

TCW Global Technology

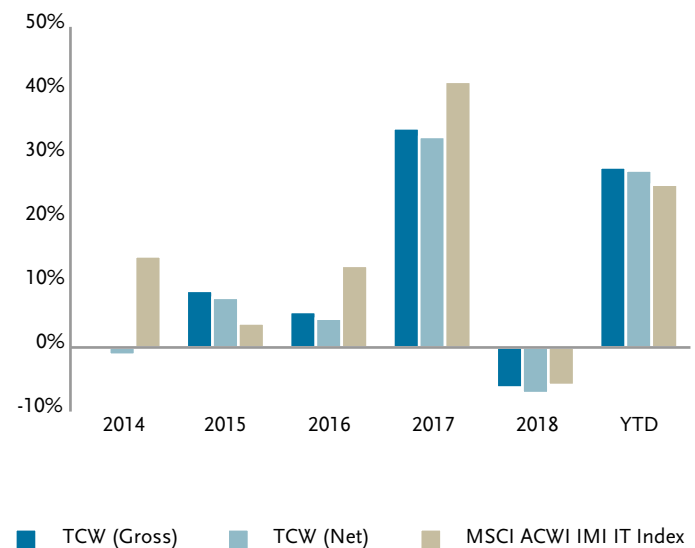
JUNE 30, 2019 | STRATEGY OVERVIEW AND ANALYSIS

A strategy that seeks to achieve capital appreciation primarily through investment in high quality technology companies with superior earnings growth and attractive stock market valuations.

Performance Summary (%)

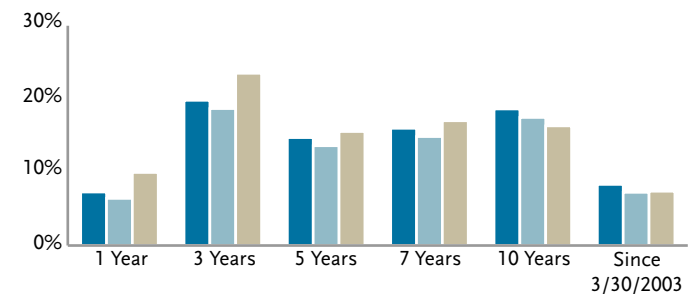
	TCW		MSCI
	Global Technology Gross	Net	ACWI IMI IT Index
2006	6.85	5.79	10.16
2007	22.71	21.51	12.64
2008	-48.17	-48.71	-44.64
2009	92.73	90.91	60.75
2010	35.95	34.60	13.62
2011	-1.73	-2.71	-5.97
2012	13.30	12.17	15.50
2013	43.82	42.39	28.51
2014	-0.14	-1.14	14.21
2015	8.84	7.75	3.75
2016	5.54	4.49	12.74
2017	34.18	32.84	41.44
2018	-6.25	-7.13	-5.86
YTD	28.08	27.60	25.39
2Q19	6.72	6.52	5.16

Performance Returns



Annualized Returns (%)

	TCW		MSCI
	Global Technology Gross	Net	ACWI IMI IT Index
1 Year	7.30	6.43	9.97
3 Years	19.82	18.69	23.51
5 Years	14.73	13.62	15.56
7 Years	16.00	14.87	17.03
10 Years	18.64	17.48	16.33
Since 3/30/2003	8.34	7.26	7.41



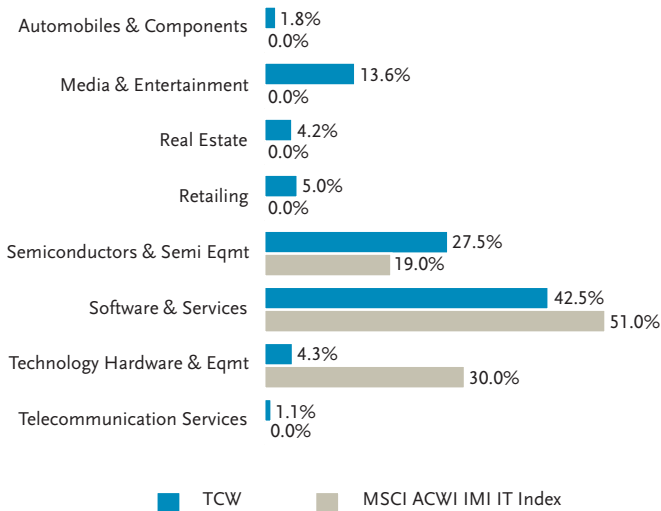
Source: TCW

Please see additional disclosures on the last page, which are an integral and important part of this material. Individual results may vary.

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An investment in the strategy described herein has risks, including the risk of losing some or all of the invested capital. An investor should carefully consider the risks and suitability of an investment strategy based on their own investment objectives and financial position. There is no assurance that the investment objectives and/or trends will come to pass or be maintained. The information contained herein may include preliminary information and/or "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented herein. TCW assumes no duty to update any forward-looking statements or opinions in this document. This material comprises the assets under management of The TCW Group, Inc. and its subsidiaries, including TCW Investment Management Company LLC, TCW Asset Management Company LLC, and Metropolitan West Asset Management, LLC. Any opinions expressed herein are current only as of the time made and are subject to change without notice. The investment processes described herein are illustrative only and are subject to change. Past performance is no guarantee of future results. © 2019 TCW

Industry Group Summary



Top Ten Holdings

Company	% of Portfolio
ServiceNow	4.76
QUALCOMM	3.35
Splunk	2.85
Adobe	2.75
Microsoft	2.68
Okta	2.64
Tencent	2.54
Amazon.com	2.53
ASML Holding	2.50
Alibaba	2.49

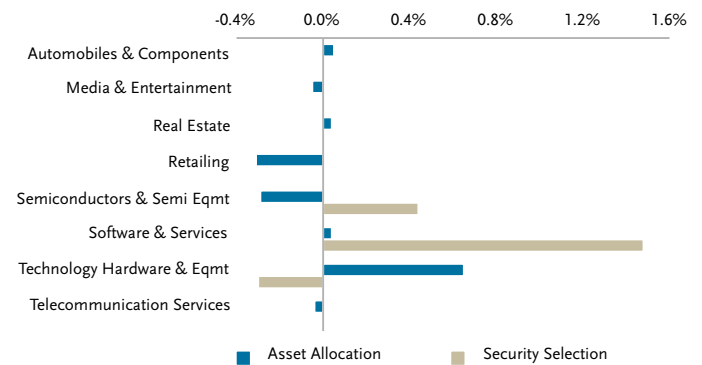
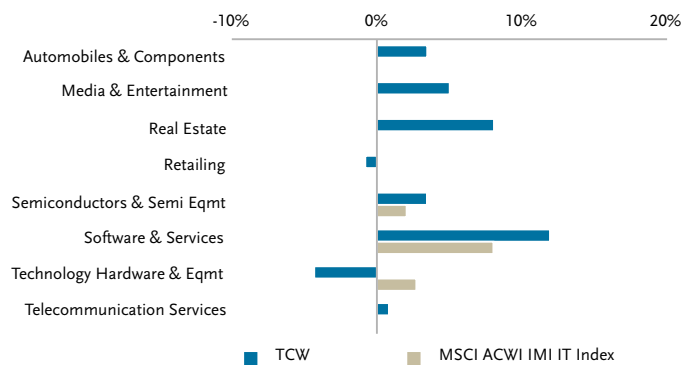
Attribution Analysis Quarter ending June 30, 2019

Industry Group Return

Industry	TCW	MSCI ACWI IMI IT Index	Difference
Automobiles & Components	3.47	--	3.47
Media & Entertainment	5.02	--	5.02
Real Estate	8.07	--	8.07
Retailing	-0.80	--	-0.80
Semiconductors & Semi Eqmt	3.45	2.05	1.40
Software & Services	11.93	8.03	3.90
Technology Hardware & Eqmt	-4.32	2.72	-7.04
Telecommunication Services	0.83	--	0.83

Industry Group Attribution

Industry	Asset Allocation	Security Selection	Total
Automobiles & Components	0.05	--	0.14
Media & Entertainment	-0.05	--	-0.61
Real Estate	0.04	--	0.25
Retailing	-0.31	--	0.33
Semiconductors & Semi Eqmt	-0.29	0.44	-0.06
Software & Services	0.04	1.48	1.24
Technology Hardware & Eqmt	0.65	-0.30	0.76
Telecommunication Services	-0.04	--	-0.56
Total	-0.05	1.62	1.57



Source: TCW, Zephyr, FactSet

Based upon a representative account. Portfolio characteristics and holdings are subject to change at any time. It should not be assumed that an investment in the securities listed was, or will be, profitable. Please see additional disclosures on the last page, which are an integral and important part of this material. Individual results may vary. Past performance is no guarantee of future results.

Portfolio Characteristics

	TCW Global Technology	MSCI ACWI IMI IT Index
Price/Earnings 1yr EPS Forecast	27.06	19.02
Dividend Yield	0.73%	1.45%
Price/Book Value	7.72	4.54
Price/Sales	6.06	3.18
Price/Cash Flow	25.98	16.34
Debt/Equity	0.57	0.72
Debt/Capital	0.41	0.44
Forecast 1yr EPS Growth	13.50%	9.56%
Market Capitalization (Mil)	\$145,103	\$296,315
Return on Equity	13.83%	24.05%
ROE 5 Year Average	14.67%	20.30%
Annual Turnover	27.86%	N/A
Active Share	76.32%	N/A
Number of Holdings	43	902

Regression Statistics (Gross)

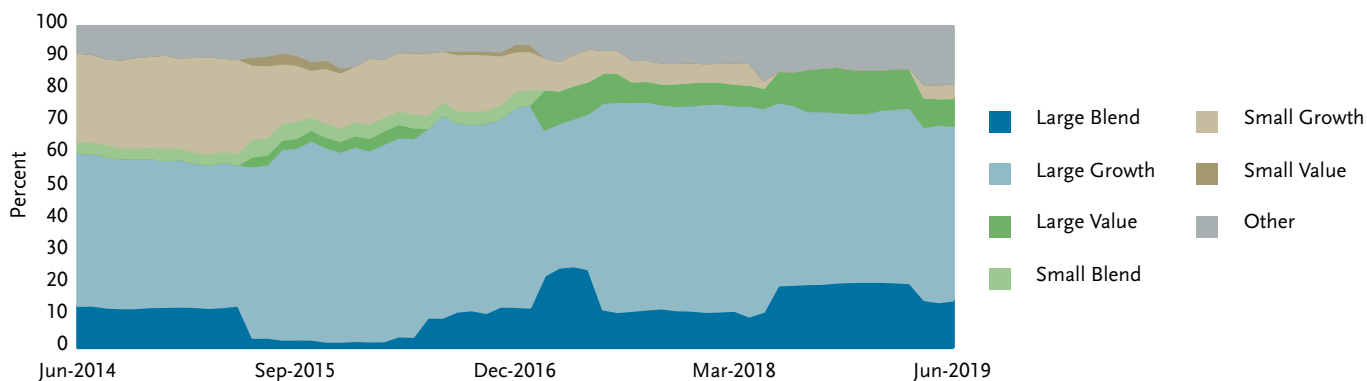
	3 Years		5 Years	
	TCW Global Technology	MSCI ACWI IMI IT Index	TCW Global Technology	MSCI ACWI IMI IT Index
Information Ratio	-0.71	-	-0.11	-
Alpha	-4.29%	-	-1.30%	-
Beta	1.08	1.00	1.07	1.00
R-Squared	91.56%	100.00%	82.01%	100.00%
Sharpe Ratio	1.06	1.43	0.77	0.97
Standard Deviation	17.43%	15.49%	17.98%	15.22%
Tracking Error	5.20%	-	7.70%	-

Five Year Statistics (Gross) July 2014 - June 2019

The Up/Down Capture Ratio measures a manager's performance in up and down markets relative to the market (benchmark). It is calculated by taking the managers up/down capture return and dividing it by the benchmark's up/down capture return.

	Up		Down		TCW vs. Index	
	# of Periods	Avg. Monthly Return	# of Periods	Avg. Monthly Return	Up Capture	Down Capture
TCW Global Technology	35	4.44%	25	-3.14%	98.80%	102.70%
MSCI ACWI IMI IT Index	36	4.10%	24	-2.87%	100.00%	100.00%

Holdings-Based Style Analysis



Source: TCW, Zephyr, FactSet

Based upon a representative account. Portfolio characteristics and holdings are subject to change at any time. All projections and estimates are based on current asset prices and are subject to change.

Portfolio Management

Jeffrey W. Lin, CFA
Portfolio Manager
Senior Vice President
Equities

Thomas Lee
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The Firm

TCW is a leading global asset management firm with more than four decades of investment experience and a broad range of products across fixed income, equities, emerging markets and alternative investments. Through the TCW and MetWest Fund Families, TCW manages one of the largest mutual fund complexes in the U.S. TCW's clients include many of the world's largest corporate and public pension plans, financial institutions, endowments and foundations, as well as financial advisors and high net worth individuals. As of June 30, 2019, TCW had total assets under management, including commitments, of \$205 billion. TCW is headquartered in Los Angeles, and has offices in New York, Boston, Chicago, London, Milan, Hong Kong, Tokyo, and Sydney.

Performance Disclosure

The TCW Global Technology composite is comprised of portfolios whose objective is to outperform the benchmark over the long term by investing in technology-related industries. While TCW's objective is to outperform the stated benchmark it does not imply that this strategy shall share, or attempt to share, the same or similar characteristics of the benchmark or attempt to track the benchmark. The MSCI All Country World Information Technology Sector Investible Market Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance in developed and emerging markets. It is composed of the stocks in the MSCI AC World IMI which are classified under the Information Technology sector in the GICS classification scheme. Returns are calculated in U.S. dollars. Leverage or derivatives are not used in the management of this composite. Returns include the reinvestment of all earnings. Investment directly into an index is not possible. Investments in the strategy will be subject to fees and expenses that will reduce returns.

The TCW Group, Inc. is divided into three divisions: the Marketable Securities Division; the Alternative Products Division; and the Managed Accounts Division. Effective January 1, 2000, the Marketable Securities Division was established to provide investment advisory services in the marketable securities area. The Marketable Securities Division is defined as the Firm for purposes of reporting performance in accordance with the Global Investment Performance Standards. On February 23, 2010, The TCW Group, Inc. acquired Metropolitan West Asset Management. On January 1, 2011, the Marketable Securities Division and Metropolitan West Asset Management completed a merger. Accordingly, effective January 1, 2011, Metropolitan West Asset Management was included within the Firm definition.

The Marketable Securities Division claims compliance with the Global Investment Performance Standards (GIPS®). To receive a complete list and description of TCW's composites and/or presentation that adheres to the GIPS® standards contact Client Services at 213.244.0000 or contact us by e-mail at PortfolioAnalytics.Group@tcw.com.