

FY2019 Q1 Investment Reports

BACKGROUND

The Oregon State University (university) investment reports for the first quarter (Q1) of FY2019 are presented in the following three sections:

- **FY2019 Q1 Public University Fund Investment Report** – This section includes a report on the investments of the Public University Fund (PUF) for the first quarter of FY2019 (i.e., July 1 – September 30, 2018). The PUF is an investment pool that is administered by the university on behalf of all Oregon public university participants, pursuant to legislation adopted by the 2014 Legislature. The PUF holds assets of the following participating Oregon public universities: Eastern Oregon University, Oregon Institute of Technology, Oregon State University, Portland State University, Southern Oregon University, and Western Oregon University.
- **FY2019 Q1 Oregon State University Investment Report** – This section includes a report on the investments of the operating and endowment assets of the university. This report reflects the university's operating assets that are invested in the PUF, the university's endowment and quasi-endowment investments managed by the Oregon State University Foundation, the land held as separately invested endowments, and the land grant endowment that is invested in the PUF.
- **FY2019 Q1 Market Background** – This section provides a general discussion of the investment markets and related performance information during the first quarter of FY2019.

FY2019 Q1 PUBLIC UNIVERSITY FUND INVESTMENT REPORT

(Prepared by the Public University Fund Administrator)

Performance

The Public University Fund (PUF) gained 0.3% for the fiscal quarter ended September 30, 2018.

The Oregon Short-Term Fund (OSTF) returned 0.6% for the quarter, outperforming its benchmark by 10 basis points. The Core Bond Fund returned 0.1% for the quarter, performing in line with its benchmark. The investment yield on the PUF portfolio was 0.6% for the quarter.

In October, Oregon State Treasury fixed income portfolio manager, Tom Lofton, conducted a quarterly performance review with university staff. The investment team took advantage of market volatility and rising interest rates to deploy cash into U.S. Treasuries and corporate fixed income securities, extending the portfolio's investment yield by 8 basis points.

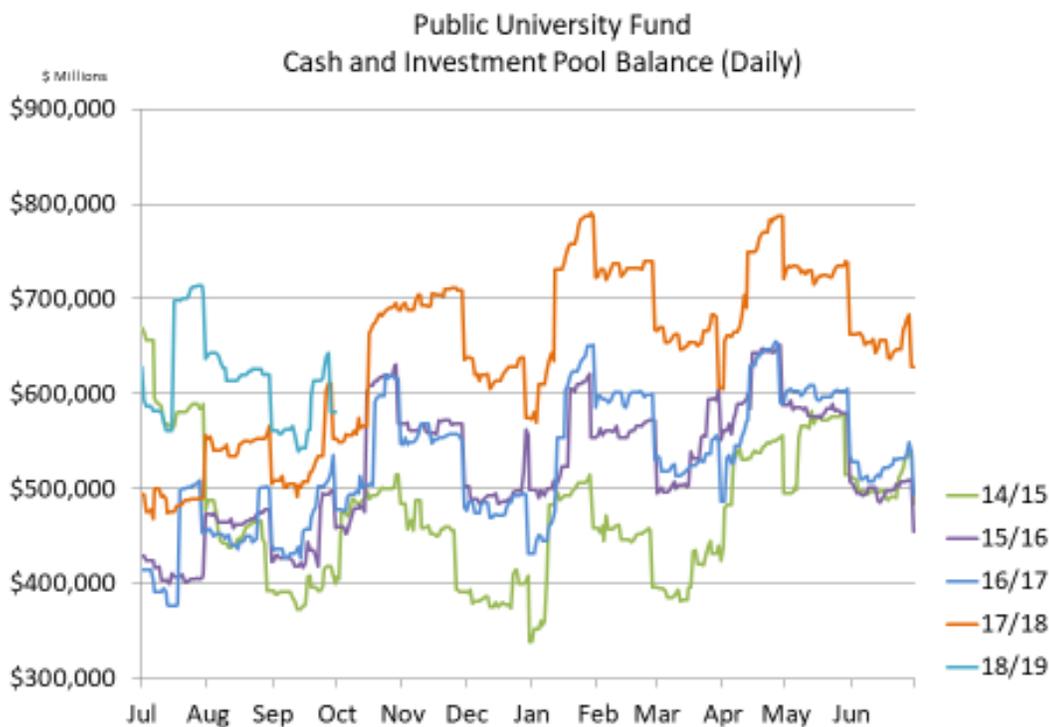
The Public University Fund continues to meet the PUF investment policy's stated objectives to provide adequate liquidity to meet operating needs while producing a total return that exceeds short duration strategies, over the long term. The PUF returned 1.4% over a trailing three-year period compared to 0.8% for the 91-day Treasury bill. The yield on the portfolio averaged 1.9% for three years.

A snapshot of each investment pool's portfolio characteristics and market exposures is included with this report.

	Quarter Ended 9-30-18	Current Fiscal YTD	Prior Fiscal YTD	3-Year Avg.	Market Value	Asset Allocation	Policy Allocation
Oregon Short-Term Fund	0.6%	0.6%	0.4%	1.3%	\$199,816,429	34.7%	\$100 million target ¹
<i>Benchmark - 91 day T-Bill</i>	0.5%	0.5%	0.3%	0.8%			
PUF Core Bond Fund	0.1%	0.1%	0.6%	N/A	375,954,380	65.3%	
<i>Blended Benchmark ²</i>	0.1%	0.1%	0.6%	0.9%			
PUF Total Return	0.3%	0.3%	0.5%	1.4%	\$575,770,809	100.0%	
<i>PUF Investment Yield</i>	0.6%	0.6%	0.5%	1.9%			

¹ The PUF policy guidelines define investment allocation targets based upon total participant dollars committed. Core balances in excess of liquidity requirements for the participants are available for investment in the Core Bond Fund. Maximum core investment allocations are determined based upon anticipated average cash balances for all participants during the fiscal year.

² The Blended Benchmark is comprised of the Bloomberg Barclay's Aggregate 3-5 Years Index (75%) and the Bloomberg Barclay's Aggregate 5-7 Years Index (25%).



The PUF cash and investment pool averaged \$614 million during Q1 FY2019. Higher balances compared to the prior fiscal year are primarily attributable to one participant's unspent bond proceeds.

Investment Income and Participant Ownership

During the quarter, investment earnings distributed to the participants totaled \$3,896,168.

	Earnings Distribution ¹	Market Value as of 9/30/18	% Ownership
Oregon State University ²	\$ 1,978,748	\$ 277,971,106	48.3%
Portland State University	1,130,415	176,429,578	30.6%
Western Oregon University	312,006	49,948,118	8.7%
Southern Oregon University	171,660	27,318,492	4.7%
Oregon Institute of Technology	168,927	24,556,925	4.3%
Eastern Oregon University	134,412	19,546,590	3.4%
Grand Total	\$ 3,896,168	\$ 575,770,809	100.0%

¹ The earnings available for distribution to participants were earned during the months of June 2018 through August 2018 and distributed to participants in September 2018. Earnings are distributed to participants based upon average cash and investment balances on deposit during the same period, which differs from the total market value at the end of the quarter.

² As of September 30, 2018, Oregon State University's total PUF market value consisted of operating assets, valued at \$277,649,242, and the land grant endowment, valued at \$321,864.

Oregon Short-Term Fund Exposures

September 30, 2018

Sector	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
Corporates	52.4%	-0.7%	0.5	1.2	2.7%
Treasuries	19.6%	-0.2%	0.5	0.0	2.3%
Securitized	14.1%	-0.5%	0.6	1.0	2.7%
Government Related	10.7%	-0.1%	0.4	0.7	2.0%
Cash Securities	1.9%	0.0%	0.1	0.1	2.1%
Investment Funds	1.1%	0.0%	2.7	1.5	3.1%
Municipals	0.2%	0.0%	0.0	0.1	2.3%
Total	100.0%	-1.5%	0.6	0.9	2.5%

Rating	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
AAA	40.4%	-0.8%	0.5	0.4	2.4%
AA+	1.1%	0.0%	0.9	1.0	2.6%
AA	7.2%	0.0%	0.3	0.9	2.4%
AA-	22.6%	-0.2%	0.4	1.1	2.6%
A+	6.6%	-0.1%	0.6	1.3	2.7%
A	13.7%	-0.2%	0.6	1.3	2.8%
A-	7.2%	-0.2%	0.7	1.2	2.8%
No Rating	0.1%	0.0%	0.2	0.3	2.5%
Investment Funds	1.1%	0.0%	2.7	1.5	3.1%
Total	100.0%	-1.5%	0.6	0.9	2.5%

Industry	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
Banking	36.0%	-0.5%	0.5	1.2	2.7%
Treasuries	19.6%	-0.2%	0.5	0.0	2.3%
ABS	14.1%	-0.5%	0.6	1.0	2.7%
Government Related	10.7%	-0.1%	0.4	0.7	2.0%
Consumer Cyclical	6.3%	-0.1%	0.6	1.3	2.6%
Capital Goods	4.3%	-0.1%	0.5	1.4	2.7%
Consumer Non-Cyclical	2.1%	0.0%	0.8	1.0	2.6%
Cash Securities	1.9%	0.0%	0.1	0.1	2.1%
Technology	1.4%	0.0%	0.5	1.0	2.5%
Investment Funds	1.1%	0.0%	2.7	1.5	3.1%
Insurance	0.8%	0.0%	0.7	1.5	2.7%
Utility	0.7%	0.0%	0.1	0.1	2.3%
Finance Companies	0.3%	0.0%	2.0	2.1	3.5%
Industrial Other	0.2%	0.0%	0.2	0.2	2.3%
Municipals	0.2%	0.0%	0.0	0.1	2.3%
Transportation	0.1%	0.0%	0.5	0.5	2.7%
Communications	0.1%	0.0%	1.3	1.3	2.9%
Financial Other	0.1%	0.0%	0.0	0.0	1.7%
Total	100.0%	-1.5%	0.6	0.9	2.5%

Top Exposures	Market Value Percent
United States Treasury	20.1%
JP Morgan Chase & Company	3.6%
Wells Fargo & Company	2.6%
Toyota Motor Corporation	2.5%
Federal Home Loan Banks	2.3%
Morgan Stanley	2.2%
Toronto-Dominion Bank (The)	2.1%
Royal Bank of Canada	1.9%
Citigroup Incorporated	1.8%
Barclays Plc	1.7%
Bank of Nova Scotia	1.7%
Bank of America Corporation	1.7%
Bank of Montreal	1.6%
American Express Company	1.6%
American Express Credit Account Master Trust	1.5%
Honda Motor Company Limited	1.5%
Federal Farm Credit Banks Funding Corporation	1.5%
Goldman Sachs Group Incorporated (The)	1.5%
Caterpillar Incorporated	1.4%
Walmart Incorporated	1.4%

Source: Oregon State Treasury

PUF Core Bond Fund Exposures

September 30, 2018

Sector	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
Treasuries	36.9%	-0.4%	4.1	0.0	2.9%
Securitized	30.1%	-1.5%	3.4	4.0	3.3%
Corporates	22.3%	-0.9%	3.5	4.4	3.7%
Government Related	10.0%	-0.2%	4.1	4.3	3.1%
Cash	0.7%	0.0%	0.6	0.9	2.5%
Total	100.0%	-3.0%	3.7	2.6	3.2%

Rating	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
AAA	77.0%	-2.2%	3.8	2.1	3.1%
AA+	0.0%	0.0%	0.0	0.0	0.0%
AA	1.8%	0.0%	2.9	3.1	3.1%
AA-	0.5%	0.0%	1.7	3.7	3.2%
A+	0.4%	0.0%	5.4	5.5	3.4%
A	2.9%	-0.1%	2.6	4.3	3.4%
A-	5.8%	-0.1%	2.9	4.8	3.5%
BBB+	3.6%	-0.2%	3.5	4.1	3.7%
BBB	5.8%	-0.2%	4.1	4.3	4.0%
BBB-	2.2%	-0.2%	4.1	4.3	4.1%
Total	100.0%	-3.0%	3.7	2.6	3.2%

Industry	Market Value	Gain (Loss)	Duration		Yield
	Percent	Percent	Rate	Spread	Percent
Treasuries	36.9%	-0.4%	4.1	0.0	2.9%
MBS Pass-Through	12.9%	-0.9%	4.0	4.4	3.4%
CMBS	8.7%	-0.3%	3.4	3.9	3.3%
Agency	7.5%	-0.2%	4.2	4.5	3.1%
ABS	5.2%	-0.2%	2.1	2.9	3.1%
Banking	5.1%	-0.1%	1.2	4.0	3.3%
Consumer Non-Cyclical	5.0%	-0.3%	4.2	4.4	3.8%
CMO	3.3%	-0.2%	3.2	4.3	3.2%
Capital Goods	2.8%	-0.1%	3.1	3.8	3.5%
Consumer Cyclical	2.7%	-0.1%	3.2	3.6	3.7%
Supranational	2.0%	0.0%	3.5	3.5	3.1%
REITs	1.7%	0.0%	6.8	7.0	4.3%
Insurance	1.5%	-0.1%	2.8	3.2	3.5%
Basic Industry	1.3%	-0.1%	4.2	4.3	3.7%
Cash	0.7%	0.0%	0.6	0.9	2.5%
Transportation	0.6%	0.0%	4.1	4.1	3.7%
Technology	0.6%	0.0%	4.8	4.8	3.9%
Local Authority	0.5%	0.0%	4.4	4.9	3.6%
Utility	0.4%	0.0%	7.9	8.0	3.8%
Finance Companies	0.3%	0.0%	5.9	6.0	4.6%
Energy	0.2%	0.0%	6.1	6.2	3.8%
Communications	0.1%	0.0%	1.5	5.0	3.7%
Total	100.0%	-3.0%	3.7	2.6	3.2%

Top Exposures	Market Value Percent
United States Treasury	44.9%
Federal National Mortgage Association	4.6%
Federal Home Loan Mortgage Corporation	4.6%
Federal Farm Credit Banks Funding Corporation	2.2%
European Investment Bank	2.0%
FHLMC Multifamily Structured Pass-Through K716	1.5%
FHLMC Multifamily Structured Pass-Through K040	1.3%
FHLMC Multifamily Structured Pass-Through K058	1.3%
Capital One Multi-Asset Execution Trust	1.2%
Morgan Stanley Capital Trust	1.2%
Citibank Credit Card Issuance Trust	1.2%
Wells Fargo Commercial Mortgage Trust	1.1%
Sherwin-Williams Company (The)	1.0%
Ford Motor Company	0.9%
Keurig Dr. Pepper Incorporated	0.9%
CNH Equipment Trust 2017-A	0.9%
Citigroup Incorporated	0.8%
Goldman Sachs Group Incorporated (The)	0.8%
Walmart Incorporated	0.8%
Astrazeneca Plc	0.8%

Source: Oregon State Treasury

FY2019 Q1 OREGON STATE UNIVERSITY INVESTMENT REPORT

The schedule of Oregon State University's investments is shown in the investment summary below.

Public University Fund Performance

Oregon State University's operating assets and the land grant endowment are invested in the Public University Fund (PUF). The report on the investment performance of the PUF provided in the separate section above, shows the PUF gained 0.3% for the first quarter.

OSU Endowment Asset Performance

The OSU Endowment Assets, including those managed by the OSU Foundation, earned a total return of 1.8% during the first quarter. The three-year average return was 10.4%. The total market value of the OSU endowment assets as of September 30, 2018 was \$55,377,358.

The OSU Foundation, pursuant to an investment management contract, is managing the majority of the university's endowment assets. The OSU Foundation's Endowment Pool earned a total return of 2.1% during the quarter, underperforming its benchmark by 110 basis points. The three-year average return was 10.4%, outperforming its benchmark by 30 basis points.

Oregon State University
Investment Summary
as of September 30, 2018
 (Net of Fees)

	Quarter Ended 9/30/2018	Current Fiscal YTD	Prior Fiscal YTD	3 Yr Avg	5 Yr Avg	10 Yr Avg	Market Value	Actual Asset Allocation	Policy Allocation Range
OSU Operating Assets Invested in Public University Fund									
Oregon Short - Term Fund	0.6%	0.6%	0.4%	1.3%	1.0%	0.9%	\$ 96,355,840	34.7%	1
Benchmark - 91 day T-Bill	0.5%	0.5%	0.3%	0.8%	0.5%	0.3%			
PUF Core Bond Fund	0.1%	0.1%	0.6%	N/A	N/A	N/A	181,293,402	65.3%	1
Blended Benchmark ²	0.1%	0.1%	0.6%	0.9%	1.9%	N/A			
Public University Fund Total Return	0.3%	0.3%	0.5%	1.4%			<u>\$ 277,649,242</u>	<u>100.0%</u>	
Public University Fund Investment Yield	0.6%	0.6%	0.5%	1.9%					
OSU Endowment Assets									
OSU Endowment Assets Invested in the OSUF Endowment Pool									
Total Global Equity	2.2%	2.2%	5.5%				\$ 25,657,791	52.9%	50.0%
Benchmark - MSCI All Country World Index	4.3%	4.3%	5.2%						
Total Global Fixed Income	0.0%	0.0%	2.3%				4,219,712	8.7%	5.0%
Benchmark - Bloomberg Barclays Global Agg. Bond Index	-0.9%	-0.9%	1.8%						
Total Absolute Return	0.3%	0.3%	-0.2%				6,722,438	13.9%	10.0%
Benchmark - HFRI Fund of Funds Index	0.3%	0.3%	2.3%						
Total Real Assets	0.3%	0.3%	0.8%				4,374,920	9.0%	10.0%
Benchmark - Real Assets Custom ³	-1.0%	-1.0%	1.7%						
Total Private Capital	7.4%	7.4%	6.1%				6,227,714	12.8%	25.0%
Benchmark - No benchmark provided									
Total Cash	0.0%	0.0%	0.0%				1,299,865	2.7%	0.0%
Total OSU Endowment Assets Invested in OSUF Endow. Pool ⁴	2.1%	2.1%	3.7%	10.4%			<u>48,502,440</u>	<u>100.0%</u>	<u>100.0%</u>
Benchmark-80% MSCI ACWI/20% BBG Barclays Global Agg. ⁵	3.2%	3.2%	4.5%	10.1%					
Other OSU Endowment Assets									
Land Held as Separately Invested Endowment Funds ⁶	0.0%	0.0%	0.0%	9.9%			6,553,054		
Other Endowment Assets Invested in the PUF	0.3%	0.3%	0.5%	1.4%			321,864		
Total Other OSU Endowment Assets							<u>6,874,918</u>		
Total OSU Endowment Assets	1.8%	1.8%	3.4%	10.4%			<u>\$ 55,377,358</u>		

(continued on next page)

Oregon State University
Investment Summary
as of September 30, 2018

- ¹ The Public University Fund (PUF) policy guidelines define investment allocation targets based upon total participant dollars committed. Core balances in excess of liquidity requirements for the participants are available for investment in the Core Bond Fund. Maximum core investment allocations are determined based upon anticipated average cash balances for all participants during the fiscal year.
- ² Blended Benchmark Composition: 75% Bloomberg Barclay's Aggregate 3-5 Years Index, 25% Bloomberg Barclay's Aggregate 5-7 Years Index.
- ³ Real Assets Custom Benchmark: 1/3 Financial Times Stock Exchange European Public Real Estate Association/National Association Real Estate Investment Trust Developed Index, 1/3 Bloomberg Commodity Index, 1/3 Bloomberg Barclays U.S. Treasury Inflation Protected Securities.
- ⁴ Investment returns are reported net of investment manager fees; gross of the Foundation's administrative fees.
- ⁵ The Endowed Pool benchmark consists of 80% of the MSCI ACWI and 20% of the Barclays Global Aggregate. During the portfolio transition period (July 2016), as agreed with OSUF, the benchmark return was equal to the actual return of the portfolio. Prior to 7/1/16, the benchmark consisted of 15% S&P 500 / 4% Russell 1000 Growth / 17% MSCI EAFE / 6% MSCI Emerging Markets / 6.5% Barclays Aggregate / 6.5% Citi WGBI / 3% Principal Diversified Real Assets Custom Blend / 18% HFRI Fund of Funds Composite Index / 3% S&P North American Natural Resources Sector Index / 3% Alerian MLP Index / 5% NCREIF Townsend Blended Index / 10% Burgiss Global Private Equity Index / 2% 91 Day T-Bills / 1% Mercer Illiquid Natural Resources Index.
- ⁶ Physical appraisals completed every five years. Valuations in interim years provided by faculty. Investment returns updated annually during the fiscal fourth quarter. Land held as separately invested endowments may not be sold, with the exception of the Matteson property, beginning 2/25/2035. Land use is restricted to teaching and research. Partial harvests, consistent with good forestry management practices are allowed, with specified uses for ongoing funding for scholarships and an endowed chair.
- Note: Outlined returns underperformed their benchmark.

FY2019 Q1 MARKET BACKGROUND

(Prepared by Callan Associates, consultants to the Oregon Investment Council)

Macroeconomic Environment

Happy 10-year anniversary to the Global Financial Crisis! Just a decade ago, some of the world's largest and most revered financial institutions, along with the modern financial system itself, were left staring into the abyss. Several events, beginning with the fire sale of Bear Stearns and failure of Lehman Brothers, quickly transitioned into a bailout of American International Group, conservatorship of Fannie Mae and Freddie Mac, multiple emergency relief programs, and forced marriages of several global investment and commercial banks. The series of events would eventually translate into one of the most painful economic recessions on record. And yet, as grave as things appeared in September 2008 and during the months that followed, the global economy just 10 years later finds itself in the midst of one of the longest economic expansions in the modern era. But as much as there is a great deal of positive news to go around as the current economic expansion grinds on, nearly all global economies face headwinds of some kind in the near term.

At the head of the pack, the U.S. economy has continued to feel the shot of adrenaline provided by early 2018 tax cuts and fiscal stimulus, recording 4.2% growth in the second calendar quarter and an estimated 3.6% increase in the third calendar quarter, which would be the highest two-quarter clip in nearly four years. Unemployment, which was hovering near the 10% mark during the depth of the financial crisis, is at 3.7% and wage growth, which has been anemic throughout the recovery period, has shown some signs of life recently with gains of approximately 4.7% over last year's wages. U.S. Inflation remains subdued with a 2.7% increase during the quarter; prices were held in check with a slowdown in fuel and housing costs. Core inflation, which excludes food and energy, grew at a 2.2% rate during August. Tempering the enthusiasm, however, most market observers acknowledge that the stoked growth in the U.S. is unlikely sustainable, due to demographic trends (aging population, fewer new job entrants), uncertainty around the full impact of tariffs with China and other trading partners, and an unsettled political environment.

Looking abroad, global growth has continued to show resiliency, though moving at a slower pace than earlier this calendar year. The Global Purchasing Managers' Index (PMI), which provides a survey-based reflection of the economic health of the manufacturing and service sectors, continued to offer encouraging readings across much of the developed and emerging world throughout the third calendar quarter. However, the steady rise in U.S. interest rates and U.S. dollar appreciation have begun to create some headaches for many parts of the world, particularly in the form of higher interest costs for Emerging Market countries with significant U.S. dollar-based debt burdens. Within the euro zone, investors are trying to balance the health of the PMI, lower unemployment figures, and stable inflation with headwinds such as ascendant populism (e.g., Italy), declining net export and trade activity, and stalling progress on British Exit (Brexit) negotiations (with a rapidly approaching deadline).

In Japan, corporate earnings, export activity, and business sentiment remain relatively strong. Meanwhile, a tight labor market (a 2.4% jobless rate as of August) has yet to translate into higher wages and private consumption has remained weak, though the latter could see a bump in advance of a planned sales tax hike (to 10%) in October 2019 along with other fiscal reforms. And in China, President Xi Jinping's national team of economists continue to focus efforts on deleveraging (non-financial corporate debt is estimated at 164% of gross domestic product, according to the Bank of International Settlements) and structural reforms while balancing the

need for policy stimulus, likely in the form of more infrastructure investment, to counteract the impact of U.S. tariffs that have yet to take full effect.

Equity Market Results

The U.S. equity market posted broad gains in the third calendar quarter, fueled by strong economic growth, soaring corporate profits, and record levels of stock buybacks. Several major indices hit record levels during the quarter, and the S&P 500 Index's 7.7% gain was its biggest since the fourth calendar quarter of 2013. Volatility was muted in spite of persistent headlines around the tariff threats and the ever-changing negotiations. Large growth stocks were the top performers (Russell 1000 Growth: +9.2%) and small value (Russell 2000 Value: +1.6%) occupied the bottom slot. All sectors posted positive returns within the S&P 500, but the differences were stark. Health Care (+14.5%), Industrials (+10.0%), Technology (+8.8%), and the new Communication Services (+9.9%) sectors were the top performers, bookended by Materials, Energy, and Real Estate, all of which returned less than 1% for the quarter. The new Communication Services sector replaced Telecommunications and adopted names from Technology and Consumer Discretionary, including Facebook, Alphabet, Netflix, Twitter, and Disney and now includes over 20 holdings (initially, the new sector represented 10% of the S&P 500.) FAANG stocks (Facebook, Apple, Amazon, Netflix, and Google) plus Microsoft contributed nearly a quarter of the S&P 500's return in the third calendar quarter, which was a lower impact than prior quarters. Apple (+22.4%) was the largest FAANG stock contributor while Facebook (-15.4%) was a detractor.

Non-U.S. developed markets underperformed the U.S. in the third calendar quarter as the Morgan Stanley Capital Indices (MSCI) All Country World Index ex-U.S. rose a meager 0.7% (in U.S. dollar terms). Japan was a top performer (+3.7%) as Prime Minister Shinzo Abe won his inter-party leadership battle and retained his role as president of the Liberal Democratic Party. The U.K. dropped 1.7% on uncertainty around Brexit, while Europe ex-U.K. finished up 1.8% despite being weighed down by political turmoil and financial woes in Italy (-4.5%). Emerging market equities declined (MSCI Emerging Markets Index: -1.1%), but returns were highly divergent. Turkey (-21%) and Greece (-18%) fell the most due to macro-economic concerns. As a region, Latin America gained 5% with Mexico (+7%) and Brazil (+6%) up the most. Elsewhere, Russia (+6%) rebounded, largely due to the surge in its Energy sector (+16%). Conversely, China (-8%) dropped given a large sell-off in Chinese technology companies (-14%) and India (-2%) posted a modest loss due to a significant decline in its Financial sector (-12%).

Fixed Income Market Results

Yields rose during the quarter; the 2-year U.S. Treasury Note climbed nearly 30 basis points (bps) to close at a multi-year high of 2.81% while the 10- and 30-year Treasuries rose roughly 20 bps. The yield curve continued to flatten with the spread between the 2-year Treasury yield and the 10-year Treasury yield falling to 24 bps as of quarter-end. As expected, the Federal Reserve (Fed) hiked rates by 25 bps in September, and one more hike in December 2018 appears likely. Markets expect two more hikes in calendar year 2019 while the median Fed projection is for three. The 10-year breakeven inflation rate rose modestly to 2.14% (as of 9/30) from 2.11% (as of 6/30) and the Bloomberg Barclays Treasury Inflation Protected Securities Index fell 0.8% as rates rose.

The return on the Bloomberg Barclays U.S. Aggregate Bond Index was flat (+0.0%) for the quarter with the U.S. Treasury sector (-0.6%) underperforming the Corporate bond sector (+1.0%). High yield (Bloomberg Barclays High Yield Index: +2.4%) outperformed and leveraged

loans rose 1.8% (S&P Loan Syndications & Trading Association Leveraged Loan). Meanwhile, returns for the Bloomberg Barclays Global Aggregate ex-U.S. Bond Index fell 1.7% on an unhedged basis while the hedged version was flat (+0.0%). The U.S. dollar strengthened versus the Japanese yen and U.K. pound but was roughly flat versus the euro. As a result, Japan (-3.7%) and the U.K. (-3.1%) were among the worst performers in U.S. dollar terms. Canada was the only source of a positive result (+0.7%) due solely to currency appreciation versus the U.S. dollar. In local terms, Canada also delivered a negative return (-1.1%).

The quarterly return for the JP Morgan Emerging Market Bond Global Diversified Index (U.S. dollar denominated) was +2.3% with all sub-regions delivering positive results. Local currency emerging markets, however, fared more poorly. The JP Morgan Global Bond Emerging Markets Diversified Index fell 1.8% for the quarter, but also endured significant intra-quarter volatility, including a 6.1% drop in August. Further, return dispersion among countries was significant. Argentina (-35%) has seen its peso fall more than 50% this calendar year to a record low as investors were spooked by previous currency debacles and worries over the economic picture. In addition to securing support from the International Monetary Fund, the country's central bank hiked short-term interest rates 15 percentage points to a global high of 60%. Turkey (-27%) endured a similar currency rout, though for different reasons. U.S.-imposed sanctions and concerns over central bank policy were the twin drivers of the lira's weakness. Turkey hiked short rates by 6.25% to 24% to stem its currency slide. Elsewhere, returns were far more modest (positive or negative) with only Russia (-6%) and Mexico (+6%) being noteworthy.

The municipal bond market delivered modest negative returns in the third calendar quarter as yields rose. The Bloomberg Barclays 1-10 Year Blend fell 0.1% and the broader Municipal Bond Index dropped 0.2%. Issuance remained muted and is down 15% from last calendar year's pace (through 9/30). In an ongoing trend, lower-quality bonds continued to outperform higher quality. The highest-quality sector, AAA-rated bonds, declined 0.3% for the quarter while the BBB sector was up 0.2%.

Other Asset Results

Across real assets, Master Limited Partnerships (MLP) were once again a top-performing category during the third calendar quarter, as shown in the Alerian MLP Index gain of 6.6%. Interestingly, two other rate-sensitive real asset categories—Real Estate Investment Trusts (REITs) and Listed Infrastructure—were relatively flat during the quarter, with the Financial Times Stock Exchange National Association of REITs Equity Index returning a meager 0.8% while the Dow Jones Brookfield Global Infrastructure Index shed 0.8%. It's a relationship worth monitoring and one that may continue as Real Estate and Infrastructure are somewhat more dependent upon leverage as part of their capital structures. Meanwhile, Natural Resource equities were the only other broad area of relatively positive performance within real assets, with the S&P 1200 Energy and S&P 1200 Materials Indices up 1.3% and 0.1%, respectively. With the gain in the U.S. dollar in the third calendar quarter, most commodities sold off with the exception of Energy (Bloomberg Commodity Sub Energy: +4.4%) and Livestock (Bloomberg Commodity Sub Livestock: +2.9%). Given the much higher weighting to Energy in the Goldman Sachs Commodity Index as compared to Bloomberg, the former produced a modestly positive return (+1.3%) during the quarter.

Closing Thoughts

With noted exceptions, we remain cautiously optimistic regarding the resilient global growth that has been exhibited by both the U.S. and foreign economies over the most recent quarter and

calendar year-to-date. And despite markets in both financial and real assets continuing to feel extended, such cycles are born without an assigned expiration date. Nevertheless, we are also realists and acknowledge that all good things must end, which is why we continue to encourage investors to maintain a long-term perspective and prudent asset allocation with appropriate levels of diversification.

RECOMMENDATION

Staff recommend the Finance & Administration Committee accept the FY2019 Q1 Public University Fund Investment Report and the FY2019 Q1 Oregon State University Investment Report.

—