109	\$40,904	0.69%		

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Total Retirement System | As of December 31, 2020

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Real Estate Assets		\$7,070,475		
Open-Ended Real Estate		\$5,710,836		
Clarion Partners	1.10% of Assets	\$5,710,836	\$62,819	1.10%
Total Closed End Real Estate		\$1,359,639		
Colony Realty Partners IV	1.5% management fee based on committed equity during the investment period and invested equity thereafter	\$22,227		
Rockwood Capital Real Estate Partners Fund XI, L.P.		\$1,337,412		
Private Equity Assets		\$8,989,306		
North American Strategic Partners 2006	0.8% on drawn and undrawn capital less investments sold or written off 5% carried interest, 8% preferred return	\$368,799		
Ironsides Partnership Fund IV	0% Management fee, 8% Preferred Return, 5% Carried Interest	\$2,428,143		
Ironsides Direct Investment Fund IV	0.5% Management fee, 8% Preferred Return, 15% Carried Interest	\$1,932,178		
Ironsides Partnership Fund V, L.P.		\$300,497		
Ironsides Direct Investment Fund V, L.P.	0.5% Management fee, 8% preferred return, 15% carried interest	\$2,276,887		
HarbourVest 2019 Global Fund	0.69% average annual management fee; 8.0% preferred return on secondary and direct investments and with corresponding carried interest of 12.5% on secondary and direct investments	\$1,682,802		
Cash		\$2,113,138		
Comerica Short Term Fund		\$2,113,138		
Total		\$212,021,140	\$562,684	0.27%

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Appendices



Meketa Investment Group Corporate Update

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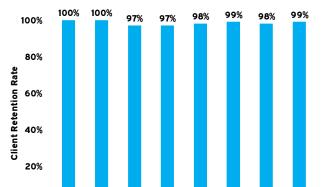
- Staff of 199, including 132 investment professionals and 40 CFA Charterholders
- 214 clients, with over 300 funds throughout the United States
- Significant investment in staff and resources
- Offices in Boston, Chicago, Miami, New York, Portland (OR), San Diego, and London
- We advise on \$1.4 trillion in client assets
 - Over \$100 billion in assets committed to alternative investments
 - Private Equity
- Infrastructure
- Natural Resources

0%

- Real Estate
- Hedge Funds
- Commodities

Client to Consultant Ratio¹





2017

2012 2013 2014 2015 2016

Client Retention Rate²

Meketa Investment Group is proud to work for over 5 million American families everyday.

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¹ On March 15, 2019, 31 employees joined the firm as part of the merger of Meketa Investment Group and Pension Consulting Alliance.

² Client Retention Rate is one minus the number of clients lost divided by the number of clients at prior year-end.



Asset Classes Followed Intensively by Meketa Investment Group

Domestic Equities

- Passive
- Enhanced Index
- Large Cap
- Midcap
- Small Cap
- Microcap
- 130/30

International Equities

- Large Cap
 Developed
- Small Cap
 Developed
- Emerging Markets
- Frontier Markets

Private Equity

- Buyouts
- Venture Capital
- Private Debt
- Special Situations
- Secondaries
- Fund of Funds

Real Assets

- Public REITs
- Core Real Estate
- Value Added
 Real Estate
- Opportunistic Real Estate
- Infrastructure
- Timber
- Natural Resources
- Commodities

Fixed Income

- Short-Term
- Core
- Core Plus
- TIPS
- High Yield
- Bank Loans
- Distressed
- Global
- Emerging Markets

Hedge Funds

- Long/Short Equity
- Event Driven
- Relative Value
- Fixed Income Arbitrage
- Multi Strategy
- Market Neutral
- Global Macro
- Fund of Funds
- Portable Alpha

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SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

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Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

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Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.