

# MEETING MATERIALS

## HOWARD COUNTY RETIREMENT PLANS

October 29, 2020

Margaret Belmondo, CIMA®, Principal

Will Forde, CFA, CAIA, Senior Consultant

Francesca LoVerde, Senior Consulting Analyst



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

# TABLE OF CONTENTS

	<u>Page</u>
<b>September Flash Report</b>	<b>2</b>
<b>Emerging Market Memo</b>	<b>10</b>
<b>ARGA Emerging Markets Equity Presentation</b>	<b>13</b>
<b>Vista Equity Partners Update</b>	<b>91</b>

# SEPTEMBER FLASH REPORT

NEPC, LLC

---

# CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Sep	Q3	YTD
<b>S&amp;P 500</b>	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	-3.8%	8.9%	5.6%
<b>Russell 1000</b>	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	-3.7%	9.5%	6.4%
<b>Russell 2000</b>	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	-3.3%	4.9%	-8.7%
<b>Russell 2500</b>	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	-2.6%	5.9%	-5.8%
<b>MSCI EAFE</b>	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	-2.6%	4.8%	-7.1%
<b>MSCI EM</b>	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	-1.6%	9.6%	-1.2%
<b>MSCI ACWI</b>	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	-3.2%	8.1%	1.4%
<b>Private Equity</b>	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	-	-	-7.3%
<b>BC TIPS</b>	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	-0.4%	3.0%	9.2%
<b>BC Municipal</b>	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	0.0%	1.2%	3.3%
<b>BC Muni High Yield</b>	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	0.1%	3.1%	0.4%
<b>BC US Corporate HY</b>	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	-1.0%	4.6%	0.6%
<b>BC US Agg Bond</b>	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	-0.1%	0.6%	6.8%
<b>BC Global Agg</b>	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	-0.4%	2.7%	5.7%
<b>BC Long Treasuries</b>	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	0.4%	0.1%	21.3%
<b>BC US Long Credit</b>	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	-0.5%	2.0%	8.0%
<b>BC US STRIPS 20+ Yr</b>	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	0.4%	0.2%	28.9%
<b>JPM GBI-EM Global Div</b>	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	-2.0%	0.6%	-6.3%
<b>JPM EMBI Glob Div</b>	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	-1.9%	2.3%	-0.5%
<b>CS Hedge Fund</b>	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	-	-	0.9%
<b>BBG Commodity</b>	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.4%	9.1%	-12.1%
<b>Alerian MLP</b>	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	-13.6%	-16.3%	-46.2%
<b>FTSE NAREIT Equity REITs</b>	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-3.3%	1.4%	-17.5%

Source: FactSet, Barclays, Thomson One

\*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag

# TRAILING ANNUAL INDEX PERFORMANCE

Equity							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
<b>MSCI ACWI</b>	-3.2%	8.1%	1.4%	10.4%	7.1%	10.3%	8.5%
<b>S&amp;P 500</b>	-3.8%	8.9%	5.6%	15.1%	12.3%	14.1%	13.7%
<b>Russell 1000</b>	-3.7%	9.5%	6.4%	16.0%	12.4%	14.1%	13.8%
<b>Russell 2000</b>	-3.3%	4.9%	-8.7%	0.4%	1.8%	8.0%	9.9%
<b>Russell 2500</b>	-2.6%	5.9%	-5.8%	2.2%	4.5%	9.0%	10.8%
<b>MSCI EAFE</b>	-2.6%	4.8%	-7.1%	0.5%	0.6%	5.3%	4.6%
<b>MSCI EM</b>	-1.6%	9.6%	-1.2%	10.5%	2.4%	9.0%	2.5%
Credit							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
<b>BC Global Agg</b>	-0.4%	2.7%	5.7%	6.2%	4.1%	3.9%	2.4%
<b>BC US Agg</b>	-0.1%	0.6%	6.8%	7.0%	5.2%	4.2%	3.6%
<b>BC Credit</b>	-0.3%	1.5%	6.4%	7.5%	6.2%	5.7%	4.9%
<b>BC US HY</b>	-1.0%	4.6%	0.6%	3.3%	4.2%	6.8%	6.5%
<b>BC Muni</b>	0.0%	1.2%	3.3%	4.1%	4.3%	3.8%	4.0%
<b>BC Muni HY</b>	0.1%	3.1%	0.4%	1.3%	5.8%	6.0%	6.0%
<b>BC TIPS</b>	-0.4%	3.0%	9.2%	10.1%	5.8%	4.6%	3.6%
<b>BC 20+ STRIPS</b>	0.4%	0.2%	28.9%	21.3%	16.0%	11.3%	10.4%
<b>BC Long Treasuries</b>	0.4%	0.1%	21.3%	16.3%	11.9%	8.2%	7.2%
<b>BC Long Credit</b>	-0.5%	2.0%	8.0%	9.3%	8.6%	8.8%	7.3%
<b>BC Govt/Credit 1-3 Yr</b>	0.0%	0.2%	3.1%	3.7%	2.8%	2.1%	1.6%
<b>JPM EMBI Glob Div</b>	-1.9%	2.3%	-0.5%	1.3%	3.5%	6.1%	5.4%
<b>JPM GBI-EM Glob Div</b>	-2.0%	0.6%	-6.3%	-1.4%	0.2%	4.8%	0.5%
Real Assets							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
<b>BBG Commodity</b>	-3.4%	9.1%	-12.1%	-8.2%	-4.2%	-3.1%	-6.0%
<b>Alerian Midstream Index</b>	-10.5%	-9.4%	-36.2%	-34.8%	-11.9%	-4.5%	-
<b>FTSE NAREIT Equity REITs</b>	-3.3%	1.4%	-17.5%	-18.2%	0.2%	3.9%	7.9%

Source: S&P, MSCI, Russell, Barclays, JPM, Alerian, FTSE, FactSet



## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE SUMMARY (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	Ending September 30, 2020								
				1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Composite</b>	<b>1,172,942,500</b>	<b>100.0</b>	<b>100.0</b>	<b>-1.2</b>	<b>4.5</b>	<b>2.1</b>	<b>7.3</b>	<b>6.8</b>	<b>8.6</b>	<b>7.9</b>	<b>7.3</b>	<b>Apr-97</b>
<i>Policy Index</i>				-1.4	3.6	1.2	5.9	5.9	7.6	7.3	7.2	Apr-97
<i>Allocation Index</i>				-1.4	3.8	1.5	6.6	--	--	--	--	Apr-97
<b>Total US Equity Composite</b>	<b>293,077,784</b>	<b>25.0</b>	<b>23.0</b>	<b>-3.3</b>	<b>8.9</b>	<b>4.2</b>	<b>13.9</b>	<b>10.8</b>	<b>13.7</b>	<b>13.9</b>	<b>8.7</b>	<b>Jul-97</b>
<i>Russell 3000</i>				-3.6	9.2	5.4	15.0	11.6	13.7	13.5	8.1	Jul-97
<i>US Equity Allocation Index</i>				-3.6	9.3	5.6	15.4	11.2	13.5	13.3	--	Jul-97
<b>Total International Equity</b>	<b>193,293,058</b>	<b>16.5</b>	<b>17.0</b>	<b>-1.8</b>	<b>9.3</b>	<b>-0.3</b>	<b>9.9</b>	<b>4.2</b>	<b>8.4</b>	<b>4.9</b>	<b>4.8</b>	<b>Jul-97</b>
<i>MSCI ACWI ex USA</i>				-2.5	6.3	-5.4	3.0	1.2	6.2	4.0	4.4	Jul-97
<b>Total Fixed Income Composite</b>	<b>355,663,786</b>	<b>30.3</b>	<b>30.0</b>	<b>-0.3</b>	<b>1.6</b>	<b>5.3</b>	<b>6.6</b>	<b>4.8</b>	<b>5.4</b>	<b>4.6</b>	<b>5.5</b>	<b>Jul-97</b>
<i>Fixed Income Policy Index</i>				-0.1	0.6	6.8	7.0	5.2	4.2	3.6	5.4	Jul-97
<b>Total Real Assets Composite</b>	<b>41,596,080</b>	<b>3.5</b>	<b>7.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-10.8</b>	<b>-10.5</b>	<b>2.6</b>	<b>5.3</b>	<b>5.7</b>	<b>6.1</b>	<b>Jul-03</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>				-1.0	-1.0	1.3	2.7	5.4	6.8	9.7	8.5	Jul-03
<b>Cash Composite</b>	<b>15,809,718</b>	<b>1.3</b>		<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.4</b>	<b>1.3</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>Dec-03</b>
<i>91 Day T-Bills</i>				0.0	0.0	0.4	0.8	1.6	1.1	0.6	1.3	Dec-03
<b>Hedge Fund Composite</b>	<b>126,676,271</b>	<b>10.8</b>	<b>8.0</b>	<b>0.1</b>	<b>3.2</b>	<b>2.8</b>	<b>4.5</b>	<b>4.4</b>	<b>4.0</b>	<b>--</b>	<b>4.7</b>	<b>Jan-11</b>
<i>HFRI FOF: Conservative Index</i>				-0.3	2.3	0.3	1.9	2.2	2.3	2.6	2.4	Jan-11
<b>Private Equity Composite</b>	<b>145,571,636</b>	<b>12.4</b>	<b>10.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.5</b>	<b>3.0</b>	<b>12.6</b>	<b>13.2</b>	<b>13.1</b>	<b>12.3</b>	<b>Jul-08</b>
<i>CJA US All PE (1 Qtr Lag)</i>				0.0	0.0	-6.7	-5.5	7.4	8.3	11.9	9.2	Jul-08
<b>Private Debt</b>	<b>1,254,167</b>	<b>0.1</b>	<b>5.0</b>	<b>0.0</b>	<b>0.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.0</b>	<b>Jun-20</b>
<i>S&amp;P/LSTA Leveraged Loan TR</i>				0.6	4.1	-0.7	1.1	3.1	4.0	4.3	4.1	Jun-20

Fiscal year end 6/30.

All history prior to 3/1/2019 was provided by AndCo.



## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Ending September 30, 2020											
	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund Composite</b>	<b>1,172,942,500</b>	<b>100.0</b>	<b>100.0</b>	<b>-1.2</b>	<b>4.5</b>	<b>2.1</b>	<b>7.3</b>	<b>6.8</b>	<b>8.6</b>	<b>7.9</b>	<b>7.3</b>	<b>Apr-97</b>
<i>Policy Index</i>				-1.4	3.6	1.2	5.9	5.9	7.6	7.3	7.2	Apr-97
<i>Allocation Index</i>				-1.4	3.8	1.5	6.6	--	--	--	--	Apr-97
<b>Total Equity Composite</b>	<b>486,370,841</b>	<b>41.5</b>	<b>40.0</b>	<b>-2.7</b>	<b>9.0</b>	<b>2.1</b>	<b>12.1</b>	<b>7.9</b>	<b>11.4</b>	<b>10.1</b>	<b>7.2</b>	<b>Apr-00</b>
<i>MSCI ACWI IMI</i>				-3.1	8.1	0.5	9.6	6.5	10.0	8.5	4.6	Apr-00
<b>Total US Equity Composite</b>	<b>293,077,784</b>	<b>25.0</b>	<b>23.0</b>	<b>-3.3</b>	<b>8.9</b>	<b>4.2</b>	<b>13.9</b>	<b>10.8</b>	<b>13.7</b>	<b>13.9</b>	<b>8.7</b>	<b>Jul-97</b>
<i>Russell 3000</i>				-3.6	9.2	5.4	15.0	11.6	13.7	13.5	8.1	Jul-97
<i>US Equity Allocation Index</i>				-3.6	9.3	5.6	15.4	11.2	13.5	13.3	--	Jul-97
<b>Large Cap Composite</b>	<b>246,416,666</b>	<b>21.0</b>	<b>19.0</b>	<b>-3.5</b>	<b>9.5</b>	<b>4.4</b>	<b>15.3</b>	<b>11.0</b>	<b>13.5</b>	<b>13.7</b>	<b>8.7</b>	<b>Apr-01</b>
<i>Russell 1000</i>				-3.7	9.5	6.4	16.0	12.4	14.1	13.8	8.0	Apr-01
<i>LSV Asset Management SMA</i>	56,605,883	4.8		-2.5	4.4	-18.0	-9.9	-0.6	6.2	10.3	8.6	May-00
<i>Russell 1000 Value</i>				-2.5	5.6	-11.6	-5.0	2.6	7.7	9.9	6.3	May-00
<i>Westfield Capital Management SMA</i>	100,063,573	8.5		-3.7	13.1	22.4	37.8	20.5	19.6	16.2	17.4	Jul-10
<i>Russell 1000 Growth</i>				-4.7	13.2	24.3	37.5	21.7	20.1	17.3	18.2	Jul-10
<i>BlackRock Equity Index Non-Lendable Fund</i>	89,747,211	7.7		-3.8	8.9	5.6	--	--	--	--	8.8	Dec-19
<i>S&amp;P 500</i>				-3.8	8.9	5.6	15.1	12.3	14.1	13.7	8.8	Dec-19
<b>Small/Mid Cap Composite</b>	<b>46,661,118</b>	<b>4.0</b>	<b>4.0</b>	<b>-2.6</b>	<b>5.7</b>	<b>2.7</b>	<b>8.5</b>	<b>9.8</b>	<b>14.1</b>	<b>14.2</b>	<b>12.0</b>	<b>Apr-93</b>
<i>Russell 2500</i>				-2.6	5.9	-5.8	2.2	4.5	9.0	10.8	9.9	Apr-93
<i>William Blair SMA</i>	17,030,389	1.5		-1.5	8.4	9.8	14.8	15.0	15.9	16.3	12.4	Jun-06
<i>Russell 2500 Growth</i>				-0.8	9.4	11.6	23.4	13.4	14.2	14.1	10.2	Jun-06
<i>ICM Small Company - ICSCX</i>	12,187,732	1.0		-4.8	2.3	-20.2	-14.7	-2.9	6.7	9.3	10.7	Apr-93
<i>Russell 2000 Value</i>				-4.7	2.6	-21.5	-14.9	-5.1	4.1	7.1	8.6	Apr-93
<i>Brown Capital Small Company Strategy SMA</i>	17,442,997	1.5		-2.0	5.7	20.8	26.9	19.4	20.8	--	19.1	Aug-11
<i>Russell 2000 Growth</i>				-2.1	7.2	3.9	15.7	8.2	11.4	12.3	11.1	Aug-11



## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	Ending September 30, 2020								
				1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total International Equity</b>	<b>193,293,058</b>	<b>16.5</b>	<b>17.0</b>	<b>-1.8</b>	<b>9.3</b>	<b>-0.3</b>	<b>9.9</b>	<b>4.2</b>	<b>8.4</b>	<b>4.9</b>	<b>4.8</b>	<b>Jul-97</b>
<i>MSCI ACWI ex USA</i>				-2.5	6.3	-5.4	3.0	1.2	6.2	4.0	4.4	Jul-97
<b>International Developed Markets Composite</b>	<b>118,814,473</b>	<b>10.1</b>	<b>12.0</b>	<b>-1.8</b>	<b>7.1</b>	<b>-2.9</b>	<b>8.2</b>	<b>3.3</b>	<b>6.6</b>	<b>5.9</b>	<b>3.3</b>	<b>Mar-08</b>
<i>MSCI EAFE</i>				-2.6	4.8	-7.1	0.5	0.6	5.3	4.6	2.0	Mar-08
Mondrian International Equity Fund, L.P.	52,879,429	4.5		-4.2	1.5	-18.3	-9.7	-3.5	2.7	3.7	0.7	Dec-07
<i>MSCI EAFE</i>				-2.6	4.8	-7.1	0.5	0.6	5.3	4.6	1.1	Dec-07
Baillie Gifford EAFE Pure K - BGPX	65,935,044	5.6		0.3	12.1	11.6	25.3	--	--	--	10.2	May-18
<i>MSCI EAFE</i>				-2.6	4.8	-7.1	0.5	0.6	5.3	4.6	-1.2	May-18
<b>International Emerging Markets Composite</b>	<b>74,478,584</b>	<b>6.3</b>	<b>5.0</b>	<b>-1.9</b>	<b>13.0</b>	<b>4.0</b>	<b>12.1</b>	<b>5.8</b>	<b>12.0</b>	<b>2.8</b>	<b>6.2</b>	<b>Feb-06</b>
<i>MSCI Emerging Markets</i>				-1.6	9.6	-1.2	10.5	2.4	9.0	2.5	4.7	Feb-06
DFA Emerging Markets Value Portfolio Institutional - DFEVX	24,154,989	2.1		-2.0	4.9	-14.7	-6.3	-3.8	5.8	-0.1	4.3	Feb-06
<i>MSCI Emerging Markets</i>				-1.6	9.6	-1.2	10.5	2.4	9.0	2.5	4.7	Feb-06
GQG Partners Emerging Markets Equity Fund	50,323,595	4.3		-1.9	17.4	16.2	23.9	--	--	--	21.5	Dec-18
<i>MSCI Emerging Markets</i>				-1.6	9.6	-1.2	10.5	2.4	9.0	2.5	7.4	Dec-18
<b>Total Fixed Income Composite</b>	<b>355,663,786</b>	<b>30.3</b>	<b>30.0</b>	<b>-0.3</b>	<b>1.6</b>	<b>5.3</b>	<b>6.6</b>	<b>4.8</b>	<b>5.4</b>	<b>4.6</b>	<b>5.5</b>	<b>Jul-97</b>
<i>BBgBarc US Aggregate TR</i>				-0.1	0.6	6.8	7.0	5.2	4.2	3.6	5.2	Jul-97
<b>Core Fixed Income Composite</b>	<b>271,785,774</b>	<b>23.2</b>	<b>22.0</b>	<b>-0.1</b>	<b>1.7</b>	<b>7.9</b>	<b>8.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>9.7</b>	<b>Mar-19</b>
<i>BBgBarc US Aggregate TR</i>				-0.1	0.6	6.8	7.0	5.2	4.2	3.6	9.2	Mar-19
Dodge & Cox SMA	122,830,521	10.5		-0.3	1.5	7.2	8.1	5.8	5.6	4.9	5.0	May-10
<i>BBgBarc US Aggregate TR</i>				-0.1	0.6	6.8	7.0	5.2	4.2	3.6	4.0	May-10
PIMCO Total Return	123,833,180	10.6		0.1	1.7	8.3	8.4	5.5	5.1	4.2	4.6	May-10
<i>BBgBarc US Aggregate TR</i>				-0.1	0.6	6.8	7.0	5.2	4.2	3.6	4.0	May-10
State Street Global Advisors TIPS	25,122,072	2.1		-0.4	3.0	9.2	10.0	5.8	4.6	3.6	3.9	Nov-09
<i>BBgBarc US TIPS TR</i>				-0.4	3.0	9.2	10.1	5.8	4.6	3.6	4.0	Nov-09
<b>Emerging Markets Debt Composite</b>	<b>44,088,565</b>	<b>3.8</b>	<b>4.0</b>	<b>-2.0</b>	<b>0.9</b>	<b>-6.8</b>	<b>-1.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.1</b>	<b>Mar-19</b>
<i>JP Morgan GBI EM Global Diversified TR USD</i>				-2.0	0.6	-6.3	-1.4	0.2	4.8	0.5	1.2	Mar-19
Colchester Local Markets Debt Fund	44,088,565	3.8		-2.0	0.9	-6.8	-1.1	0.9	6.4	--	6.4	Oct-15
<i>JP Morgan GBI EM Global Diversified TR USD</i>				-2.0	0.6	-6.3	-1.4	0.2	4.8	0.5	4.8	Oct-15
<b>Absolute Return Fixed Income</b>	<b>39,789,447</b>	<b>3.4</b>	<b>4.0</b>	<b>0.2</b>	<b>1.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-0.2</b>	<b>Mar-20</b>
3-Month Libor Total Return USD				0.0	0.1	0.6	1.0	1.9	1.5	0.9	0.3	Mar-20
Payden Absolute Return Bond Fund PYAIX	39,789,447	3.4		0.2	1.7	--	--	--	--	--	-0.2	Mar-20
3-Month Libor Total Return USD				0.0	0.1	0.6	1.0	1.9	1.5	0.9	0.3	Mar-20



## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	Ending September 30, 2020								
				1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Real Assets Composite</b>	<b>41,596,080</b>	<b>3.5</b>	<b>7.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-10.8</b>	<b>-10.5</b>	<b>2.6</b>	<b>5.3</b>	<b>5.7</b>	<b>6.1</b>	<b>Jul-03</b>
<i>NCREIF Property Index 1 Qtr. Lag</i>				-1.0	-1.0	1.3	2.7	5.4	6.8	9.7	8.5	Jul-03
<b>Cash Composite</b>	<b>15,809,718</b>	<b>1.3</b>		<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.4</b>	<b>1.3</b>	<b>0.9</b>	<b>0.4</b>	<b>1.3</b>	<b>Dec-03</b>
<i>91 Day T-Bills</i>				0.0	0.0	0.4	0.8	1.6	1.1	0.6	1.3	Dec-03
<b>Hedge Fund Composite</b>	<b>126,676,271</b>	<b>10.8</b>	<b>8.0</b>	<b>0.1</b>	<b>3.2</b>	<b>2.8</b>	<b>4.5</b>	<b>4.4</b>	<b>4.0</b>	<b>--</b>	<b>4.7</b>	<b>Jan-11</b>
<i>HFRI FOF: Conservative Index</i>				-0.3	2.3	0.3	1.9	2.2	2.3	2.6	2.4	Jan-11
Magnitude International Class A Eligible	63,580,837	5.4		0.2	3.4	4.3	5.7	4.7	3.5	--	4.7	Jan-11
<i>HFRI FOF: Conservative Index</i>				-0.3	2.3	0.3	1.9	2.2	2.3	2.6	2.4	Jan-11
Blackstone Partners Offshore Fund LTD	63,095,434	5.4		-0.1	2.9	1.2	3.4	4.1	4.3	--	4.6	Mar-11
<i>HFRI FOF: Conservative Index</i>				-0.3	2.3	0.3	1.9	2.2	2.3	2.6	2.3	Mar-11
<b>Private Equity Composite</b>	<b>145,571,636</b>	<b>12.4</b>	<b>10.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.5</b>	<b>3.0</b>	<b>12.6</b>	<b>13.2</b>	<b>13.1</b>	<b>12.3</b>	<b>Jul-08</b>
<i>CJA US All PE (1 Qtr Lag)</i>				0.0	0.0	-6.7	-5.5	7.4	8.3	11.9	9.2	Jul-08
<b>Private Debt</b>	<b>1,254,167</b>	<b>0.1</b>	<b>5.0</b>	<b>0.0</b>	<b>0.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.0</b>	<b>Jun-20</b>
<i>S&amp;P/LSTA Leveraged Loan</i>				0.6	4.1	-0.7	1.1	3.1	4.0	4.3	4.1	Jun-20

Magnitude International Class A Eligible is preliminary as of 9/30/2020.



## Howard County Retirement Plans

# TOTAL FUND PERFORMANCE DETAIL FOOTNOTES

Performance is preliminary for 9/30/2020.

Fiscal year ends 6/30.

Policy index consists of: 19% Russell 1000 / 4% Russell 2500 / 12% MSCI EAFE / 5% MSCI Emerging Markets / 20% BBgBarc US Aggregate TR / 2% BBgBarc US TIPS TR / 4% 3-Month Libor Total Return USD / 4% JP Morgan GBI EM Global Diversified TR USD / 5% S&P/LSTA Leveraged Loan TR / 7.0% NCREIF Property Index 1 Qtr. Lag / 8% HFRI FOF: Conservative Index / 10% Private Equity Composite.

Allocation index consists of: Weighted index of underlying managers to their respective benchmark.

Fixed Income Policy index consists of: 100% BBgBarc US Aggregate TR.

Real Estate, Real Assets and Private Equity investments are valued as of 06/30/2020 and adjusted for capital calls and distributions through 09/30/2020.

All history prior to 3/1/2019 was provided by AndCo.



# EMERGING MARKET MEMO

NEPC, LLC

---

**To:** Howard County Retirement Board  
**From:** Search Sub-Committee  
**Date:** October 29, 2020  
**Subject:** Emerging Market Equity Search

---

**Summary**

As a reminder, the impetus of this search was the underperformance of Howard County’s existing emerging market equity manager, DFA. DFA is a value focused manager and was meant to compliment Howard County’s other manager, GQG, which is more growth oriented.

The subcommittee met with the below firms as part of its decision-making process:

Emerging Markets Value Equity		
ARGA	ARGA International Diversified Strategy	Not Rated**
FIAM LLC	Fidelity Select Emerging Markets Equity	1-rated
LSV	LSV Emerging Markets Value Equity	1-rated
Pzena	Pzena Emerging Markets Focused Value	1-rated

Based on the manager interviews and analysis, the sub-committee voted to recommend ARGA to present to the broader Board. There were several important aspects of ARGA’s firm, team, and strategy that drove the decision. Those items are detailed below.

**ARGA**

1. Founder & President, Rama Krishna
  - a. Rama’s background as the architect of the value-focused framework at Pzena was a key difference. Rama’s entire career has been focused on Value investing despite the ARGA track record only dating back to 2013. Rama has used his experience with Pzena to inform how ARGA can avoid the value trap that has challenged managers over the past few years.
2. Large/Well Established Firm
  - a. While NEPC has not fully completed our rating of ARGA, we have met with and evaluated the firm. While some managers who have yet to be rated are smaller and lesser known, that is not the case with ARGA. ARGA manages over \$4 billion in assets and have been rated by several larger consulting firms.

3. Performance

- a. When comparing ARGA to peers, in particular value-focused strategies, they've been able to provide strong performance. The headwinds that value managers have faced were mitigated by ARGA because of their strong investment process and risk management. In addition, the volatility and tracking error of ARGA has been in line with expectations.

4. Costs

- a. ARGA's fee is in line with the other value managers interviewed. NEPC and Sub-Committee will look to ask ARGA to sharpen their pencil ahead of their presentation to the Board.

# ARGA EMERGING MARKETS EQUITY PRESENTATION

NEPC, LLC

---

---

# ARGA Investment Management, LP

## Howard County Retirement Plans

### Emerging Markets Equity

**October 29, 2020**

A. Rama Krishna, CFA  
+1.203.614.0818  
krishna@argainvest.com

Biff Miller, CFA  
+1.617.501.3991  
miller@argainvest.com

# Contents

---

- Firm Overview
- Investment Approach
- Portfolio Characteristics and Results
- Team Composition & Biographies
- Appendix A: Research Examples
  - COVID-19: Scenario-based Valuations
- Appendix B: Global Outlook

# Firm Overview

## ARGA Overview

---

### **Valuation-focused**

- Present value framework

### **Industry experience**

- Business analysts

### **Global**

- Developed and emerging markets perspective

### **Client communication**

- Transparent

### **Alignment of interests**

- Employee-owned

## Senior Investment Experience

Name/Position	# Years Experience	Prior Experience
<b>A. Rama Krishna, CFA</b> <i>Founder/ Chief Investment Officer</i>	33	<ul style="list-style-type: none"> <li>- <b>Pzena Investment Management: President-International, Managing Principal, Portfolio Manager</b></li> <li>- Citigroup Asset Management</li> <li>- AllianceBernstein</li> <li>- Credit Suisse First Boston</li> </ul>
<b>Steven Morrow, CFA</b> <i>Director of Research</i>	27	<ul style="list-style-type: none"> <li>- <b>Bank of America Merrill Lynch: Portfolio Manager</b></li> <li>- Cumberland Associates</li> <li>- Citigroup Asset Management</li> <li>- Dreyfus Corporation</li> </ul>
<b>Robert Mitchell, PhD</b> <i>Global Business Analyst</i>	31	<ul style="list-style-type: none"> <li>- <b>Citigroup: Director, Investor Relations</b></li> <li>- Fannie Mae</li> <li>- Citigroup Asset Management</li> <li>- Marakon Associates</li> </ul>
<b>Takashi Ito, CFA</b> <i>Global Business Analyst</i>	24	<ul style="list-style-type: none"> <li>- <b>Vestec: Director of Business Development</b></li> <li>- Highview Research</li> <li>- UBS Global Asset Management</li> <li>- Citigroup Asset Management</li> </ul>
<b>Peter Carman</b> <i>Non-Executive Chairman</i>	47	<ul style="list-style-type: none"> <li>- <b>Citigroup Asset Management: Co-Chairman, Global CIO</b></li> <li>- Putnam Investments</li> <li>- AllianceBernstein</li> </ul>

## Global Research Team

Global Business Analyst	Global Sector Coverage	Location
A. Rama Krishna, CFA	Chief Investment Officer	U.S.
Steven Morrow, CFA	Director of Research, Consumer & Industrials	U.S.
Bryan Cheng	Financials, Telecom Services & Healthcare	U.S.
Hemanta Das, CFA	Materials	India
Haofei Ge	Utilities & Real Estate	U.S.
Philip Gutfleish	Materials	U.S.
Douglas Hayashi	Industrials & Materials	U.S.
Takashi Ito, CFA	Consumer & Industrials	U.S.
Sujith Kumar	Energy & Technology	U.S.
Vipul Kodan	Associate Director, Financials, Healthcare & Industrials	India
Robert Mitchell, Ph.D.	Financials, Energy & Healthcare	U.S.
Ravivannan Thangaraj	Technology	India
	<b>Average years with firm</b>	<b>8 years</b>
	<b>Average investment experience</b>	<b>20 years</b>

+ 6 Senior Research Associates and 7 Research Associates

## **AUM** (as of 9/30/2020)\*

---

### **60 Institutional Clients**

**Firm: \$5.5 billion**

#### **Strategies**

- Global: \$176 million
- International: \$2,918 million
- Emerging Markets: \$2,407 million

#### **Region**

- U.S. domiciled: \$3,868 million
- Non-U.S. domiciled: \$1,633 million

#### **Client Type**

- Sub-advisory: \$2,359 million
- Corporate ERISA, SWF, Public & Union Pensions: \$2,823 million
- Family Office & High Net Worth: \$127 million
- Endowment & Foundation: \$192 million

*\*AUM of ARGA strategies in incubation not presented herein.  
Numbers are preliminary, as is, may be subject to rounding and subject to change without notice. Numbers are presented for informational purposes only. See Material Disclosures.*

# Investment Approach

## Investment Approach

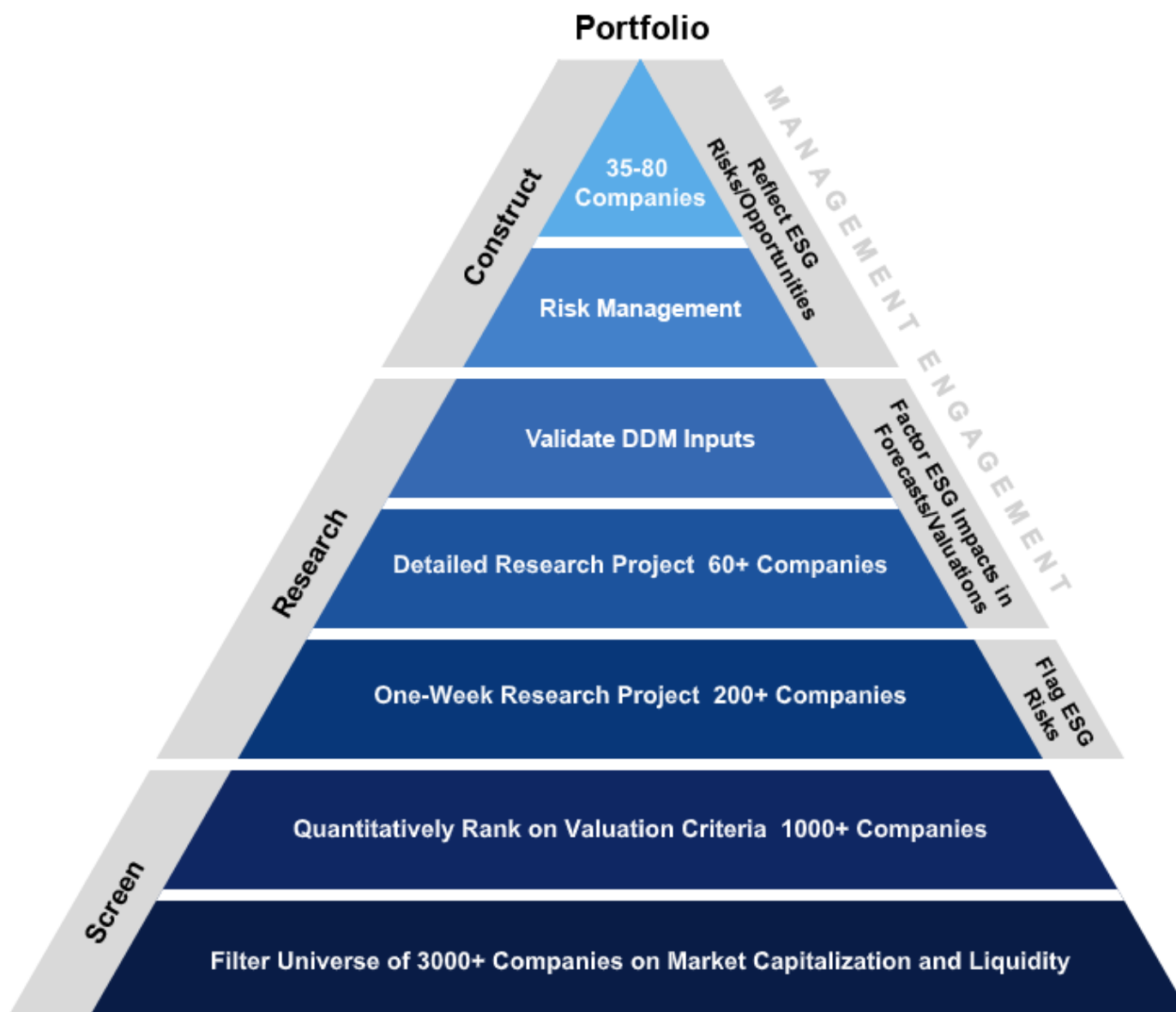
---

### **Invest in undervalued businesses based on fundamental research and present value**

- Stocks that trade at discount to intrinsic value (DDM)
- Potential long-term earnings power and dividend-paying ability
- Detailed, consistent company and industry analysis
- Adjust for company quality and economic risks
- Limit loss of capital through stress tests and diversification

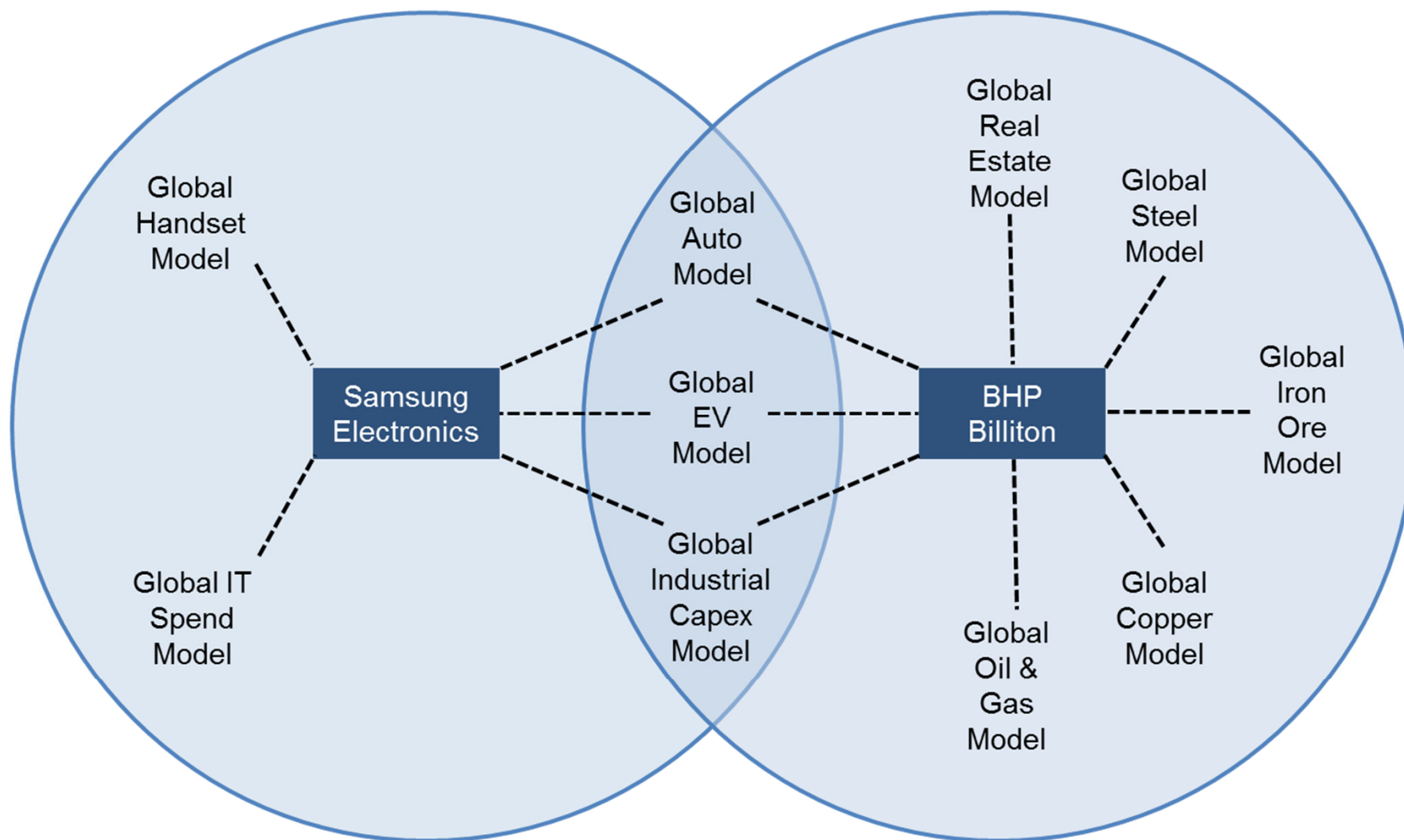
**Objective: Maximize long-term results**

# Disciplined Investment Process



## Global Industry Modeling Consistency

- Global Industry Models ensure consistent inputs across companies, making forecasts and valuations comparable across different industries and geographies



*Note: Cross linkages between different industry models not shown (e.g. Oil and Gas model uses Auto model for oil demand)  
See Material Disclosures.*

# Portfolio Construction & Risk Management

---

## Portfolio Construction

- Valuation: upside vs. downside
- Industry or region confirmation
- Confidence in long-term earnings power

## Risk Management

- Stress case scenarios for each company
- Risk buckets
- Diversification across currencies, industries, geographies
- Maximum 5% in any company at cost, 8% at market
- Maximum 25% in any industry at cost, 35% at market

# Portfolio Monitoring & Sell Discipline

---

## Portfolio Monitoring

- Daily update of metrics for portfolio holdings including valuation and fundamentals
- Ongoing dialog with research team on changes in perspective

## Sell Discipline

- Bottom half of universe on valuation
- Alternatives more attractively valued

**We remove emotion from investment decision-making**

## Why ARGA?

---

- Valuation-based
- Industry experience
- Global
- Client communication
- Alignment of interests

# **Portfolio Characteristics and Results**

## Portfolio Characteristics\*

As of 9/30/2020

	<b>ARGA</b>	<b>MSCI EM**</b>
P/E IBES FY1	9.2x	15.1x
Price/Book	0.8x	1.8x
Return on Equity—5 Year Average	15.4%	17.0%
Dividend Yield	4.7%	2.4%
Market Cap—Weighted Average	\$30.1B	\$175.4B
Market Cap—Median	\$8.8B	\$6.8B
Number of Holdings	52	1,201
Active Share	90%	

*\*The portfolio characteristics referenced above are presented as supplemental information and are derived from representative accounts selected based on objective, non-performance based criteria, taking into account consistently the weighting of every holding in the representative accounts as of the last trading day of the previous, full calendar month. The characteristics referenced above are subject to change without notice, may not be current, and are subject to risk. They do not represent all the characteristics for client accounts. It should not be assumed that an investment in accounts with these characteristics was or will be profitable. See Material Disclosures.*

*\*\*The iShares MSCI EM ETF is used as a proxy for the index*

## Top Ten Holdings\*

As of 9/30/2020

	<b>ARGA</b>
POSCO	5.4%
SK Hynix	4.6%
Samsung Electronics	3.4%
Alrosa	3.3%
Cognizant	3.2%
Catcher Technology	2.8%
Wonik IPS	2.7%
PZU	2.7%
Hana Financial	2.6%
PICC P&C	2.5%

*\*The holdings referenced above are presented as supplemental information and are derived from representative accounts selected based on objective, non-performance based criteria, taking into account consistently the weighting of every holding in the representative accounts as of the last trading day of the previous, full calendar month. They are subject to change without notice, may not be current, and are subject to risk. The holdings identified do not represent all the securities purchased, sold or recommended for client accounts. It should not be assumed that an investment in the securities identified, or in accounts with securities referenced herein, was or will be profitable. See Material Disclosures.*

## Sector Exposure\*

As of 9/30/2020

	<b>ARGA</b>	<b>MSCI EM**</b>
Communication Services	9%	13%
Consumer Discretionary	9%	20%
Consumer Staples	5%	6%
Energy	5%	6%
Financials	28%	17%
Health Care	1%	3%
Industrials	2%	4%
Information Technology	27%	20%
Materials	10%	7%
Real Estate	0%	2%
Utilities	4%	2%

*\*The sector weightings referenced above are presented as supplemental information and are derived from representative accounts selected based on objective, non-performance based criteria, taking into account consistently the weighting of every holding in the representative accounts as of the last trading day of the previous, full calendar month. They are subject to change without notice, may not be current, and are subject to risk. The sectors identified do not represent all the sectors recommended for client accounts. It should not be assumed that an investment in the sectors identified, or in accounts with sectors referenced herein, was or will be profitable. See Material Disclosures.*

*\*\*The iShares MSCI EM ETF is used as a proxy for the index*

## Country Exposure\*

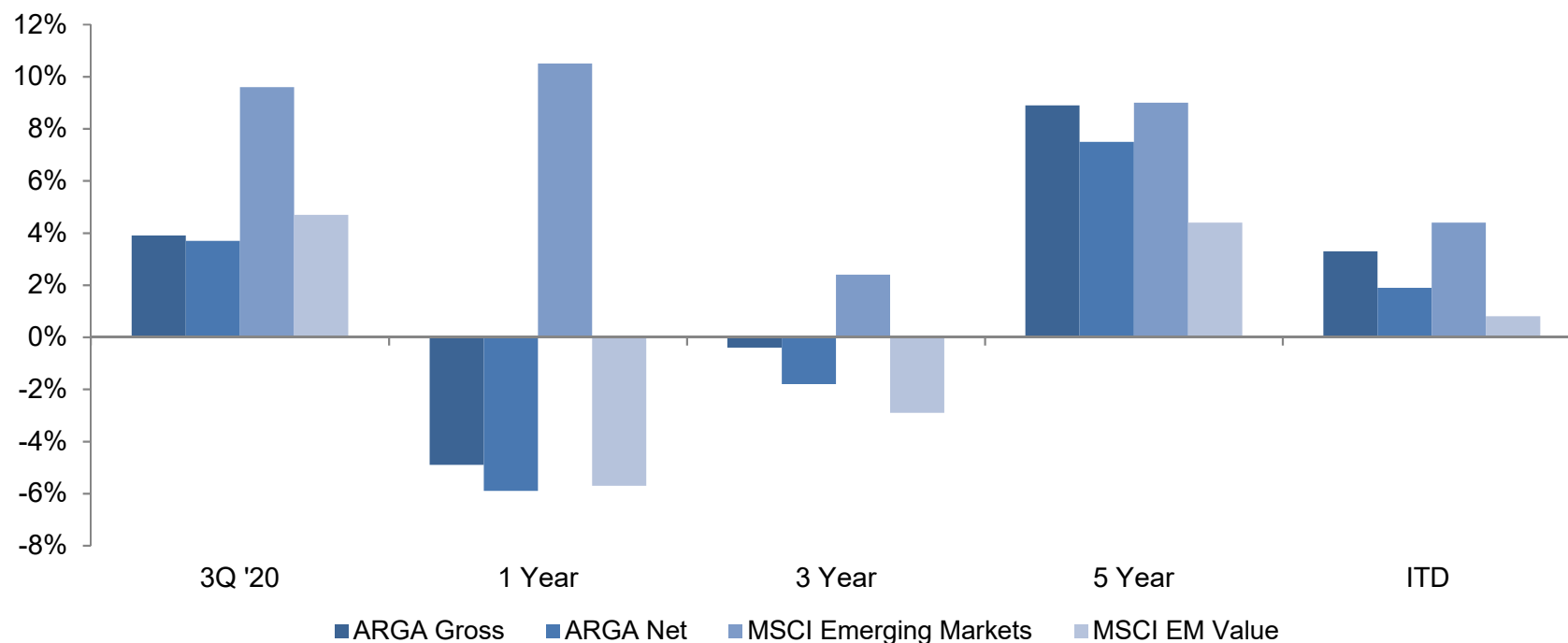
As of 9/30/2020

	<b>ARGA</b>	<b>MSCI EM**</b>		<b>ARGA</b>	<b>MSCI EM**</b>
Brazil	2%	5%	Poland	3%	1%
Chile	0%	1%	Qatar	0%	1%
China	28%	37%	Russia	8%	3%
Czech Republic	1%	0%	Singapore	2%	0%
Hong Kong	3%	0%	South Africa	5%	4%
India	5%	9%	South Korea	26%	14%
Indonesia	1%	2%	Taiwan	9%	15%
Malaysia	0%	2%	Thailand	3%	2%
Mexico	1%	2%	United Arab Emirates	0%	1%
Philippines	0%	1%	United States	3%	0%

\*The country exposures referenced above are presented as supplemental information and are derived from a representative account selected based on objective, non-performance based criteria, taking into account consistently the weighting of every holding in the representative account as of the last trading day of the previous, full calendar month. The exposures are subject to change without notice, may not be current, and are subject to risk. The exposures identified do not represent all the exposures recommended for client accounts. It should not be assumed that an investment in the exposures identified, or in accounts with exposures referenced herein, was or will be profitable. See Material Disclosures.

\*\*The iShares MSCI EM ETF is used as a proxy for the index

## Results (as of 9/30/2020)



### Emerging Markets Equity Composite

(Inception July 1, 2013)	QTD	YTD	1 Year	3 Year	5 Year	ITD
Gross <sup>1</sup>	3.9%	-17.3%	-4.9%	-0.4%	8.9%	3.3%
Net <sup>2</sup>	3.7%	-18.0%	-5.9%	-1.8%	7.5%	1.9%
MSCI Emerging Markets	9.6%	-1.2%	10.5%	2.4%	9.0%	4.4%
MSCI Emerging Markets Value	4.7%	-14.2%	-5.7%	-2.9%	4.4%	0.8%

<sup>1</sup> Results presented are unaudited, do not reflect payment of investment advisory fees and other expenses, and are net of transaction costs and commissions. <sup>2</sup> Results are preliminary, unaudited, net of all advisory fees, net of withholding taxes on dividends and interest income, and based on the maximum possible combined management and performance fees. There are no other fees deducted apart from trading expenses and investment management fees. All results include the reinvestment of dividends and other income, and represent past results, which do not guarantee future results. Results are as is, subject to rounding, subject to change and for informational purposes only. Current results may be lower or higher than presented results. Results for periods of more than one year are annualized. PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE. <sup>3</sup> The reclassification of certain transactions impacted returns in some prior periods, deemed non-material (0.1%). The impact on Gross 1 Year, Gross 3 Year and Net 3 Year returns as of 6/30/2020 reported last quarter was an understatement of 0.1% in each.

See Material Disclosures and Composite Disclosures for a fully compliant GIPS Report.

# Composite Disclosures

## Emerging Markets Equity Composite<sup>8</sup>

Year End	Gross Return <sup>1</sup>	Net Return <sup>2</sup>	MSCI EM	Number of Portfolios	Internal Dispersion	Composite Annualized Standard Deviation (gross) <sup>3</sup>	Benchmark Annualized Standard Deviation <sup>3</sup>	Total Composite Assets	Total Firm Assets
2019	19.3%	17.9%	18.4%	7	0.5% <sup>7</sup>	13.1%	14.2%	\$1727.8M	\$4973.1M
2018	-8.3%	-10.0%	-14.6%	6	0.8% <sup>7</sup>	15.9%	14.6%	\$956.1M	\$3617.1M
2017	38.8%	37.2%	37.3%	6	N/A <sup>5</sup>	20.0%	15.4%	\$858.8M	\$4036.9M
2016	24.9%	23.5%	11.2%	5	N/A <sup>5</sup>	21.2%	16.1%	\$302.4M	\$2722.3M
2015	-18.6%	-19.6%	-14.9%	5	N/A <sup>5</sup>	N/A <sup>6</sup>	N/A <sup>6</sup>	\$214.1M	\$2168.0M
2014	-14.1%	-15.1%	-2.2%	3	N/A <sup>5</sup>	N/A <sup>6</sup>	N/A <sup>6</sup>	\$116.7M	\$2227.4M
2013 <sup>4</sup>	15.3%	13.7%	7.7%	1	N/A <sup>5</sup>	N/A <sup>6</sup>	N/A <sup>6</sup>	\$2.5M	\$2248.8M

<sup>1</sup> Results presented are unaudited, do not reflect payment of investment advisory fees and other expenses, and are net of transaction costs and commissions. <sup>2</sup> Results are preliminary, unaudited, net of all advisory fees, net of withholding taxes on dividends, interest income, and capital gains, and based on the maximum possible combined management and performance fees. There are no other fees deducted apart from trading expenses and investment management fees. All results include the reinvestment of dividends and other income, and represent past results, which do not guarantee future results. Results are as is, subject to change and for informational purposes only. Current results may be lower or higher than presented results. <sup>3</sup> Three year standard deviation is calculated using gross returns. <sup>4</sup> Returns are for the period from July 1, 2013 through December 31, 2013. <sup>5</sup> The internal dispersion is not presented because there were 5 or fewer accounts in the composite for the full year. <sup>6</sup> The three-year annualized standard deviation is not presented because 36 monthly returns are not available. <sup>7</sup> ARGA calculates dispersion using the equal-weighted standard deviation of the annual gross returns for composites that include 6 or more portfolios for the entire year. <sup>8</sup> The reclassification of certain transactions impacted returns in some prior periods, deemed non-material (0.1%). There was no material impact on Gross or Net calendar year returns.

### Compliance Statement:

ARGA Investment Management, LP ("ARGA") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. ARGA has been independently verified for the periods July 1, 2010 to December 31, 2019. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The ARGA Emerging Markets Equity Composite has been examined for the period July 1, 2013 to December 31, 2019. The verification and performance examination reports are available upon request.

### Firm and Composite/Benchmark Information:

ARGA is an investment adviser registered with the Securities and Exchange Commission. ARGA manages global, international, and emerging markets equity portfolios for institutional and qualified investors.

#### ARGA Emerging Markets Equity Composite

The ARGA Emerging Markets Equity Composite was created on July 1, 2013 with an inception date of July 1, 2013. The composite includes all tax-exempt and taxable portfolios utilizing a fully invested equity allocation to mid- to large-cap emerging markets companies. The benchmark is the MSCI Emerging Markets (Net) and is net of withholding taxes on dividends, interest income, and capital gains. The benchmark consists of 26 emerging market country indices. The composite includes all discretionary accounts managed to the ARGA Emerging Markets Equity Strategy. The composite includes a private fund, a UCITS fund and separate managed accounts.

A list of composite descriptions, limited distribution pooled funds and broad distribution pooled funds is available upon request.

The index/benchmark comparisons herein are provided for informational purposes only and should not be used as the basis for making an investment decision. There are significant differences between client accounts and the indices/benchmarks referenced herein including, but not limited to, risk profile, liquidity, volatility and asset composition.

## Composite Disclosures

---

### Performance Calculations & Fees:

Valuations and returns are expressed in U.S. Dollars. Results are based on fully discretionary accounts under management, including those accounts no longer with the firm for the time period managed by the firm. Policies for valuing portfolios, calculating performance and preparing GIPS Reports are available upon request.

The investment advisory fee schedule for the ARGA Emerging Markets Equity Composite is based on a percentage of assets: 1% for assets up to \$100 million and 0.70% for assets greater than \$100 million. Performance-based fee schedules are also available. The investment advisory fee for Class A interests in the ARGA Emerging Markets Equity Fund (the "Fund") is based on a percentage of assets, as described above. The fee for Class B interests is 70% of base management fee plus 15% of outperformance over the benchmark. Fund expenses (asset-based custodian, trustee and admin fees) are capped at 25 bps; other expenses (audit, legal and tax) are capped at 5 bps. Transactions costs and commissions, and contribution and redemption charges are not included in Fund and other expenses. Actual investment advisory fees incurred by clients may vary.

No part of this document may be redistributed in whole or in part or transmitted in any form or by any means without the prior written consent of ARGA.

### **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE PERFORMANCE.**

GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

See Material Disclosures.

## Standard Fee Schedule

---

### Emerging Markets

- First \$100 Million: 1.00% per annum
  - Greater than \$100 Million: 0.70% per annum
- Separate Account minimum initial investment: \$10 Million*  
*Performance-based fee schedules also available*

### U.S. Fund and UCITS

- Minimum initial fund investment: \$1 Million
- Asset-based custodian, administrator and trustee fees are capped
- Subscriptions, Redemptions and NAV Calculation
  - U.S. Fund: Monthly
  - UCITS: Daily

## Proposed Fee for Howard County Retirement Plans

---

### Emerging Markets\*

Fixed Asset-based Management Fee of 0.70%

**OR**

Performance-based Fees:

Fixed Asset-based Management Fee of 0.49%

*plus*

15% of the excess return over MSCI EM Index (Net USD)

*\* Fee schedule applies only to mandate sizes above \$10 Million*

# **Team Composition & Biographies**

## Team Composition

---

### **Total: 67**

- By Function
  - Research: 12 global business analysts, 13 associates
  - Operations: 22
  - Administration: 3
  - Compliance: 1
  - Client relations/marketing: 11
  - Information technology: 5
- By Location
  - Stamford: 29
  - Chennai: 37
  - London: 1

## Biographies: Research

---

### **A. Rama Krishna, CFA** *Founder and Chief Investment Officer*

Mr. Krishna has over 25 years' experience in managing global equities. Before founding ARGA in 2010, Mr. Krishna was President, International of Pzena Investment Management (NYSE: PZN) and Managing Principal, Member of Executive Committee, and Portfolio Manager of its operating company in New York. While at Pzena from 2003 to 2010, he led development of the International Value and Global Value strategies, co-managed the Emerging Markets Value strategy, and managed the US Large Cap Value strategy. Mr. Krishna was previously at Citigroup Asset Management, where he was Chief Investment Officer and Head of Institutional and International. He also represented the asset management business on the Citigroup Management Committee and directly managed the Global Emerging Markets Equity strategy. Before that, Mr. Krishna was Director of International Equity Research, Portfolio Manager, International Equities and Chief Investment Officer, Emerging Markets Equities at AllianceBernstein in New York, London and Tokyo. Earlier, he worked at Credit Suisse First Boston in New York, Tokyo and Singapore, first as Equity Research Analyst and later as Chief Investment Strategist and Director - Equity Research. Mr. Krishna earned a joint M.B.A./M.A. in Asian Studies with a Japan Specialization from the University of Michigan in 1987 and a B.A. (Honors) in Economics from St. Stephen's College, The University of Delhi in 1984. He received University of Michigan's Prize Fellowship in Japanese Business and University Fellowship, and Middlebury College Scholarship. He was on the MSCI Editorial Advisory Board and is a Chartered Financial Analyst.

### **Steven Morrow, CFA** *Director of Research*

Before joining ARGA in 2010, Mr. Morrow was Portfolio Manager - Global Proprietary Trading, Bank of America Merrill Lynch, where he oversaw Global Consumer and Transportation investments. From 2002 to 2009, Mr. Morrow was a Partner and Portfolio Manager at Cumberland Associates, LLC, where he was lead manager for long/short investments in the Consumer and Transportation sectors. Before that, Mr. Morrow was Managing Director, Portfolio Manager/Equity Research Analyst at Citigroup Asset Management. He previously worked at Dreyfus Corporation as an Equity Research Analyst. Before entering the investment profession, Mr. Morrow played Professional Hockey with the Philadelphia Flyers. Mr. Morrow graduated with an M.B.A. from Cornell University in 1998 and a B.S. in Business Administration from the University of New Hampshire in 1993. Mr. Morrow is a Chartered Financial Analyst.

## Biographies: Research

---

### **Bryan N. Cheng** *Global Business Analyst*

Before joining ARGA in 2010, Mr. Cheng was Associate at Gryphon Investors, a middle-market private equity firm in San Francisco. While at Gryphon from 2005 to 2007 he evaluated new investment opportunities in the Consumer Products and Retail sectors and executed acquisitions and financings. Previously, Mr. Cheng was an investment banking analyst with Goldman Sachs & Co. in its Technology, Media & Telecommunications Group in San Francisco, where he worked on M&A transactions for clients including NTT DoCoMo, AT&T Wireless and eBay. Mr. Cheng began his career as an analyst with Citigroup / Salomon Smith Barney in its Global Consumer Group in New York. Mr. Cheng earned an M.B.A from The Wharton School at the University of Pennsylvania in 2009 and graduated with Honors from the University of California, Berkeley in 2002 with a B.S. in Business Administration.

### **Hemanta Das, CFA** *Global Business Analyst*

Before joining ARGA in 2017, Mr. Das was Research Analyst at Emkay Global Financial Services, Mumbai, where he conducted equity research on companies in the Indian Oil & Gas sector. Before that, he was Senior Research Analyst at CRISIL Ltd., where he covered companies in the European Oil & Gas sector. He previously was Assistant Manager at FINO PayTech Ltd., where he worked on mergers and acquisitions, budgeting and financial analysis. Mr. Das received an M.B.A from Faculty of Management Studies, New Delhi, in 2012, and a Bachelor of Commerce (Honors) from University of Delhi in 2009.

### **Haofei Ge** *Global Business Analyst*

Mr. Ge joined ARGA in 2013 after graduating with High Distinction from the University of Michigan, where he obtained dual degrees in Bachelor of Business Administration in Finance and B.S. in Actuarial Mathematics, and achieved University Honors for all years. Mr. Ge has also been a summer intern at East West Bank, California.

## Biographies: Research

---

### **Philip Gutfleish** *Global Business Analyst*

Before joining ARGA in 2018, Mr. Gutfleish was Senior Vice President, Equities at AllianceBernstein, where he covered the Health Care and Consumer Discretionary sectors for U.S. Large-Cap Value equities products. Previously, Mr. Gutfleish was Portfolio Manager at Elm Ridge Capital, a value-oriented long/short US equities hedge fund, covering various sectors including US Financials, Consumer Discretionary and Basic Materials. Mr. Gutfleish held prior equity research roles in London for AllianceBernstein and Och-Ziff Europe. Earlier, Mr. Gutfleish was a member of the Executive Management Committee at INA, an Italian insurance company, where he was responsible for Corporate Finance, Financial Planning and Control, and Investor Relations. Mr. Gutfleish began his career as a commercial bank lending officer in 1985, with various positions in the U.S. and Italy. Mr. Gutfleish graduated summa cum laude with an M.B.A. from New York University in 1991 and a B.A. in Political Economy of Industrialized States from the University of California, Berkeley in 1982.

### **Douglas Hayashi** *Global Business Analyst/Economist*

Before joining ARGA in 2010, Mr. Hayashi was Director of Research and Senior Analyst at HSBC Securities Japan in Tokyo. At HSBC from 1998 to 2009, Mr. Hayashi managed a research department of 30, conducted coverage of numerous industries, and was lead analyst on one of the largest shipping IPO's in history, China Cosco. Mr. Hayashi was consistently highly ranked among U.S. and Tokyo international institutional investors, and Greenwich Associates ranked him #1 Transport analyst among UK clients for five years in a row. Previously, he held research roles at Barclays de Zoete Wedd (BZW) Securities and Schroder Securities in Japan. Mr. Hayashi started his career at Mitsubishi Motors Corp. He was educated in the Philippines, Canada, U.S. and Japan. He graduated from University of Western Ontario in 1990 with an Honors Bachelor of Economics. He studied Japanese at Middlebury College and Keio University before successfully completing Level 1, the highest of the Japanese Ministry of Education language proficiency tests.

## Biographies: Research

---

### **Takashi Ito, CFA** *Global Business Analyst*

Before joining ARGA in 2012, Mr. Ito was Director of Business Development at Vestec, a Canadian voice-recognition company. At Vestec from 2011 to 2012, he founded Highview Research, an advisor to the Silverstone Fund, a global long-short, market-neutral fund focused on the Automotive sector. Working for the Silverstone Fund in Tokyo from 2004 to 2011, Mr. Ito was responsible for Asian and Japanese investments, and designed processes for risk control and position sizing. The Silverstone Fund was nominated for Best Global Equity Fund award in 2008 by London's Eurohedge. Previously at UBS Global Asset Management and Citigroup Asset Management, Mr. Ito covered global and Japanese consumer durable and capital goods companies. Mr. Ito graduated from Sophia University, Tokyo, with a degree in International Economics in 1993 and is a Chartered Financial Analyst.

### **Vipul Kodan, FRM** *Global Business Analyst/Associate Director of Research*

Before joining ARGA in 2010, Mr. Kodan was Risk Analyst at ICICI Lombard GIC India in Mumbai, where he was instrumental in designing and developing new products for Indian general insurance market. From 2006 to 2009, Mr. Kodan worked with Tata Consultancy Services Ltd, Gurgaon, as Systems Engineer, where he provided credit and loyalty card solutions to German retail clients. Mr. Kodan earned an M.B.A degree with Finance specialization from XLRI School of Business, India in 2009 and a B. Tech. (Honors) in Computer Engineering from National Institute of Technology, Kurukshetra, India in 2004. Mr. Kodan received the Ratan Tata Trust scholarship at XLRI and the Merit scholarship at NIT. He has successfully completed the GARP Financial Risk Manager examination.

## Biographies: Research

---

### **P. Sujith Kumar** *Global Business Analyst/Research Manager*

Before joining ARGA in 2010, Mr. Kumar was Analyst at ICRA Ltd., a leading credit rating agency in India. At ICRA, he worked with the corporate ratings division, handling credit rating assignments across multiple industries including Auto Ancillaries, Hotels and Textiles. Mr. Kumar earned an M.B.A from Indian Institute of Management (IIM), Lucknow, in 2009, graduating in the top 5% of his class. At IIM, he was Fund Manager at Credence Capital, a student-run fund of IIM that invested in Indian equity markets, and received the Apeejay Trust Scholarship for academic excellence. He received a B. Tech. in Computer Science from National Institute of Technology, Calicut, India, in 2007.

### **Robert J. Mitchell, Ph.D.** *Global Business Analyst*

Before joining ARGA in 2010, Mr. Mitchell was Director, Investor Relations at Citigroup, where he liaised with the investment community and handled quarterly releases and regulatory filings. From 2004 to 2009, Mr. Mitchell was Director, Investor Relations at Fannie Mae, conducting research and analysis. Previously, Mr. Mitchell was Equity Research Analyst, Financial Services at Citigroup Asset Management. Earlier, he was Strategy Consultant at Marakon Associates. Mr. Mitchell graduated with a Ph.D. in Finance from Carnegie Mellon University in 1997, an M.B.A. from Duke University in 1989, and a B.S. in Industrial Engineering from North Carolina State University in 1985.

### **Ravivannan Thangaraj** *Global Business Analyst*

Before joining ARGA in 2017, Mr. Thangaraj was an ASIC Engineer at Juniper Networks in Bangalore. At Juniper, a US-based multinational corporation that develops and markets networking products, Mr. Thangaraj worked on chip design and the company's largest network processor. He earned a Masters in Management from HEC Paris in 2017, a Post Graduate Diploma in Management from the Indian Institute of Management in 2017, and a Bachelor of Technology in Electronics and Communication Engineering from India's National Institute of Technology in 2012.

## Biographies: Client Relationships

---

### **Bruce E. Deutsch** *Director - Client Relationships*

Before joining ARGA in 2012, Mr. Deutsch was Managing Director, Institutional Sales & Marketing at Palisade Capital Management in Fort Lee since 2008. Previously, he was Senior Vice President, Institutional Sales & Marketing with Atalanta Sosnoff Capital in New York. Earlier, Mr. Deutsch was Senior Vice President, Director of Marketing, for Thomas White International in Chicago. He began his career in public accounting at Touche Ross. Mr. Deutsch received a B.S. in Accounting from Lehigh University in 1979 and is a Certified Public Accountant.

### **Lawrence K. Miller II, CFA** *Director – Consultant and Client Relationships*

Before joining ARGA in 2019, Mr. Miller was at Schroder Investment Management North America as Consultant Relations Director since 2007. From 2004 to 2007, he was Vice President – Consultant Relations at U.S. Trust Institutional. Mr. Miller began his investment career in 1996 at MFS Institutional Advisors in a variety of marketing and consultant relations roles. He earned an M.B.A in 1995 from Babson College and a B.A. in 1990 from St. Lawrence University. He is a Chartered Financial Analyst and a member of the CFA Society of Boston.

### **Timothy A. O’Sullivan** *Director - Global Client Relationships*

Before joining ARGA in 2010, Mr. O’Sullivan was at Western Asset Management as a senior member of the executive team. He was responsible for integrating the businesses acquired from Citigroup Asset Management and establishing Western Asset’s footprint in money markets in New York. Until 2006, Mr. O’Sullivan spent 21 years in Citigroup’s investment management businesses, including as Head of Institutional Asset Management for Middle East/Africa for 10 years. He began his U.S. career at the commodities firm, CSA, after relocating from Ireland in 1983. He graduated in Accounting from the Institute of Technology, Sligo, Ireland.

## Biographies: Client Relationships

---

### **Kamyar Varzi** *Director - Client Relationships*

Before joining ARGA in 2019, Mr. Varzi was Institutional Director of Sales and Service in the Institutional Group at Fisher Investments, where he worked for 12 years. From 2005-2007, Mr. Varzi was Channel Manager at Franklin Templeton. Earlier in his career, Mr. Varzi worked in various client service and marketing roles in the US and UK, including at Dresdner Kleinwort Wasserstein. Mr. Varzi graduated from Pepperdine University with a B.S. in Business Administration and a minor in English Literature in 2000.

## Biographies: Firm

---

### **Neda Clark, J.D.** *Chief Compliance Officer*

Before joining ARGA in 2013, Ms. Clark was Chief Compliance Officer at EQA Partners, a hedge fund specializing in currency and global macro strategies. As in-house legal counsel, Ms. Clark was responsible for the creation, enforcement and oversight of EQA's compliance program. Also serving as EQA's Director of Client Services, Ms. Clark was primary liaison with institutional investors and external fund administrators. Previously, she co-founded and was COO of Repertoire, Inc., a specialty European designer furniture and home accessories store in Boston. Ms. Clark began her career as an associate at the law firm of Gaston & Snow, where she specialized in mergers and acquisitions, syndication and securities law. Ms. Clark earned her B.A. in Government and French Literature from Smith College in 1983 and her J.D. from Suffolk University Law School in 1987. At Suffolk, Ms. Clark served as an Editor of the Suffolk Law Review and won the Moot Court Competition.

### **Irina Gheorghe, CFA** *Senior Investment Specialist*

Before joining ARGA in 2017, Ms. Gheorghe worked at Coal Pension Trustees as Senior Investment Manager and part of the investment management team responsible for \$30 billion in pension assets. From 2008 to 2015, she worked at Towers Watson, initially as Investment Analyst, then as Investment Consultant – Manager Research, where she led the Multi-Asset team in researching, rating and recommending investment products for global clients. Ms. Gheorghe earned her B.S. in Economics and Econometrics from Nottingham University in 2008, and is a Chartered Financial Analyst.

### **Sholy K. Gopalan** *Chief Operating Officer*

Before joining ARGA in June 2020, Mr. Gopalan spent more than 22 years in Atos. From Nov 2018 to May 2020, he was Vice President and Head of global delivery for Atos's Telecom, Media and Technology verticals. From June 2018 to Nov 2018, he was Vice President and Head of global delivery for the Insurance vertical and from 2013 to 2015, he was Vice President and Head of Knowledge Process Outsourcing business across the Banking & Finance, Insurance, Retail and Manufacturing verticals. Prior to 2013, he worked in various positions managing sales, delivery and presales for the Banking and Finance verticals. Mr. Gopalan received an MBA from Newport University in Chennai, India in 2001 and a B.S. in Applied Science from Coimbatore Institute of Technology in Computer Technology, India in 1995.

## Biographies: Firm

---

### **Peter Carman** *Non-Executive Chairman*

Mr. Carman has over 45 years' experience managing international equities. Before joining ARGA in 2010, Mr. Carman served on the Board of Directors for Numeric Investors. From 1997 to 2001, he was Co-Chairman and Global Chief Investment Officer of Citigroup Asset Management, with responsibility for \$400B AUM in offices worldwide. Previously, Mr. Carman was Senior Managing Director – Equities at Putnam Investments, with leadership of all equity strategies and focus on expanding competencies in fundamental and quantitative research. During his 1993 to 1997 tenure at Putnam, equity assets grew from \$23B to over \$150B. Mr. Carman was Chief Investment Officer of Sanford Bernstein from 1981 to 1993, responsible for U.S. Equity products and involved in development for International Equities and Fixed Income. Earlier, he was Chief Investment Officer at First National Bank of Denver and Portfolio Manager/Analyst at Peter L. Bernstein. Mr. Carman graduated with an M.B.A. from Harvard Graduate School of Business Administration in 1971 and a B.A. from Brown University in 1963.

## **Appendix A: Research Examples**

# **COVID-19: Scenario-based Valuations**

## COVID-19 and Business Forecasting\*

---

*Making predictions is dangerous, especially about the future*

- Versions by Mark Twain, Yogi Berra, Samuel Goldwyn
- Complex, poorly understood and evolving
  - World in transition even without COVID
- ARGA's approach: Systematic and scenario-based valuation
  - Identifies main dimensions
  - Uses available information for predictions
  - Internally consistent, applicable across businesses and regions

• ARGA's COVID-19 framework draws on thoughts shared by Gautam Ahuja, Ph.D., Eleanora and George Landew Professor of Management, SC Johnson College of Business, Cornell University

See Material Disclosures.

## Solving the Right Problem

---

*Huge debate on lock-down but virus raises multiple problems*

- Medical problem
  - Contagious, dire, unknown consequences with no vaccine or treatment
- Social problem
  - Fear of the unknown, potentially dire and varied consequences
  - Changes in behavior affect consumer and investment demand
- Excessive focus on lock-down and its economic consequences
  - Politicizes policy and creates conflict among stakeholders
  - Benefits and costs not equitably distributed

## Scenario Planning: Base and Stress Valuations

---

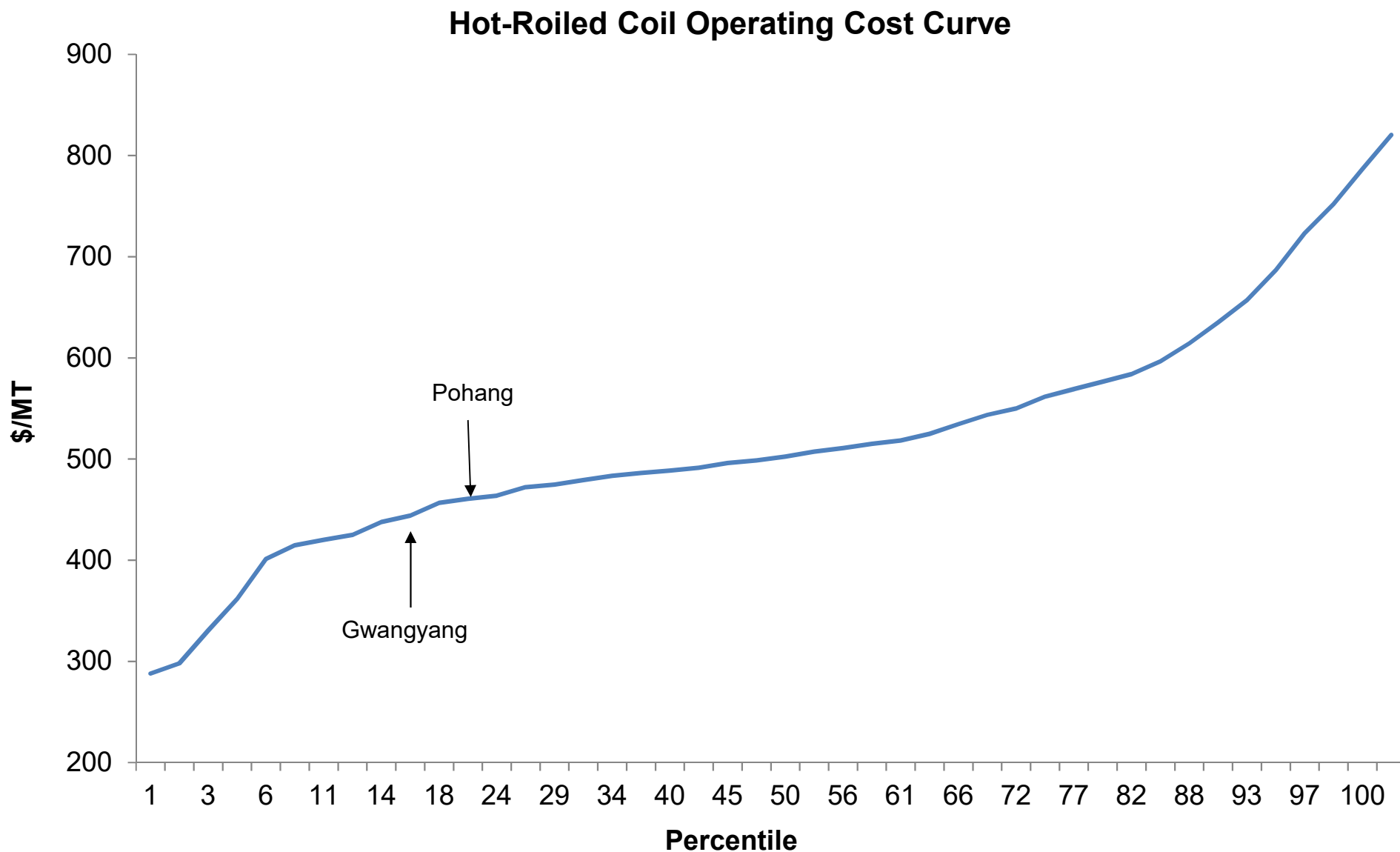
- Useful for a highly uncertain world
- Identifies key uncertainties and possible resolution
  - Timing of effective vaccine/treatment
  - Multilateral or unilateral strategies for addressing Pandemic
- Develops internally consistent models for each state of the world
- Uses existing understanding of phenomena to predict outcomes
- Helps crystallize uncertainties and facilitates forecasting

## ARGA: Base and Stress Case Scenarios

---

- Base: Vaccine/treatment in 2021
  - Global GDP 5% hit
  - Reduced productivity as specialization suffers
  - Multilateral cooperation
  
- Stress: Vaccine/treatment delayed to 2024
  - Global GDP 8-10% hit
  - Value chains regionalized
  - Competitive response as populism rises

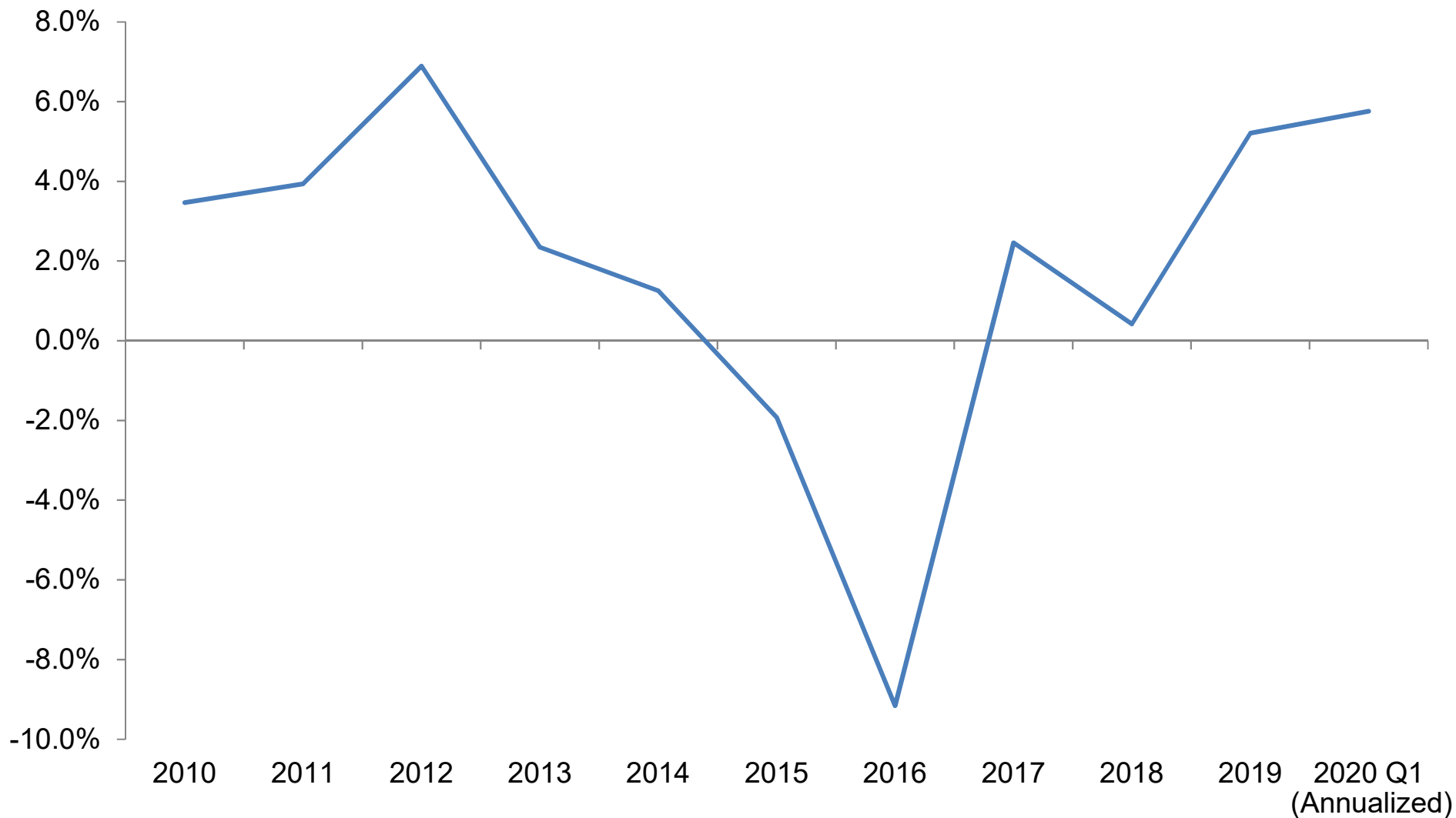
## POSCO: Low Cost Producer



Source: Metal Bulletin Research. See Material Disclosures.

## POSCO: Non-Steel Businesses Improving

**ROIC Non-steel Business**



Source: Company Reports, ARGA Analysis. See Material Disclosures.

## POSCO: Base & Stress Case Assumptions

---

- Base Case
  - 1.5% revenue growth (in-line with inflation)
  - No incremental volumes
  - Operating margin of 6.3%
  - 6% pre-tax return on combination of existing capital invested in non-steel businesses and future excess capital generated
  - DDM upside is ~140%.
  
- Stress Case
  - No growth (no price or volume)
  - Margin compression
  - 2% pre-tax return on existing capital invested in the non-steel businesses and future excess capital generated
  - DDM upside is ~25%

# Research: DDM Example\*

ARGA Investment Management - Dividend Discount Model												
Company Name:	SK Telecom Co. Ltd.			Country/Region:	South Korea							
Ticker :	KOSE:A017670			Market Type:	Emerging Market							
Trading Currency:	KRW			Country Discount Rate Basis:	Local Bond Yield							
Filing Currency:	KRW			Valuation Date:	13-Dec-16							
Sector:	Telecommunication Services			Fiscal Year End:	30-Dec-16							
<b>Forecasts</b>												
	<u>Dec-15</u>	<u>FY1</u>	<u>FY2</u>	<u>FY3</u>	<u>FY4</u>	<u>FY5</u>	<u>FY6</u>	<u>FY7</u>	<u>FY8</u>	<u>FY9</u>	<u>FY10</u>	
EPS	20,988	21,841	22,659	18,280	20,829	23,382	24,376	25,406	26,462	27,546	28,656	
DPS	10,000	11,224	12,111	9,150	9,718	10,115	10,545	10,990	11,447	11,916	12,396	
BVPS	213,142	221,255	227,444	239,737	251,253	265,316	276,654	290,379	304,554	319,188	334,288	
ROE	10.1%	6.2%	6.8%	7.6%	8.4%	9.0%	8.9%	8.8%	8.8%	8.7%	8.6%	
<b>Time Structure</b>				<b>Years</b>	<b>Constant Stage Drivers</b>							
Explicit Stage				5	Normalized EPSG							4.2%
Constant Stage				10	Normalized PO							43.3%
Transition Stage				5	Implied Marginal ROE							7.4%
<b>Discount Rate</b>				<b>Stock Specific Risk (Jump)</b>								
Bond Yield				2.2%	BS Strength							Average
Inflation Differential				-1.6%	EPS Forecastability							Average
Market ERP				4.5%	EPS Variability							Average
Stock Specific Risk				0.0%	Stock Specific Risk							0.0%
<b>Beginning Discount Rate</b>				<b>6.8%</b>	<b>Model Notes / Error Flags</b>							
<b>Terminal Calculation</b>												
Terminal Discount Rate				6.8%								
ROE Premium				0.0%								
Terminal ROE				6.8%								
Terminal PO Ratio				50.0%								
Terminal EPSG (Implied)				3.4%								
<b>DDM Intrinsic Value Results</b>				<b>Comments</b>								
Explicit Stage				46,198	12%							
Constant Stage				67,509	17%							
Transition Stage				29,647	8%							
Terminal Stage				179,101	46%							
<b>DDM Intrinsic Value</b>				<b>390,626</b>	<b>83%</b>							
Stock Price				232,500								
<b>Return to DDM Intrinsic Value</b>				<b>68.0%</b>								

\*Any discussion of securities as described herein is presented as supplemental information only and there is no assurance that the firm will make any investments in the same or similar security identified. Investments are subject to change without notice, may not be representative of current holdings, and are subject to risk. It should not be assumed that an investment in the security identified, or in accounts with the security identified, was or will be profitable. See Material Disclosures.

## Research: Iterative Method of Risk Analysis\*

---

**DDM provides framework for using experience and judgment**

*Illustration: SK Telecom Co. Ltd.*

**Base case:** Recent ROE and capital management initiatives continue

Return to intrinsic value = **68.0%**

**Stress case 1:** Regulators do not permit > 9% ROE in perpetuity

Return to intrinsic value = **25.8%**

**Stress case 2:** Management does poor job of reinvesting cash

Return to intrinsic value = **-4.8%**

\*Any discussion of securities as described herein is presented as supplemental information only and there is no assurance that the firm will make any investments in the same or similar security identified. Investments are subject to change without notice, may not be representative of current holdings, and are subject to risk. It should not be assumed that an investment in the security identified, or in accounts with the security identified, was or will be profitable. See Material Disclosures.

## Global Industry Consistency

---

### Consistency in Analytical Framework

- Forecasting based on same set of variables (demographics, etc.)
- Global context in evaluating assumptions and observed trends

### Consistency in Assumptions

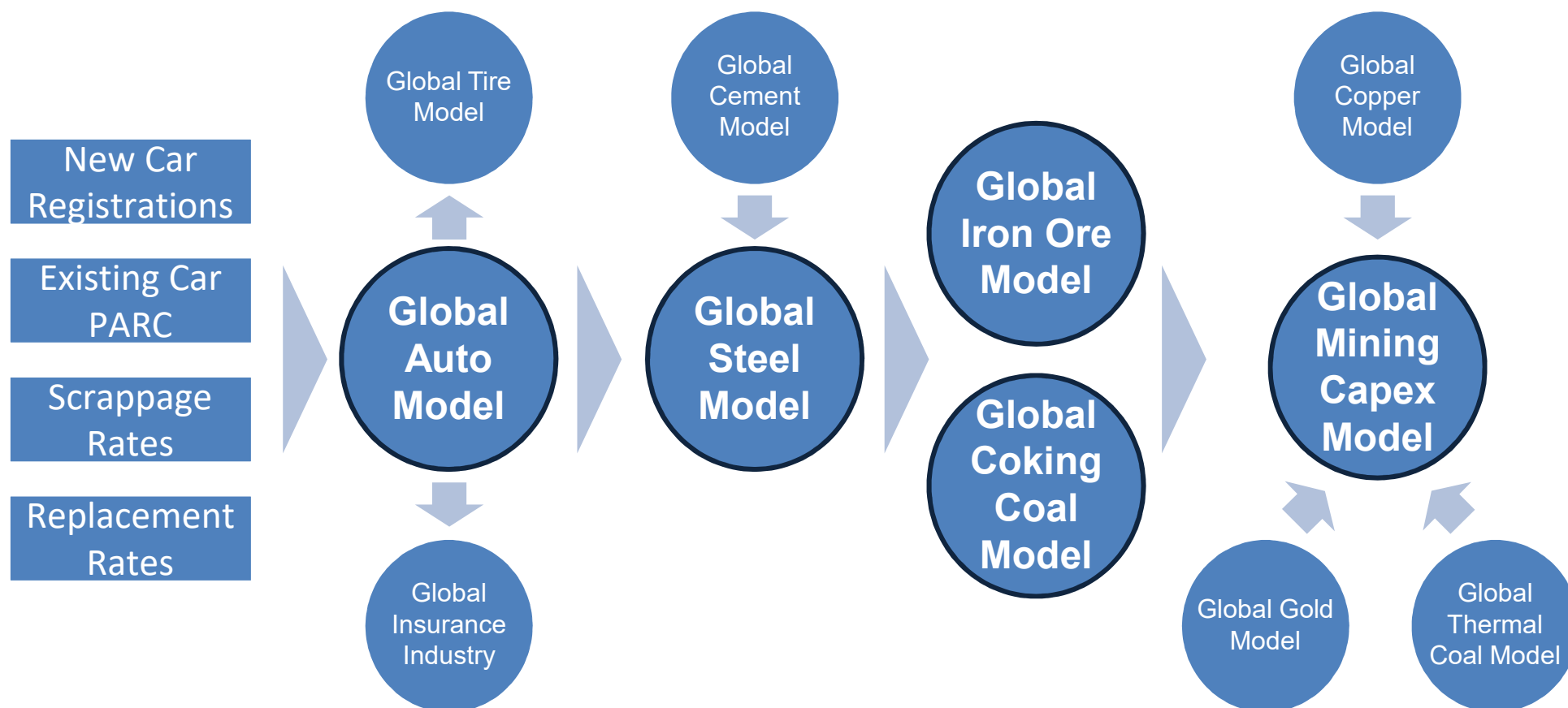
- Output of global industry models serve as inputs to other industry models & individual company models
  - Consistent forecast inputs in context across industries & companies
  - “Sanity” check on assumptions

### Consistency in Accounting

- Off-balance sheet liabilities
- Company-specific accounting policies
  - Capitalization of expenses
  - Revenue recognition, etc.

## Illustrative Integration of ARGA Global Industry Models

- Consistent inputs between global industry models allows for true comparability in evaluating company forecasts and valuations



## Technology Industry Models: Shared Across Companies

- Industry models are broadly leveraged

### Global Technology Industry Models

	Server	PC / Tablet	Smartphone / Handset	Networking	Storage	Printer / Copier	Digital Camera	IT Services	Telco Capex
<b>Hardware &amp; EMS</b>									
F5 Networks	■								
Cisco Systems	■			■					■
Ericsson									■
EMC	■				■				
Hewlett-Packard	■	■			■	■		■	
Ricoh						■			
Canon						■	■		
Nikon						■	■		
Xerox						■		■	
Samsung Electronics		■	■						
Blackberry			■						
<b>Jabil Circuit</b>	■	■	■	■	■	■			■
Flextronics	■	■	■	■					
Quanta Computer	■	■	■						
Compal Electronics	■	■	■						
Wistron	■	■	■						

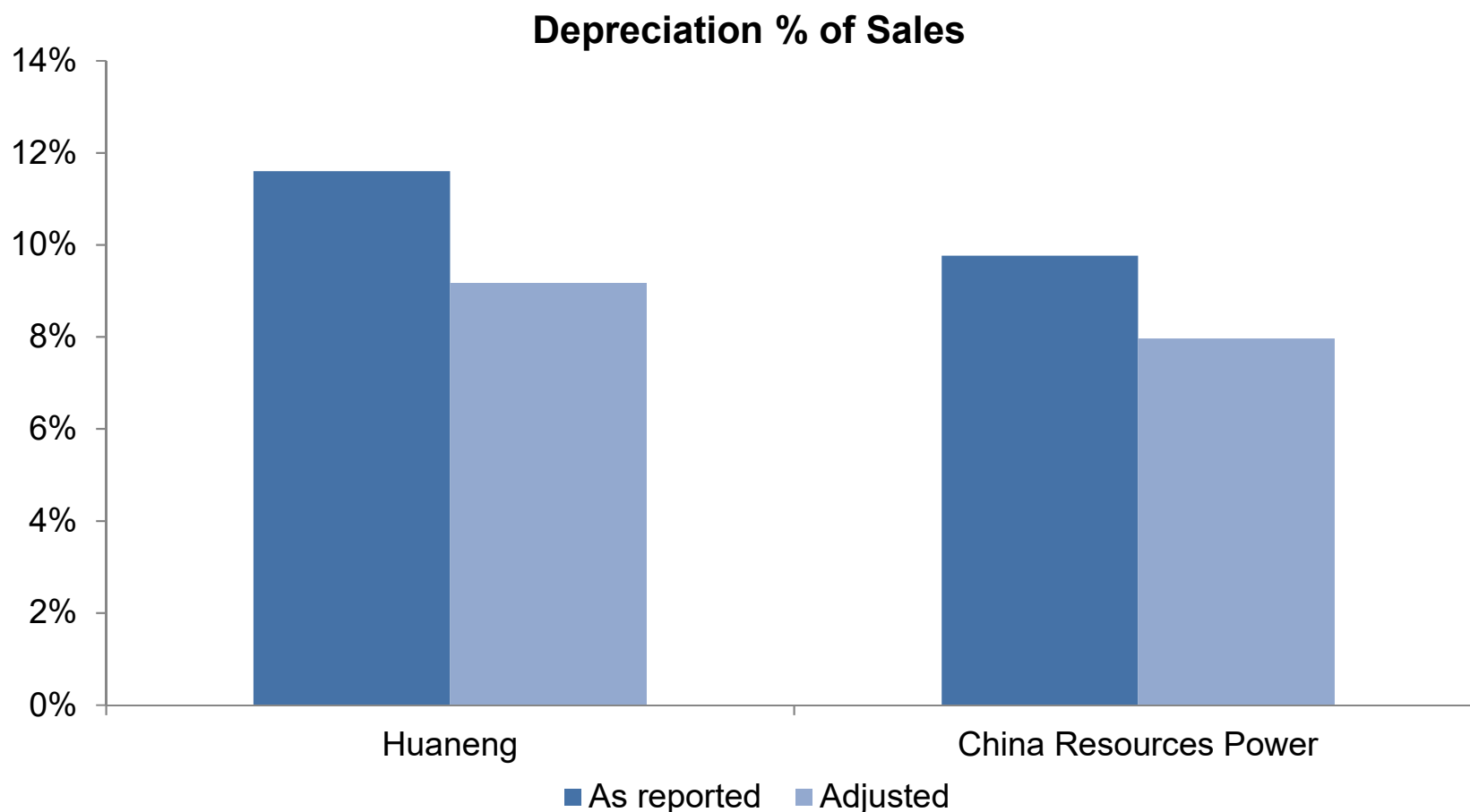
## Leveraging Industry Models in Company Analysis

- Jabil Circuit example

<u>End Market</u>	<u>Exposure</u>	<u>Global Industry Model</u>	<u>Normalized Growth</u>
Peripherals (imaging/printing)	8%	Global Printer	1.7%
Consumer Devices	38%	Global Handset, Global PC/Tablet	7.0%
Servers & Storage	12%	Global Server, Storage	3.0%
Networking	16%	Global Networking Equip	4.2%
Telecommunications	6%	Global Telco Capex	-2.5%
Automotive	1%	Global Auto	7.2%
Medical	7%	Global Healthcare Spend	7.5%
Industrial	13%	Sub-segment models	4.6%
<b>Total</b>	<b>100%</b>		<b>4.8%</b>

## Accounting Consistency: Chinese Utility Depreciation

- Chinese power utilities depreciate steam turbines within 15 years, much faster than global industry practices
- Adjusting to a 25 year schedule allows for a more accurate presentation of operational performance and better comparability with global peers



Source: Company Reports, ARGA Analysis, See Material Disclosures.

## **Appendix B: Global Outlook**

## Value Performance (9/30/2020)

### Global Equity

	QTD	YTD	1 Year	3 Year (Annualized)	5 Year (Annualized)	7 Year (Annualized)
MSCI ACWI Value	4.0%	-14.5%	-8.0%	-1.2%	5.0%	3.4%
MSCI ACWI Growth	12.0%	18.1%	30.2%	15.3%	15.4%	12.1%
<b>Value Performance</b>	<b>-8.0%</b>	<b>-32.7%</b>	<b>-38.2%</b>	<b>-16.6%</b>	<b>-10.5%</b>	<b>-8.7%</b>

### International Equity

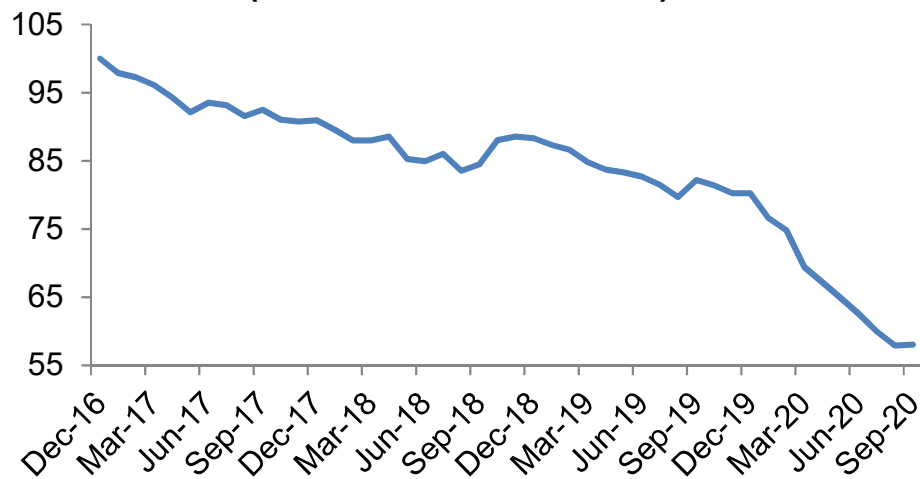
	QTD	YTD	1 Year	3 Year (Annualized)	5 Year (Annualized)	7 Year (Annualized)
MSCI ACWI ex US Value	2.3%	-17.6%	-10.8%	-5.1%	2.1%	-0.3%
MSCI ACWI ex US Growth	10.2%	7.3%	17.5%	7.3%	10.1%	6.5%
<b>Value Performance</b>	<b>-7.9%</b>	<b>-24.9%</b>	<b>-28.4%</b>	<b>-12.4%</b>	<b>-8.0%</b>	<b>-6.8%</b>

### Emerging Markets Equity

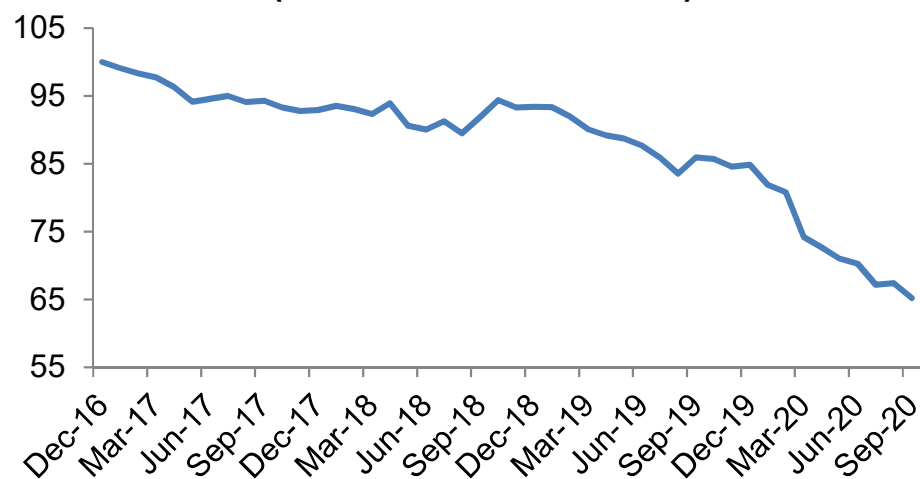
	QTD	YTD	1 Year	3 Year (Annualized)	5 Year (Annualized)	7 Year (Annualized)
MSCI EM Value	4.7%	-14.2%	-5.7%	-2.9%	4.4%	-0.1%
MSCI EM Growth	14.2%	12.4%	27.8%	7.4%	13.2%	7.4%
<b>Value Performance</b>	<b>-9.5%</b>	<b>-26.6%</b>	<b>-33.5%</b>	<b>-10.3%</b>	<b>-8.8%</b>	<b>-7.6%</b>

## Recent Value Performance (9/30/2020)

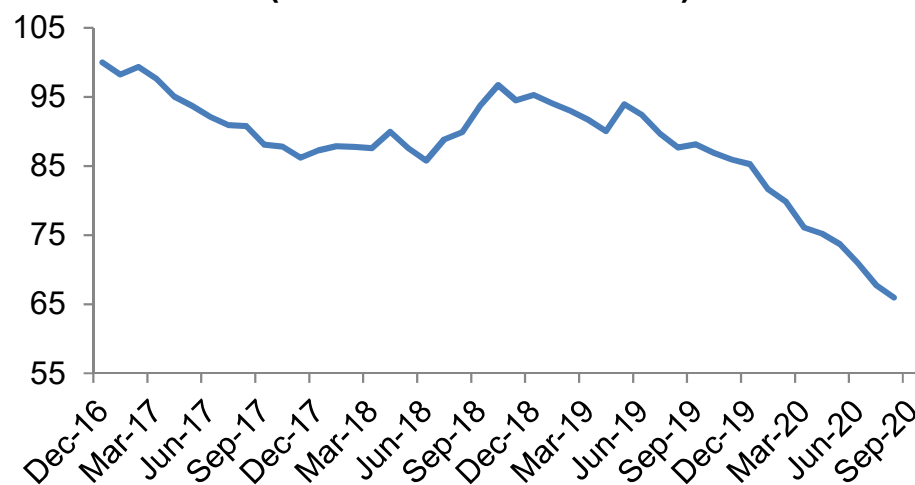
**ACWI Value/Growth  
(December 2016 = 100)**



**ACWI ex-US Value/Growth  
(December 2016 = 100)**

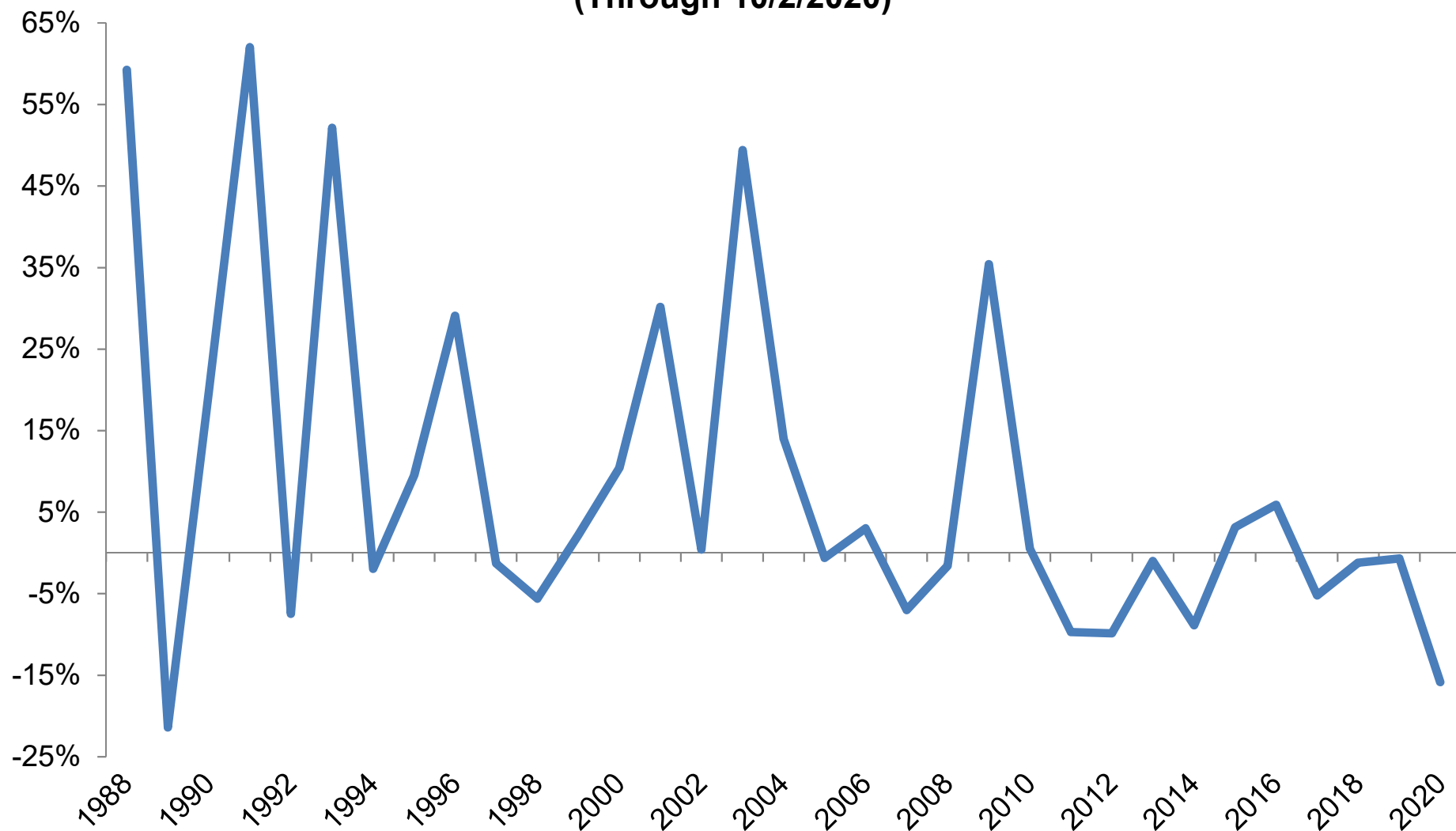


**EM Value/Growth  
(December 2016 = 100)**



## Value Opportunity in Emerging Markets

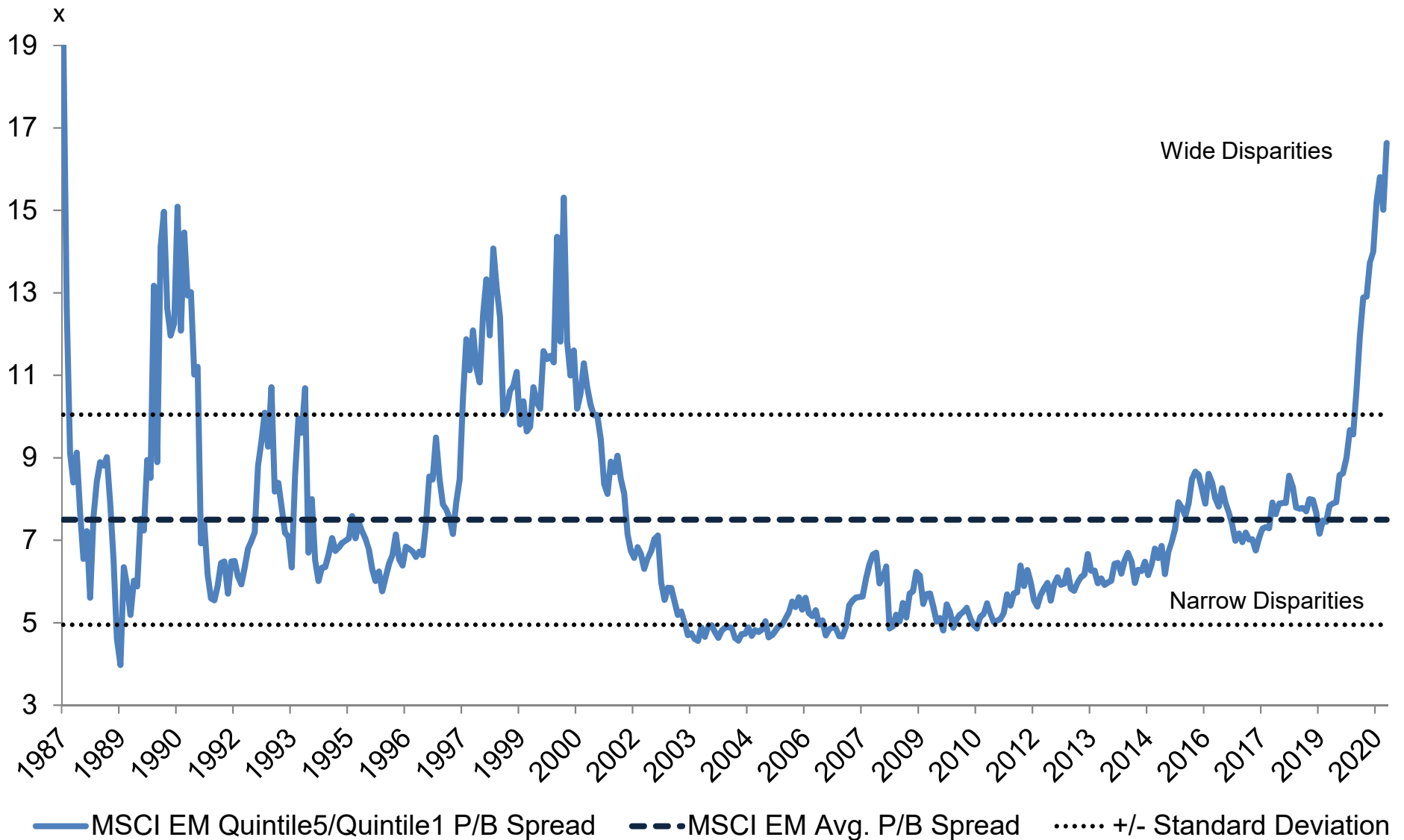
**Emerging Markets P/B Quintile 1 vs. Average  
(Through 10/2/2020)\***



**\*Annual returns of the cheapest P/B quintile of stocks vs. the average in the MSCI EM universe for one year forward periods ending March 31 (and stub period through 10/2/2020).**

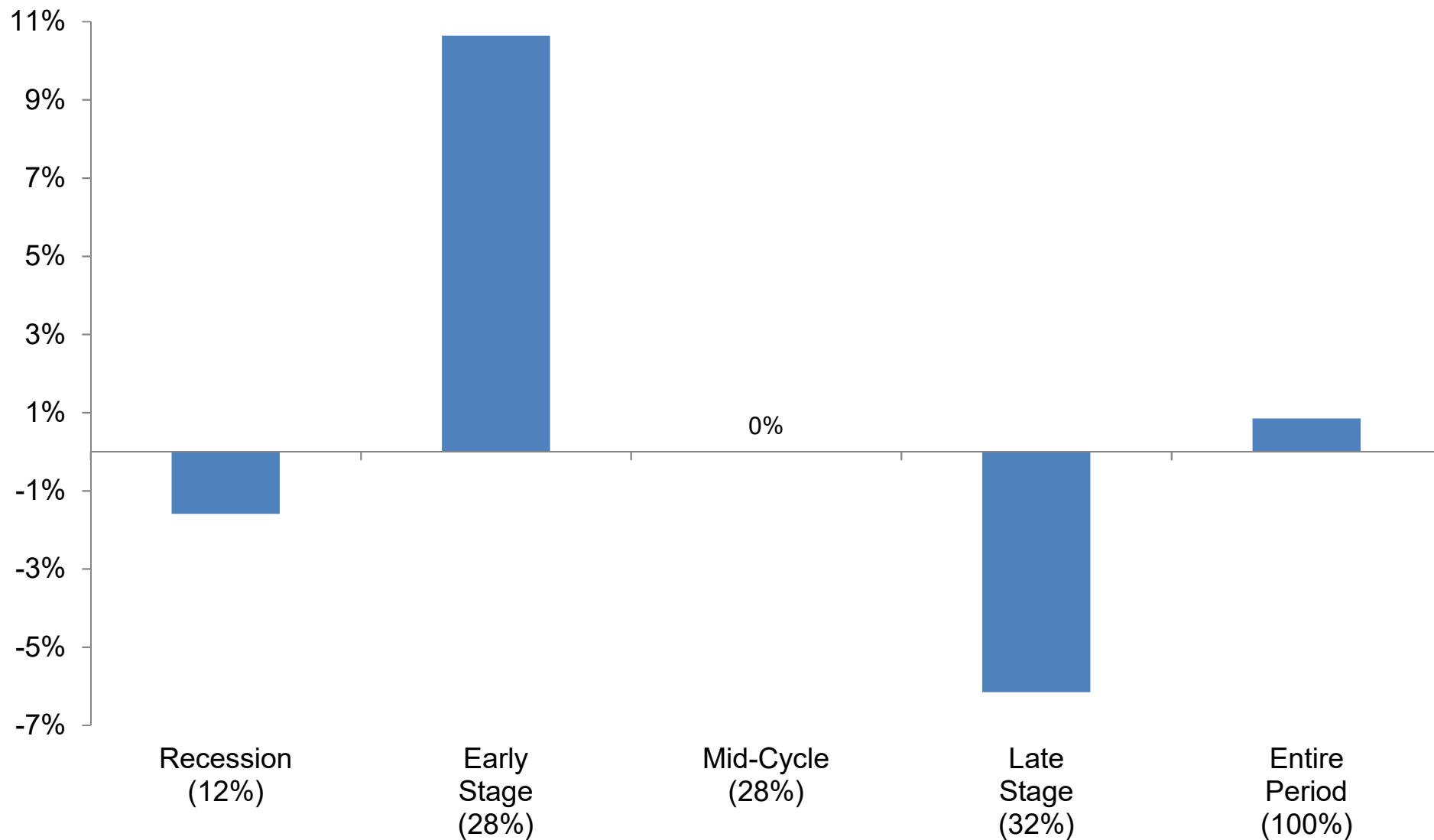
Source: Sanford C. Bernstein, ARGA Analysis. See Material Disclosures.

# EM Spreads Widen Sharply



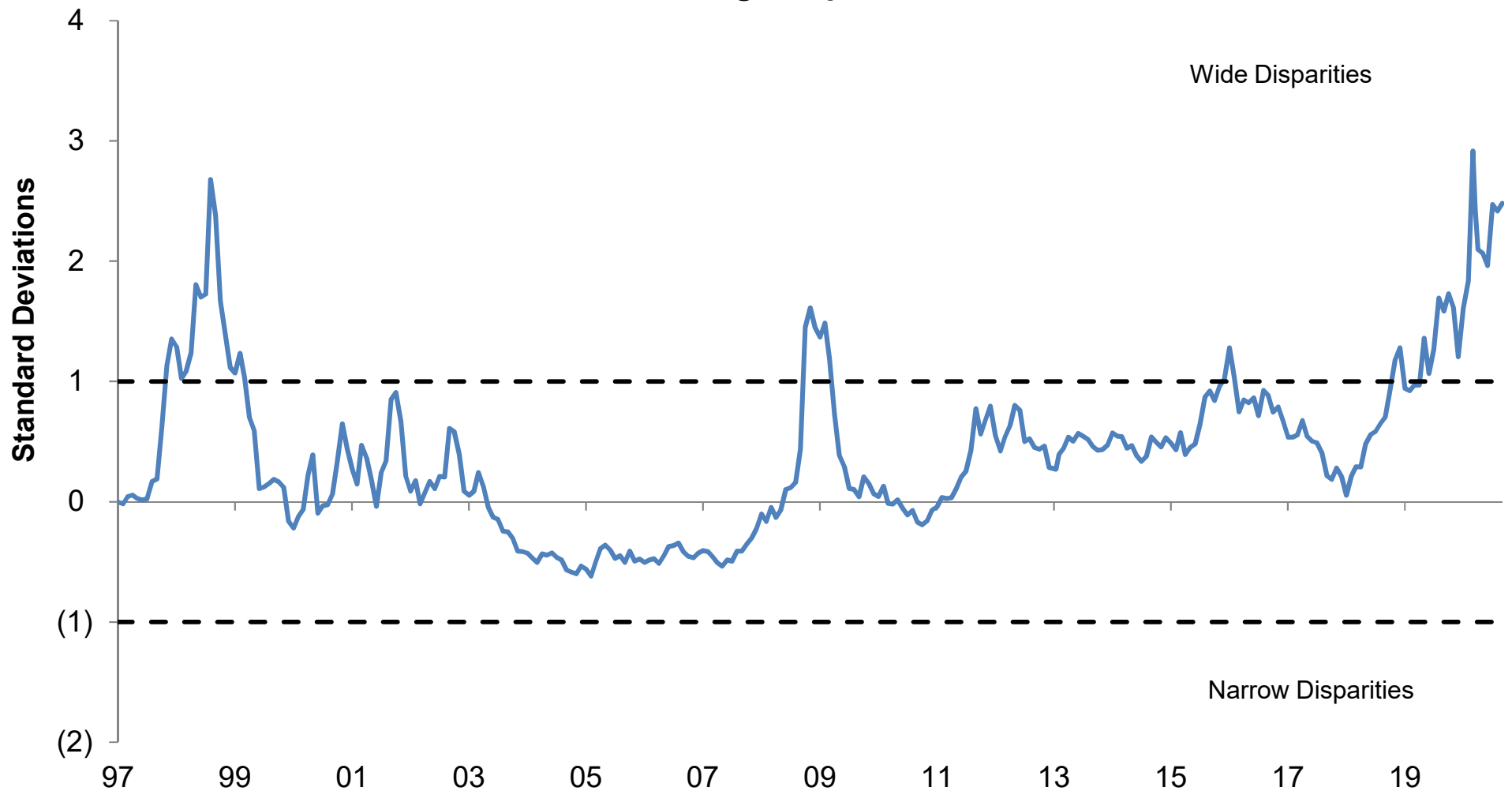
## Sharp Value Outperformance Early Cycle

**Annual Avg. Excess Return Value vs. Growth Since 1975**



# EM Valuation Spreads Wide

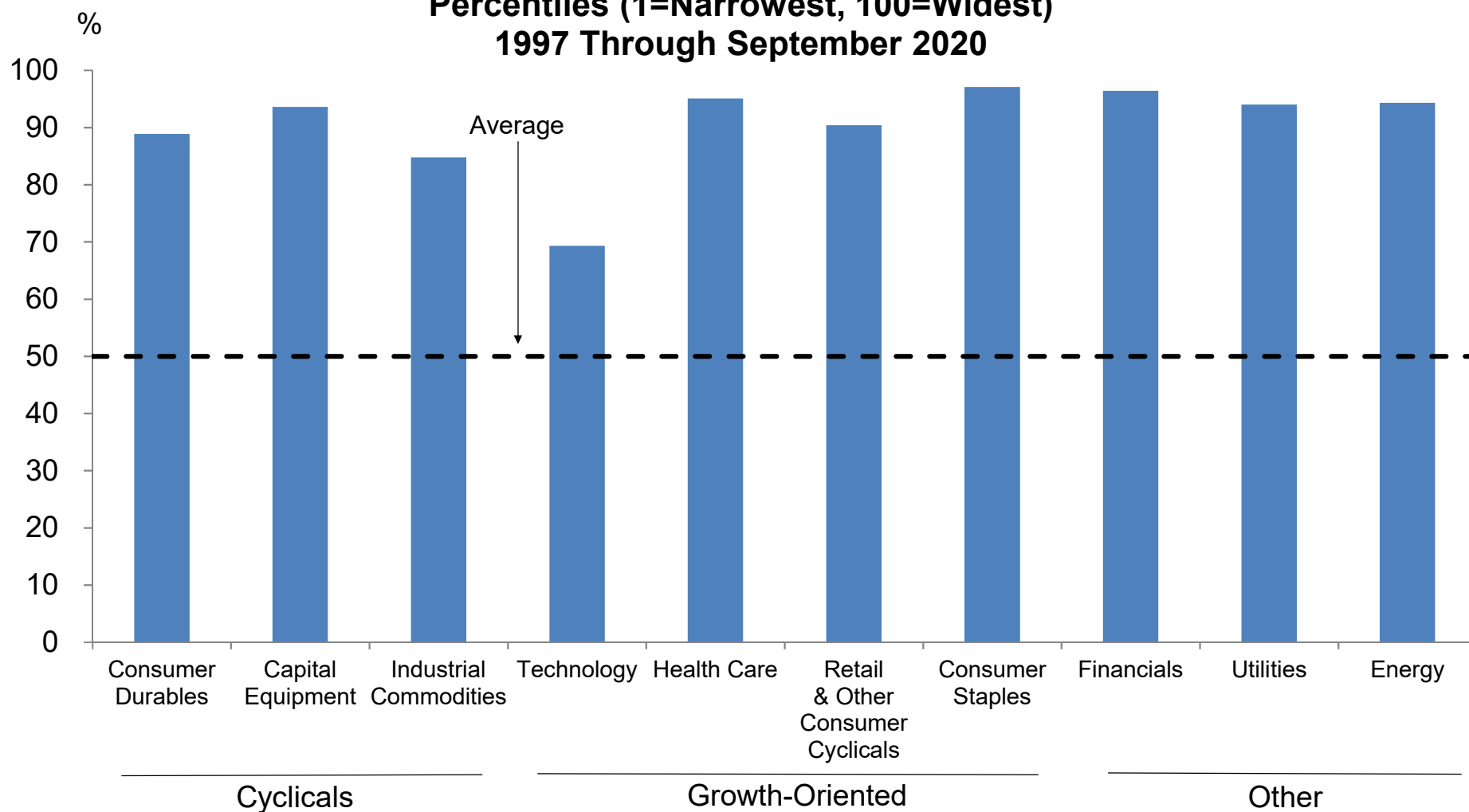
**Emerging Markets  
Valuation Spreads  
The Top Quintile Compared to the Market Average  
1997 Through September 2020**



Source: Empirical Research Partners Analysis, ARGA Analysis. See Material Disclosures.

## EM Valuation Spreads Historically Wide Across Sectors

**Emerging Markets  
Intra-Sectoral Valuation Spreads<sup>1</sup>  
Current Readings Compared to Long-Term History  
Percentiles (1=Narrowest, 100=Widest)  
1997 Through September 2020**

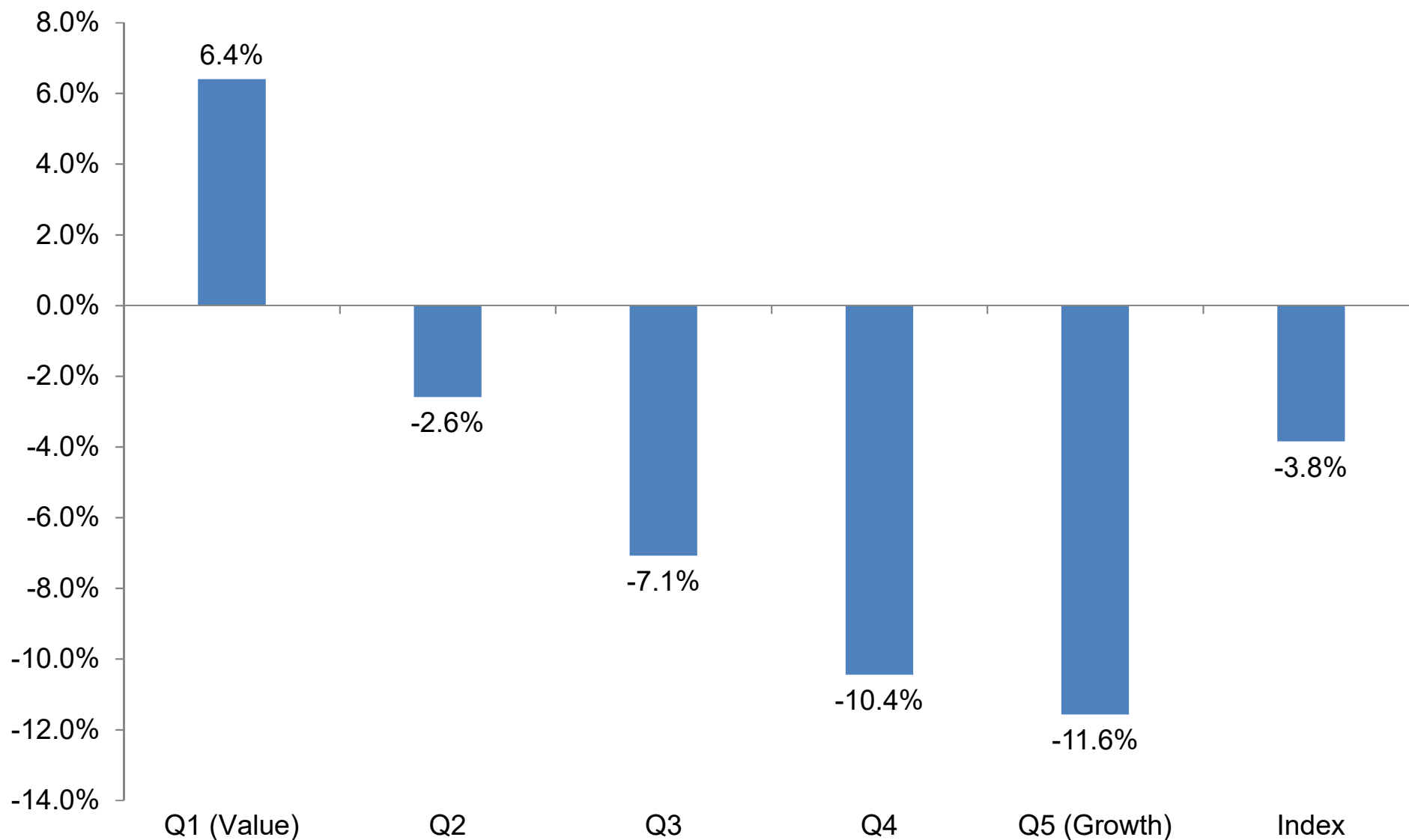


<sup>1</sup>Top quintile compared to the sector average.

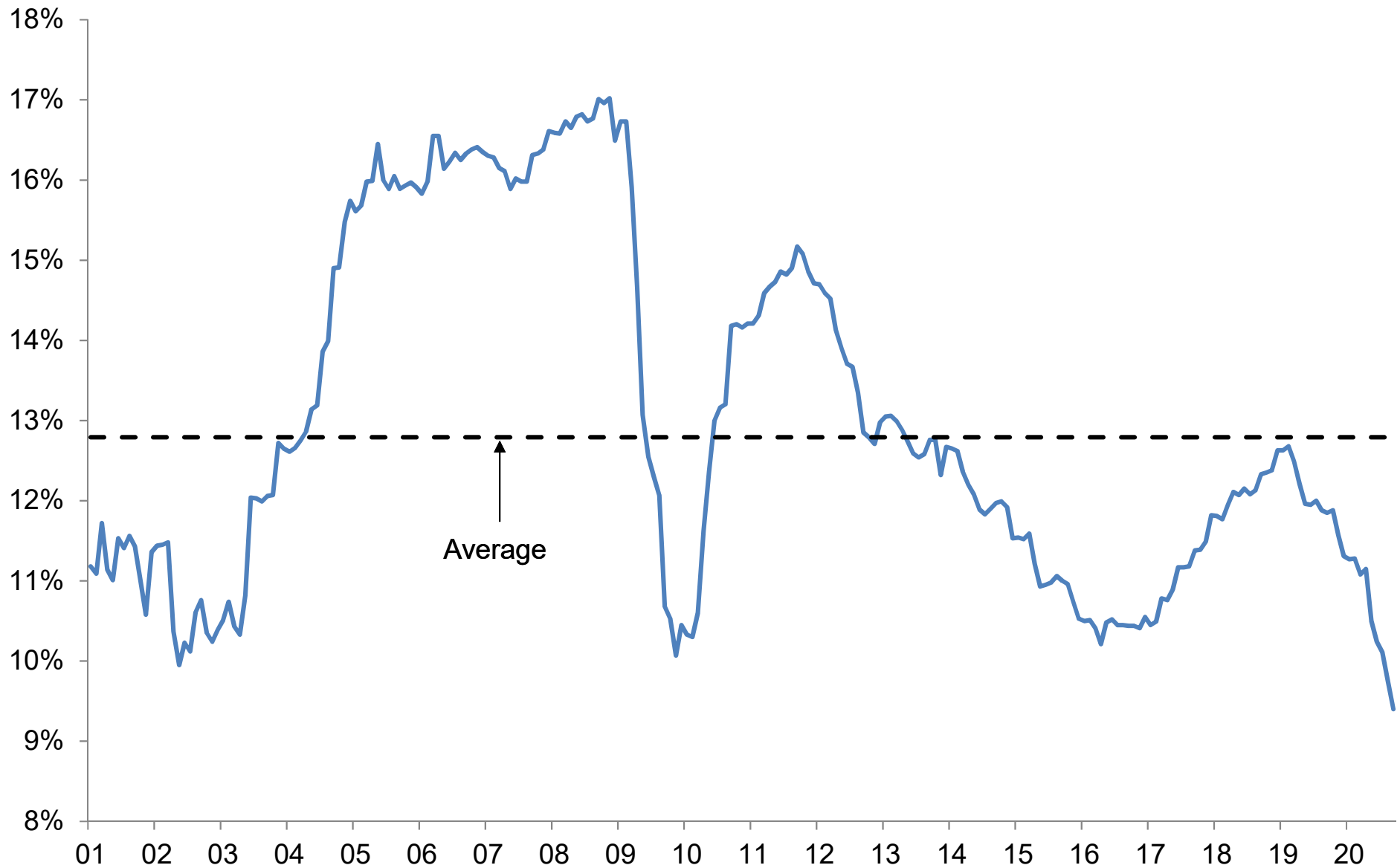
Source: Empirical Research Partners Analysis, ARGA Analysis. See Material Disclosures.

## EM Valuation Mean Reversion

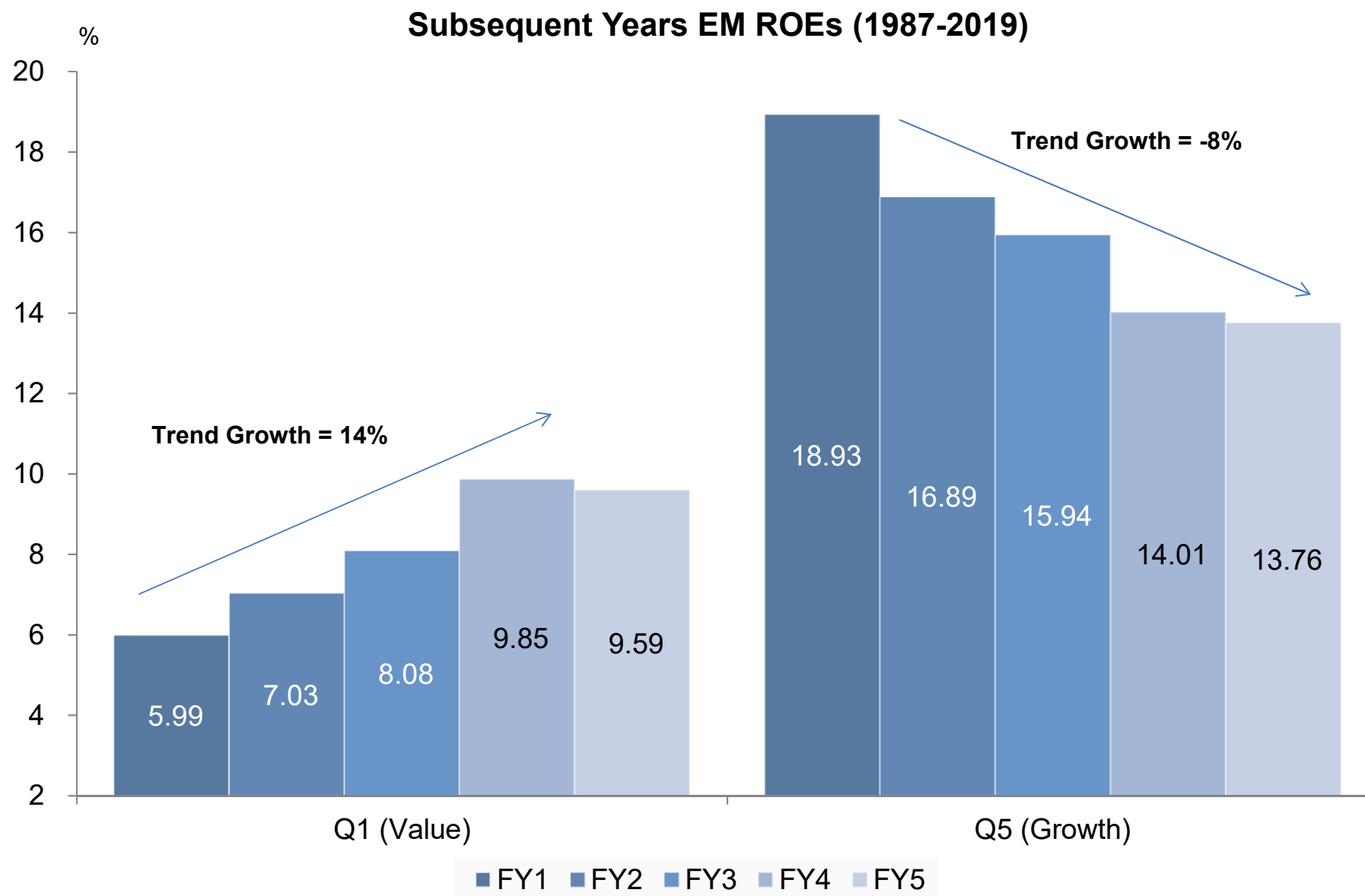
Change in P/B Fwd. 12M vs. Current P/B (1987-2020)



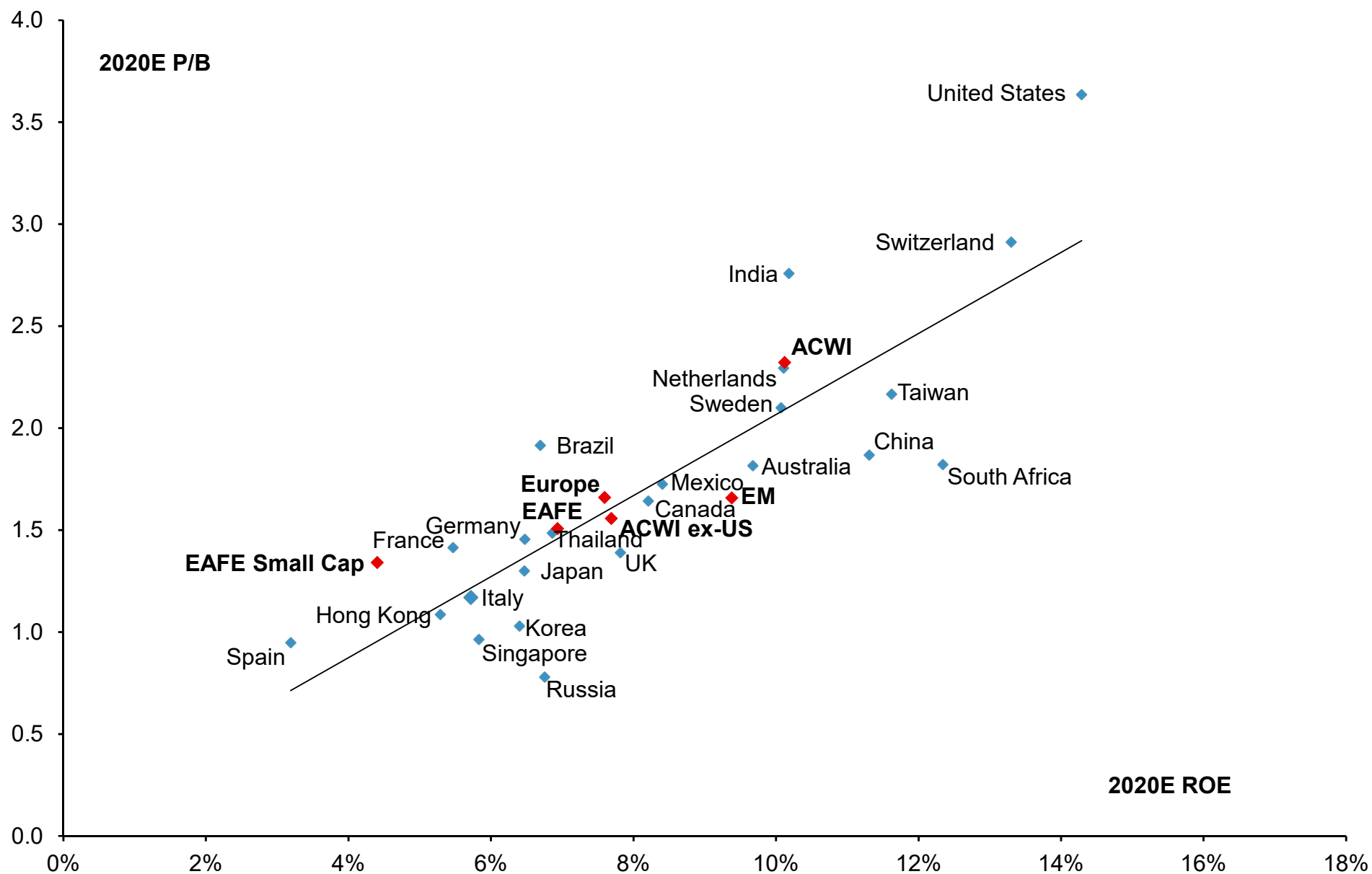
## EM Return on Equity Should Recover



## EM Earnings Mean Reversion



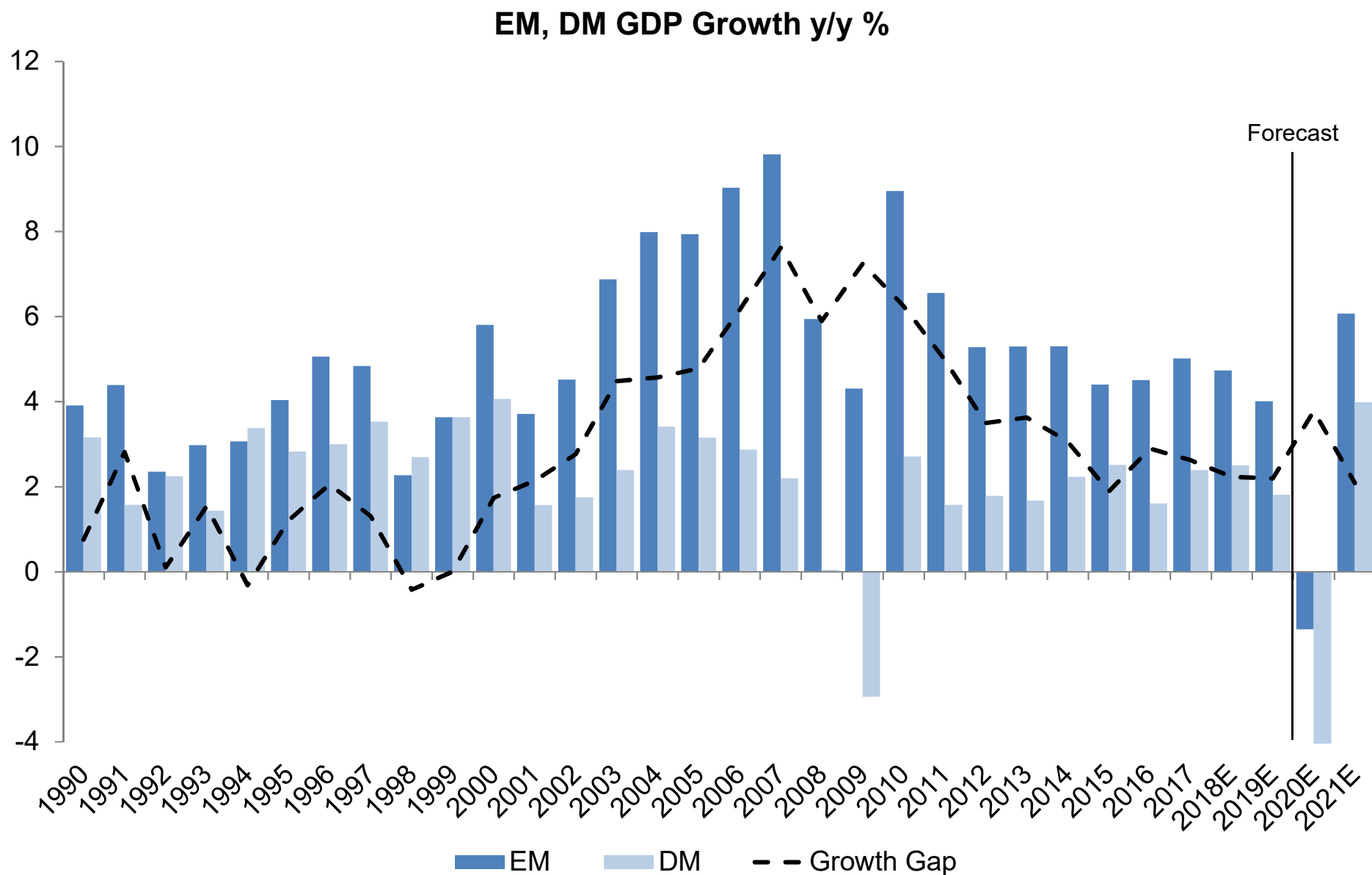
## Several EM Countries Appear Undervalued



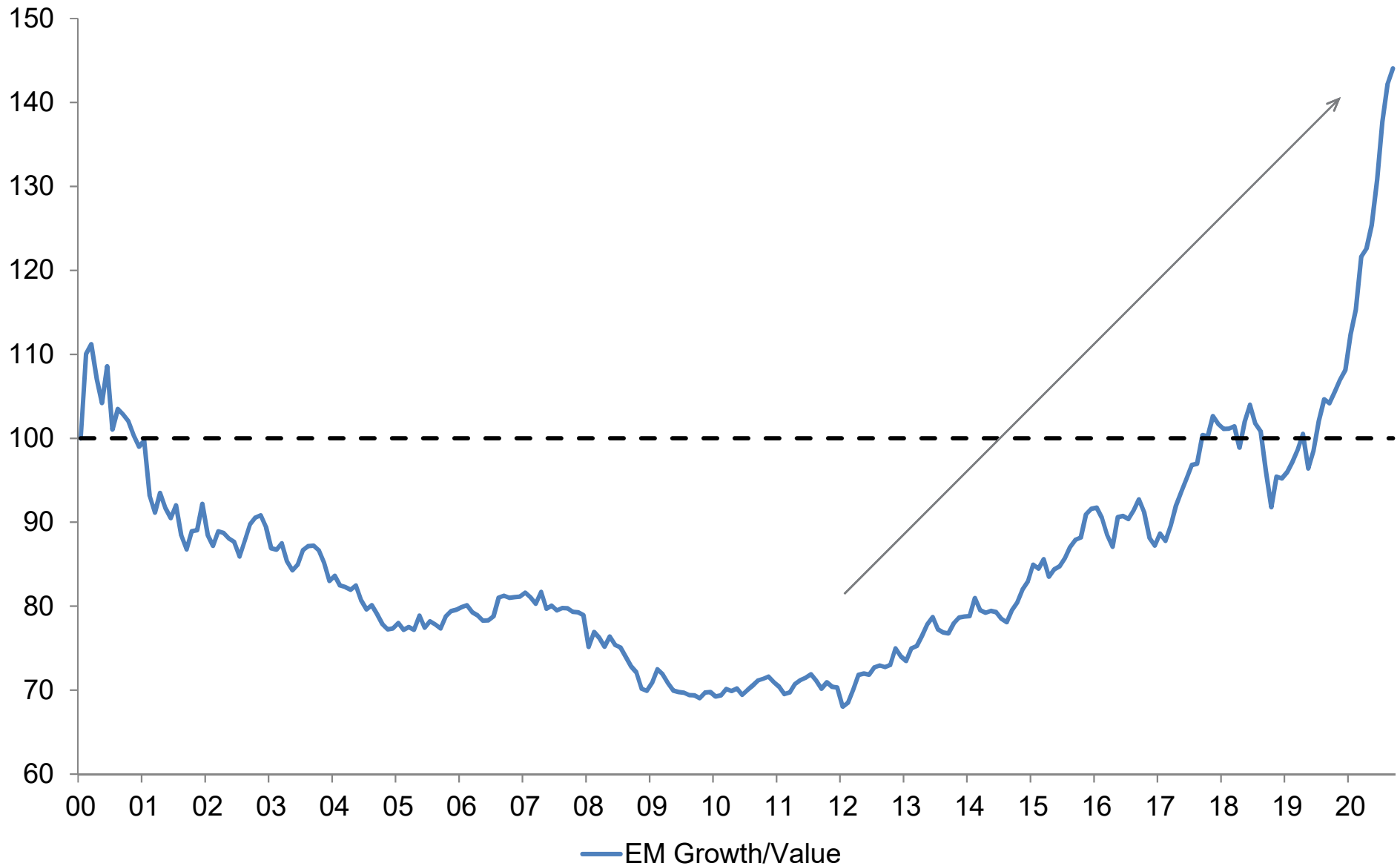
As of 10/5/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

## EM-DM Growth Gap



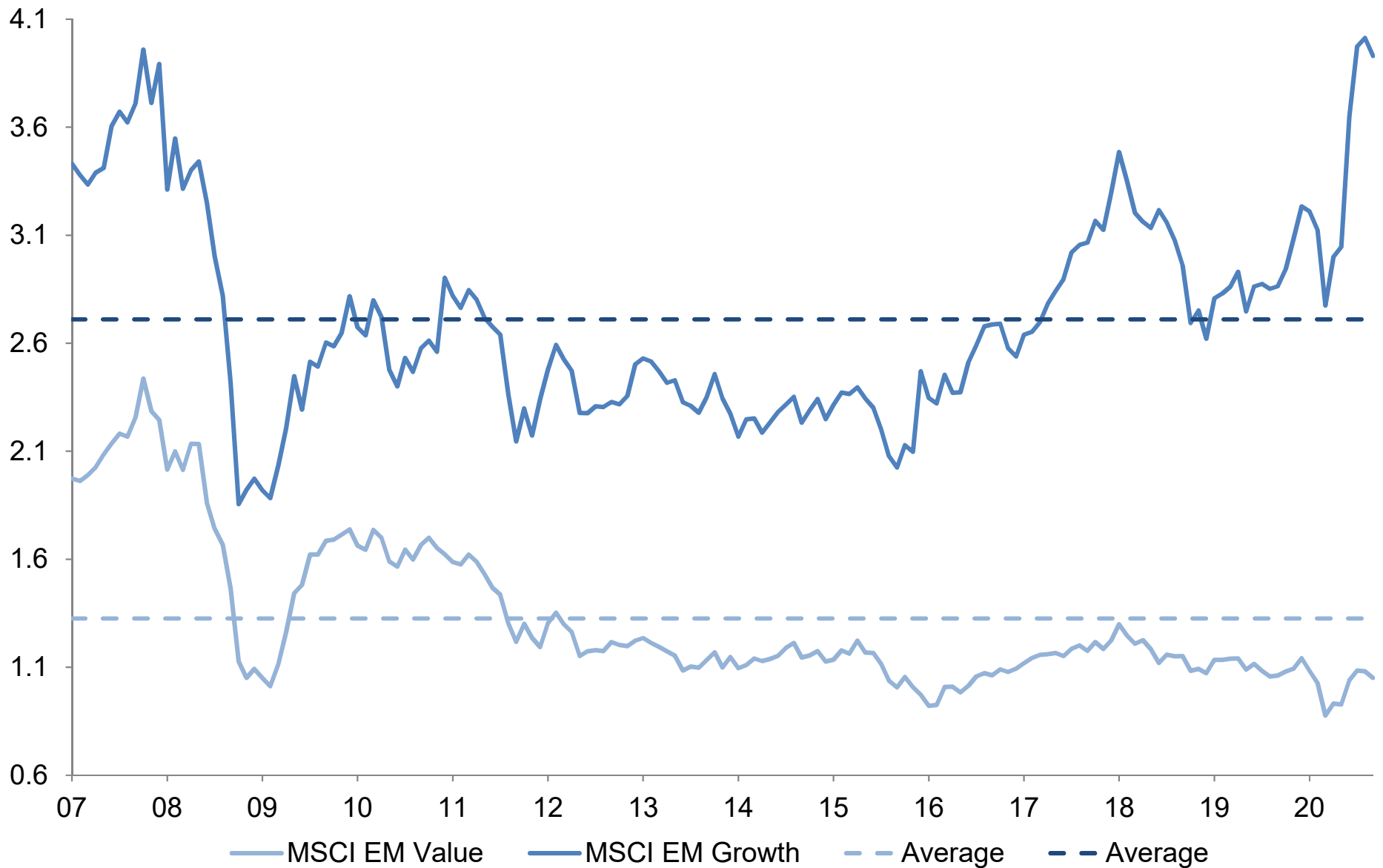
## MSCI EM Growth/Value Performance



As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

## EM P/B: Growth vs Value



As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

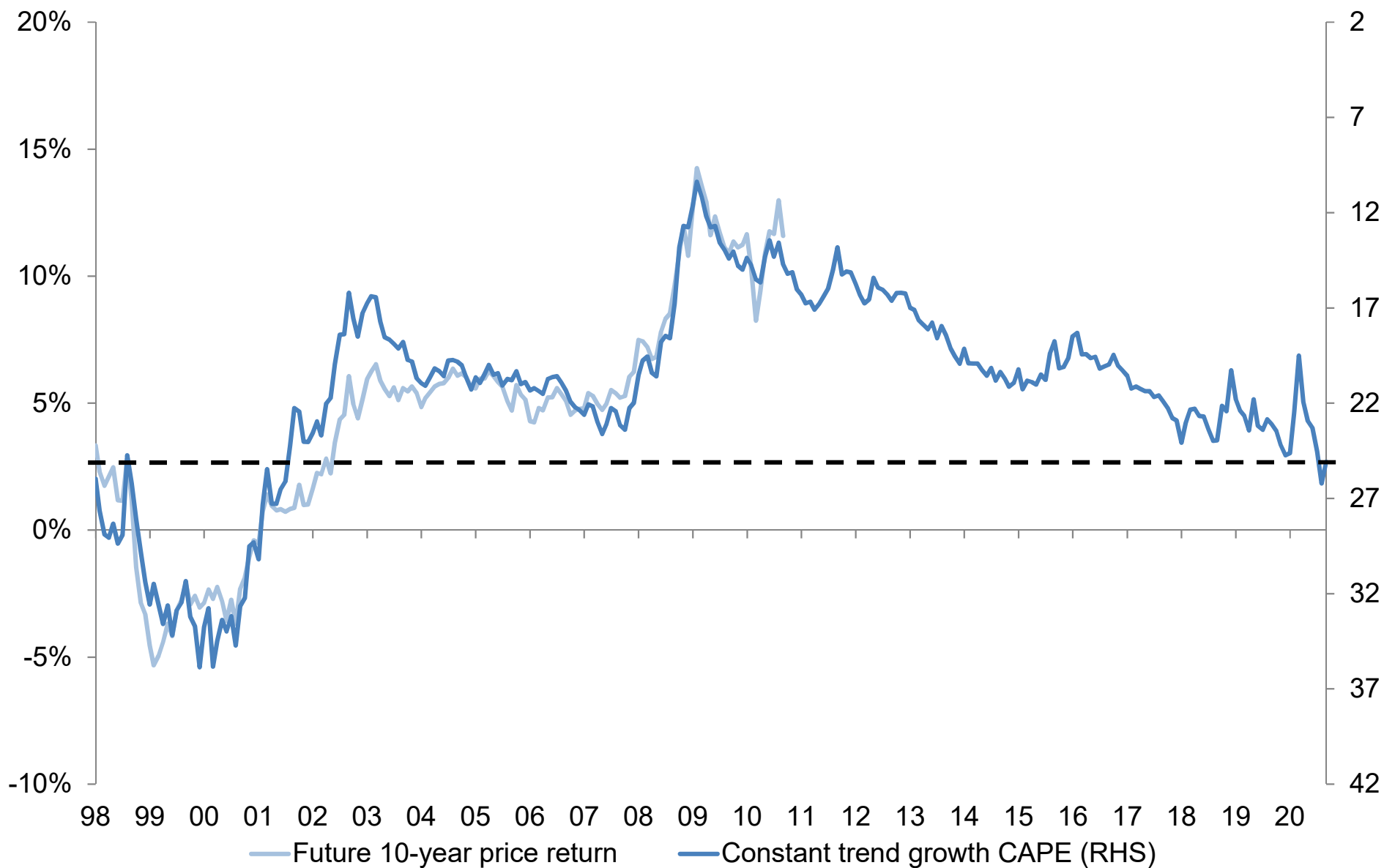
## EM CAPE Significantly Lower than US CAPE



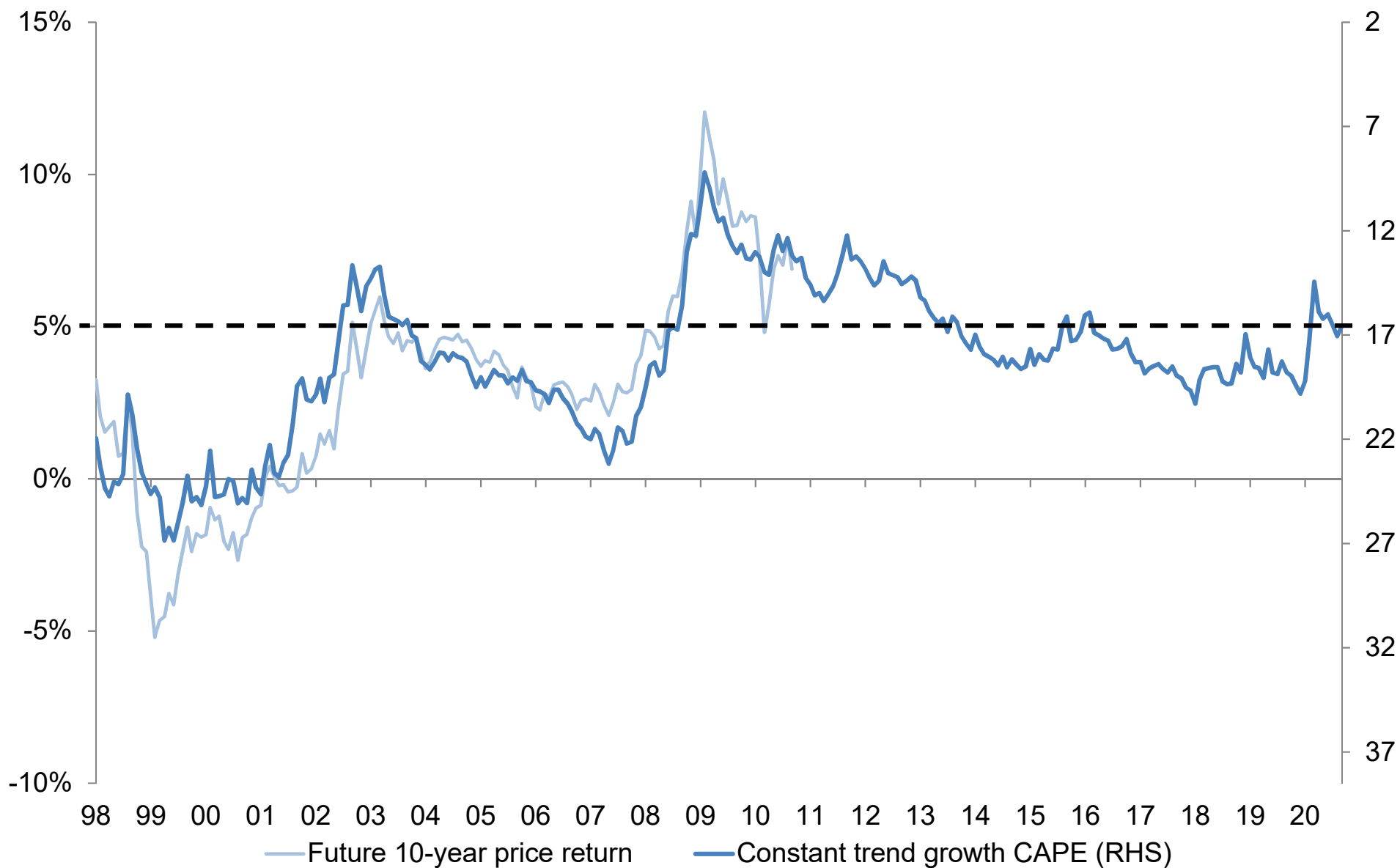
As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

## US Future 10-Year Real Returns



## US Value Future 10 Year Returns Likely ~5%



As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

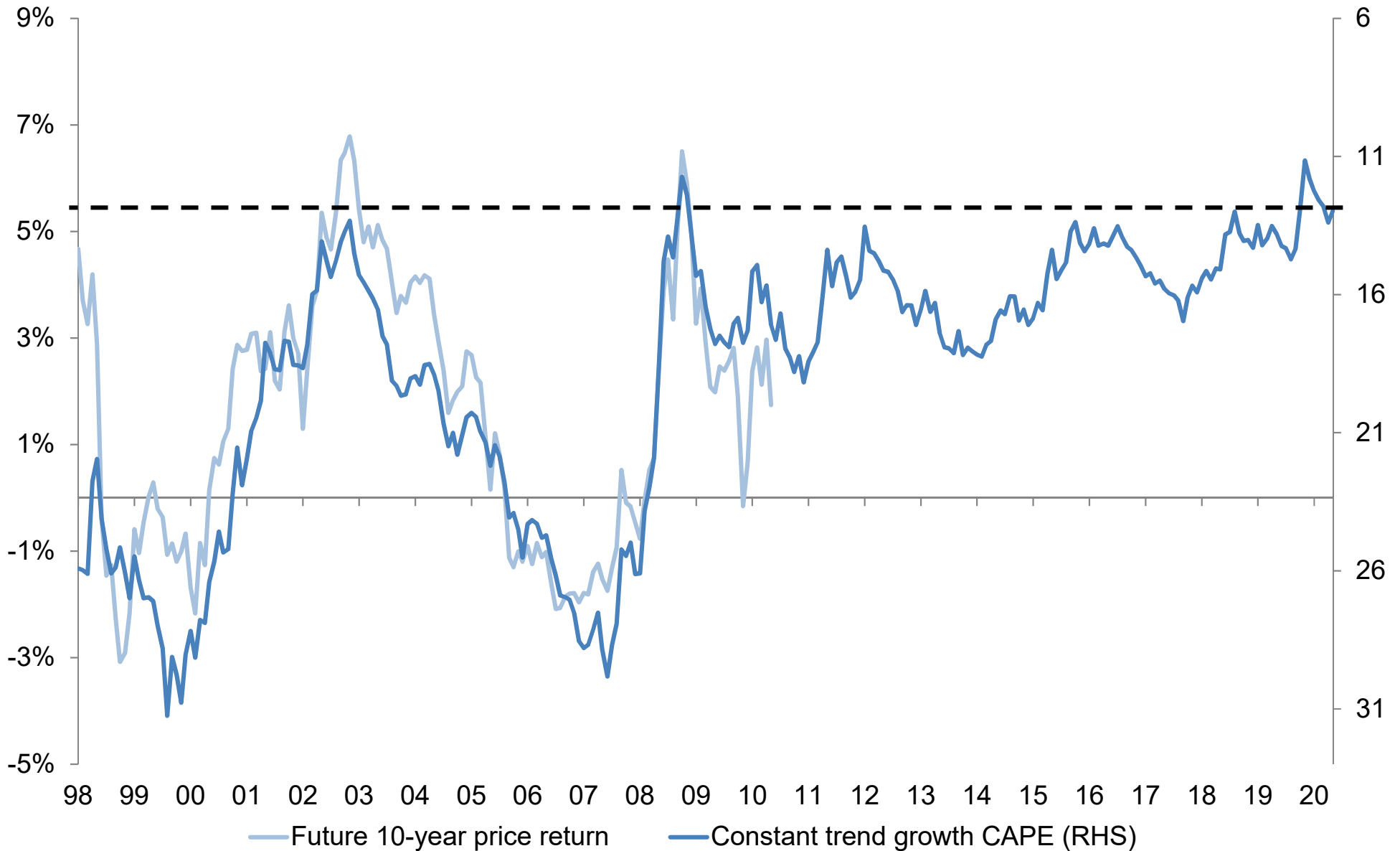
## US Growth Future 10 Year Returns Likely ~0%



As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARG A Analysis. See Material Disclosures.

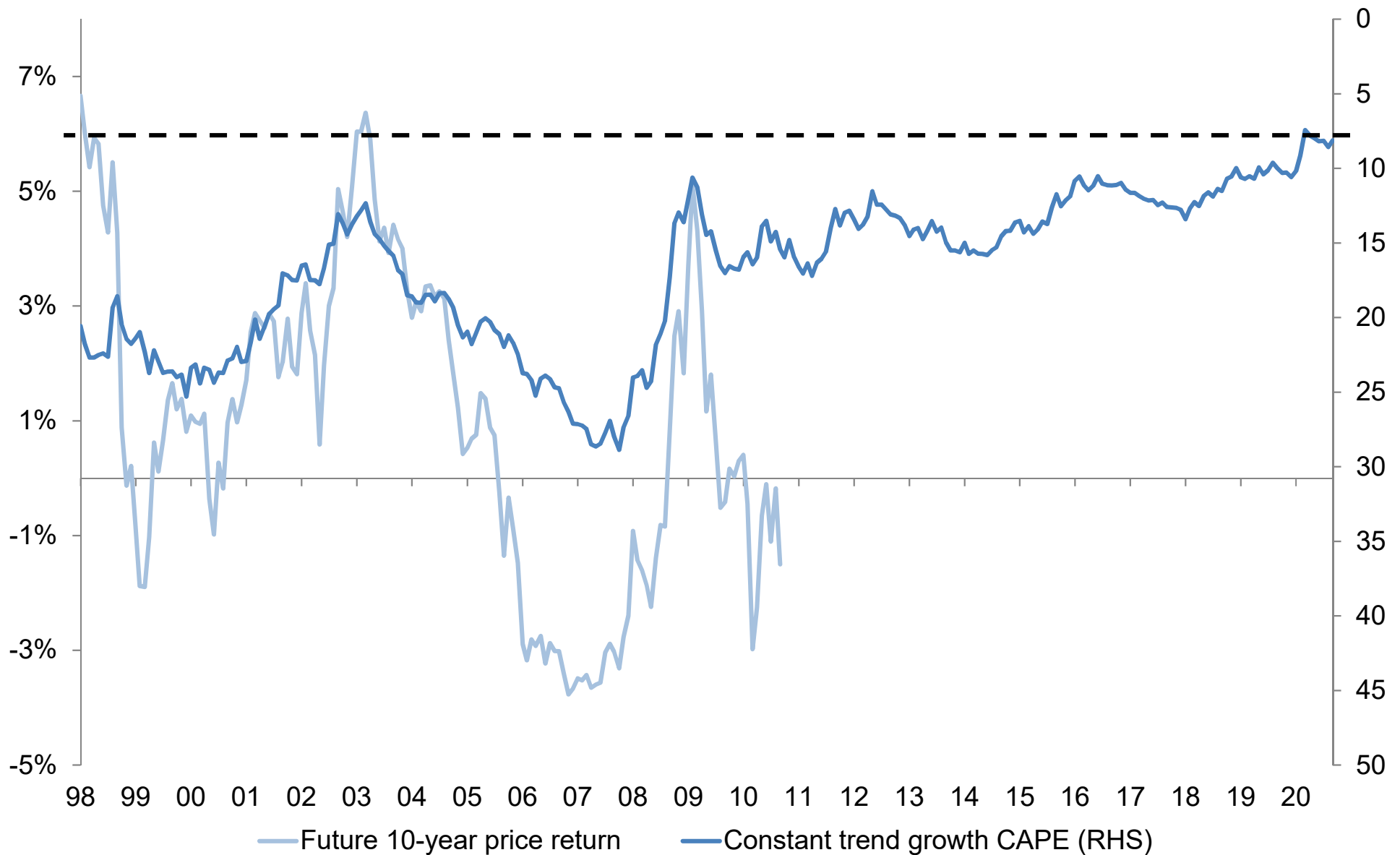
## EAFE Future 10-Year Real Returns



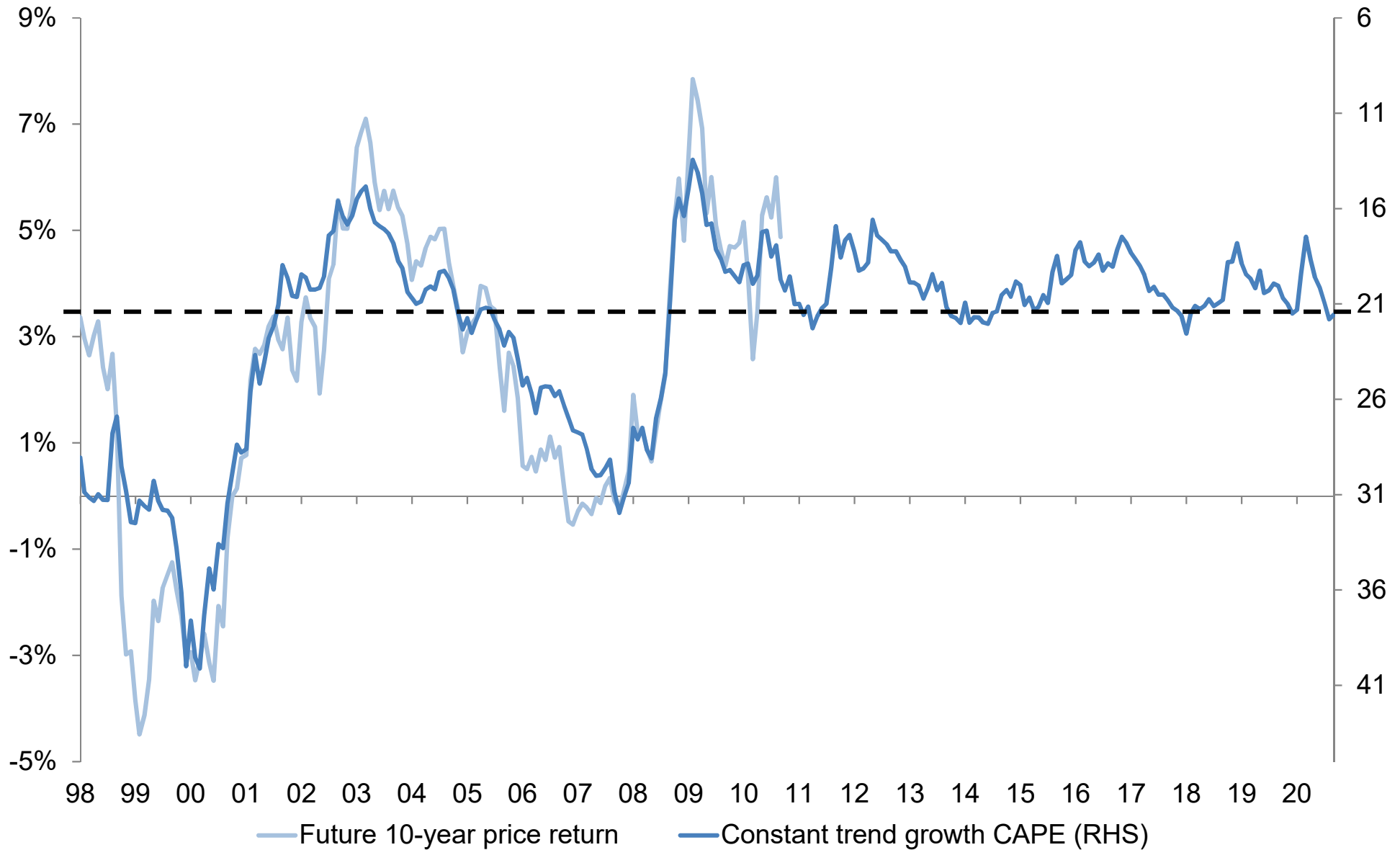
As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARG A Analysis. See Material Disclosures.

## EAFE Value Future 10 Year Returns Likely ~6%



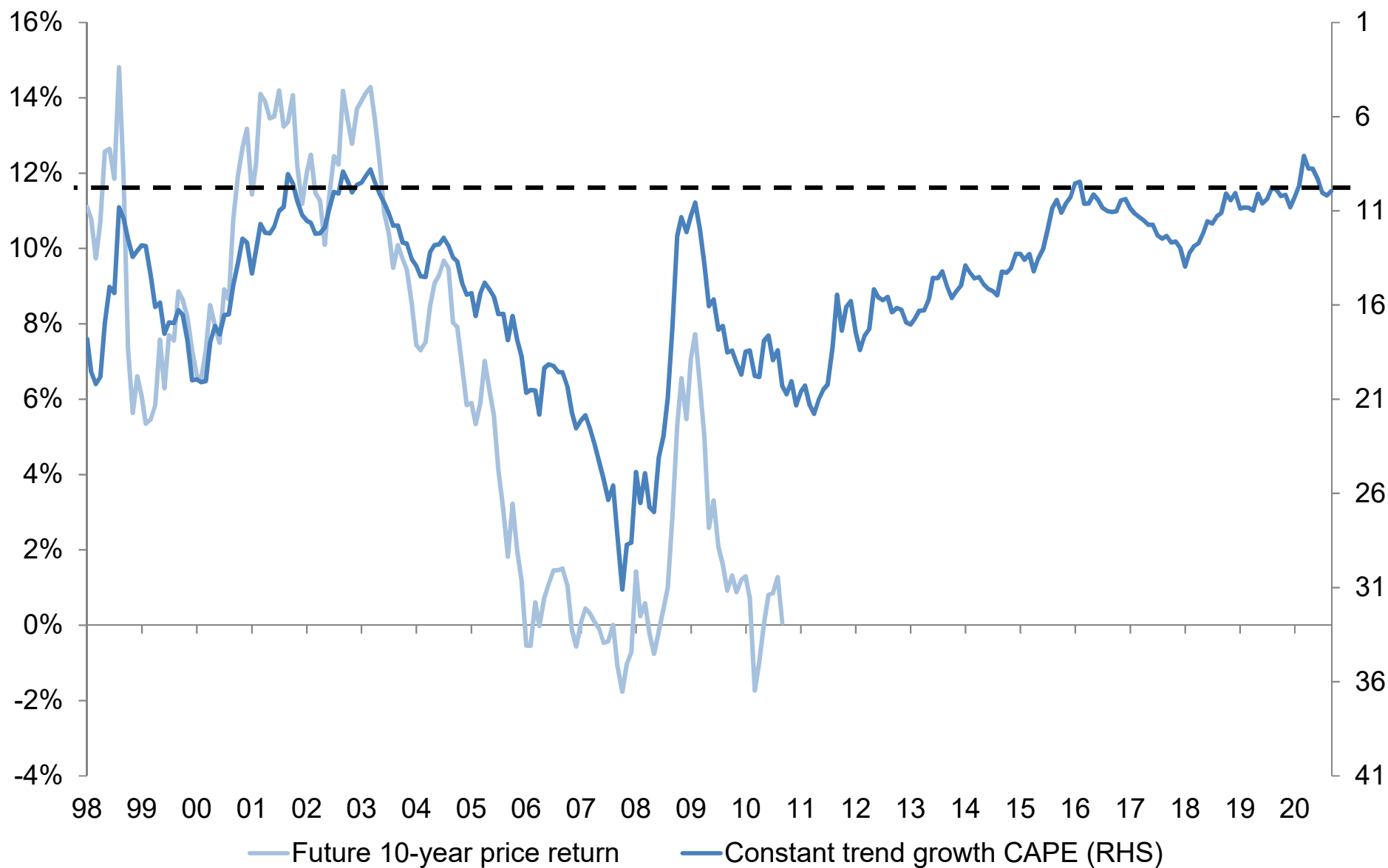
## EAFE Growth Future 10 Year Returns Likely ~3%



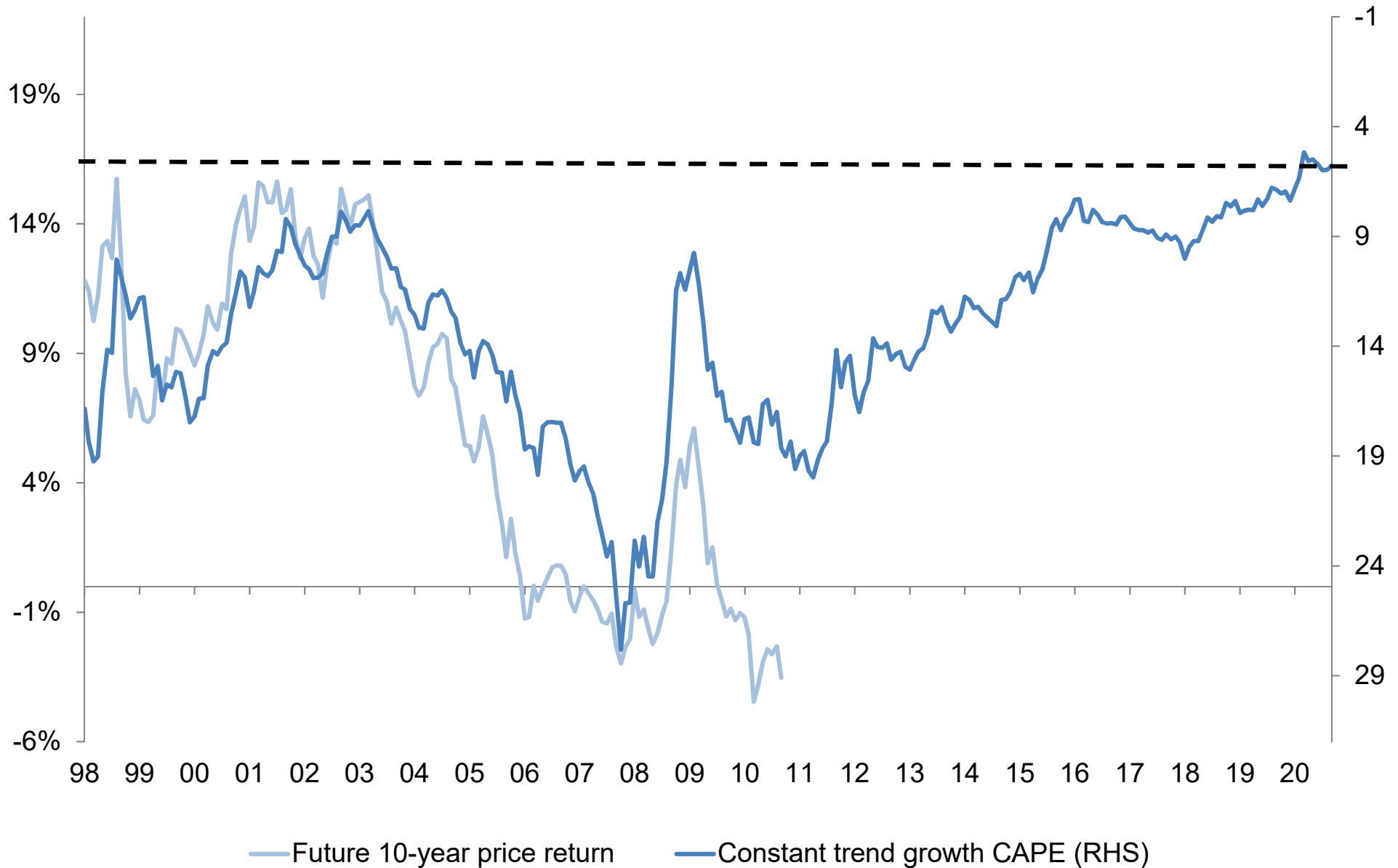
As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARGA Analysis. See Material Disclosures.

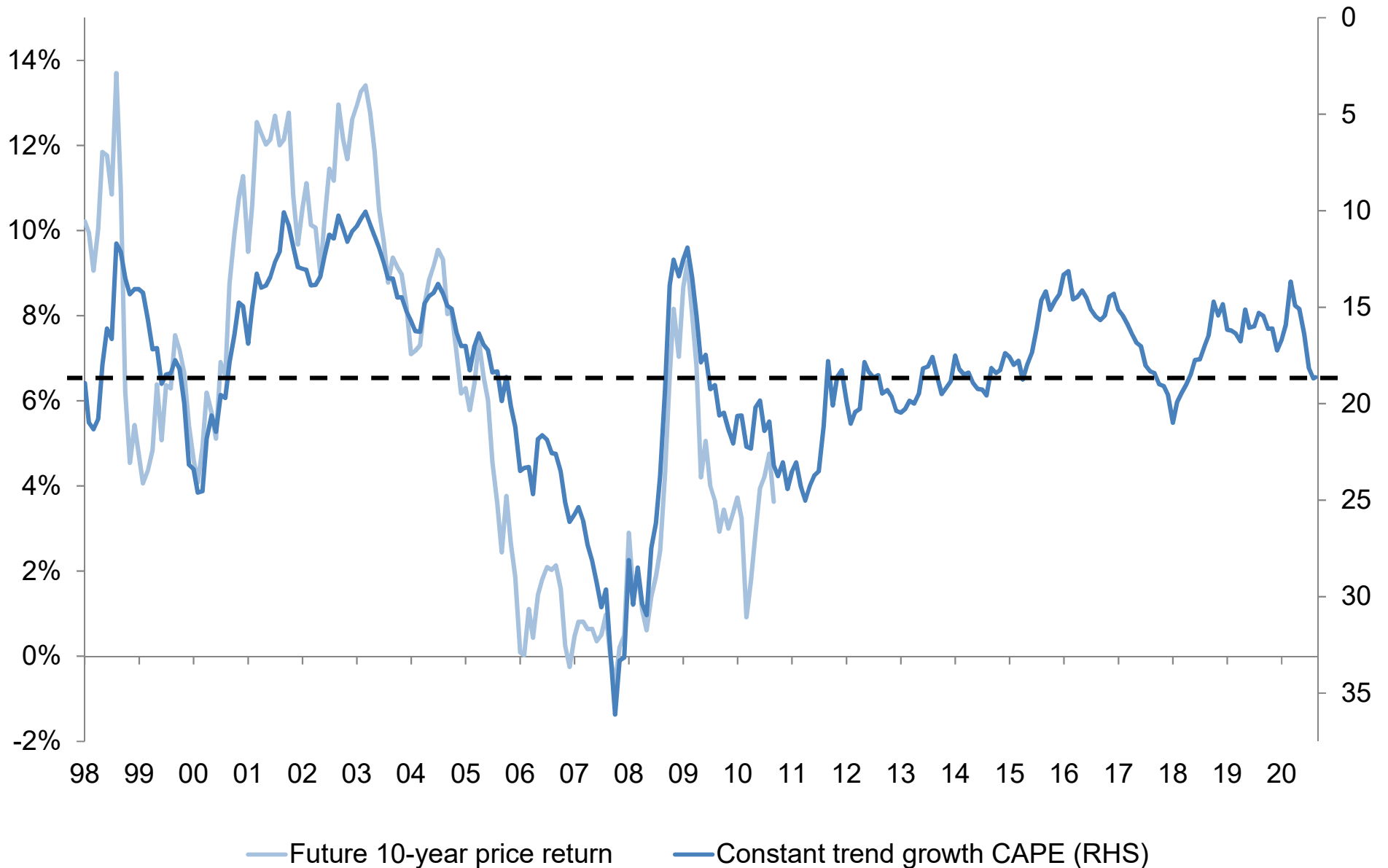
## EM Future 10-Year Real Returns



## EM Value Future 10 Year Returns Likely ~16%



## EM Growth Future 10 Year Returns Likely ~6%



As of 9/30/2020

Source: MSCI, Thomson Reuters Datastream, UBS, ARG A Analysis. See Material Disclosures.

## Material Disclosures

---

*This document does not constitute an offer of investment advisory services by ARGA Investment Management, LP (“ARGA”) or any of its subsidiaries, nor does it constitute an offering of interests in any private fund; any such offering will be made solely pursuant to a private fund’s offering memorandum. This document has been prepared for informational purposes only and is not intended to provide specific investment advice or recommendations to any recipient. This document is confidential, is intended only for the person to whom it has been sent and under no circumstances may a copy be shown, copied, transmitted or otherwise given to any person other than the authorized recipient without ARGA’s prior written consent. The information contained in this document, including any expression of opinion or forecast, is provided for information purposes only and may be derived from sources ARGA believes to be reliable, but such data has not been independently confirmed and ARGA makes no representation or warranty as to its accuracy or completeness. To the fullest extent permitted by applicable law, ARGA expressly disclaims any liability whatsoever for errors and omissions in any information, and for any use or interpretation by others of any information, contained herein. Some of the information in this document is based on forward-looking statements including descriptions of anticipated market changes and expectations of future activity. Forward-looking statements involve risks, uncertainties, and other factors that may cause actual results to be materially different from any future results implied by forward-looking statements. Although ARGA believes that such statements and opinions are based upon reasonable assumptions, undue reliance should not be placed on any of the forward-looking statements discussed herein.*

**PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.** *Inherent in any investment is the potential for loss. Investors could lose all or substantially all of their investment. Investing based on ARGA’s strategies is subject to a variety of risks described in Part 2A of ARGA’s Form ADV and in the offering memorandum with respect to any private fund for which each strategy is used.*

*Performance information includes the effect of any investments made in certain public offerings, participation in which may be restricted with respect to certain investors. As a result, performance for the specified periods with respect to any such restricted investors may have differed materially from the performance information herein. Performance information is based on strategy exposure limits which may change without notice in the discretion of ARGA, based on anticipated market changes. Valuations and returns are expressed in U.S. Dollars.*

*The securities referenced herein are subject to change at any time without notice, may not be current and are subject to risk. They do not represent all the securities purchased, sold or recommended for accounts. Individual portfolios may vary. There is no assurance that an investment in the securities referenced herein was or will be profitable or that any investment decision we make in the future will be profitable.*

*The MSCI information may only be used for internal use, may not be reproduced or disseminated in any form and may not be used as a basis for or a component of any financial instruments or products or indices. None of the MSCI information is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Historical data and analysis should not be taken as an indication or guarantee of any future performance analysis, forecast or prediction. The MSCI information is provided on an “as is” basis and the user of this information assumes the entire risk of any use made of this information. MSCI, each of its affiliates and each other person involved in or related to compiling, computing or creating any MSCI information (collectively, the “MSCI Parties”) expressly disclaims all warranties (including, without limitation, any warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall any MSCI Party have any liability for any direct, indirect, special, incidental, punitive, consequential (including, without limitation, lost profits) or any other damages. (www.msci.com).*

*No part of this document may be redistributed in whole or in part or transmitted in any form or by any means without the prior written consent of ARGA.*

*© 2020, ARGA Investment Management, LP. All rights reserved.*

# VISTA EQUITY PARTNERS UPDATE

NEPC, LLC

---



NEPC, LLC

**To:** Clients with Exposure to Vista Equity Partners  
**From:** NEPC Research  
**Date:** October 19, 2020  
**Subject:** Vista Equity Partners Update October 2020

---

### ***Issue***

On October 14, 2020, in a letter sent to all Vista investors, Robert Smith, the Chairman and CEO of Vista Equity Partners ("Vista" or the "Firm"), communicated that he had entered into a Non-Prosecution Agreement ("NPA") with the Department of Justice "for his involvement from 2000 through 2015 in an illegal scheme to conceal income and evade millions in taxes by using an offshore trust structure and offshore bank accounts." The NPA relates to reports from this summer that Mr. Smith had been pursued by the US Department of Justice and the IRS for over four years for potential tax crimes related to \$200 million in assets that were proceeds from Vista's first fund, Vista Equity Fund II, which had \$1 billion in commitments from a single Limited Partner, Robert T. Brockman. As part of the NPA, Mr. Smith agreed to pay \$139 million in back taxes and penalties, abandon \$182 million in charitable contribution deductions, and cooperate with government investigations, notably those related to Mr. Brockman's own tax matter. By complying with the NPA, Mr. Smith will not be prosecuted by the government and will seek to put the matter behind him. No Vista Equity Partners entity is part of the settlement and neither Vista nor any of its funds were involved or under investigation.

Subsequent to the disclosure that Mr. Smith had reached the settlement with the Department of Justice, Bloomberg reported that in a call with senior professionals at Vista that took place on October 14<sup>th</sup>, Mr. Smith announced that Brian Sheth, Vista's co-founder and President, may leave the Firm. No time frame for the departure or other relevant details have been disclosed at this time.

### ***Analysis***

The settlement of the DoJ investigation provides closure to a personal tax matter that related to one individual at Vista but had the potential to serve as a distraction for others. The timing of the agreement was consistent with Vista's guidance that the matter would be resolved in the near future and that no other Vista entities or individuals were involved in the investigation.

At this time, NEPC has not received details related to Mr. Sheth's purported departure. While it alone would not trigger a Key Person clause for any of Vista's actively investing funds, it would still constitute a significant departure. As Vista has grown and matured as a firm, its Key Person clauses have become more expansive over time, requiring either both Robert Smith and Brian Sheth or a majority of senior investment/administrative personnel to cease being active in the partnerships before a clause is triggered. Given the depth of the Firm's investment teams across all of Vista's funds, we are confident that the other senior individuals in place will be able to continue to execute the funds' strategies and manage out the existing portfolios. However, as with any departure of a firm owner and key executive



officer, we believe the situation warrants heightened monitoring of any additional changes in team or sentiment. We will continue to communicate any developments as we receive further information.

***Foundation for the Analysis***

In forming our analysis, NEPC performed the following activities:

1. Phone call with Vista on October 15, 2020
2. Reviewed memo sent to Vista Limited Partners on October 15, 2020
3. Reviewed DoJ press release and NPA Statement of Facts dated October 15, 2020

This memo is based on information provided to NEPC by Vista Equity Partners. NEPC is not responsible for any inaccuracies in this memorandum based on information provided to us by a third party.

***Relationship Disclosure***

Brian Sheth, President of Vista Equity Partners, is the brother of Neil Sheth, NEPC Partner and Director of Global Research. This relationship is disclosed in all NEPC memos that provide a rating of funds managed by Vista. Analysis of Vista Equity Partners, including this research update, is performed by NEPC's Private Markets team. All information regarding this matter was received directly from the manager or from third parties. Although Neil Sheth is a member of NEPC's Alternative Assets Committee, he was not involved in this research project.

# DISCLAIMER

- **This report contains summary information regarding the investment management approaches described herein but is not a complete description of the investment objectives, policies or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches.**
- **Past performance is no guarantee of future results.**
- **Information on market indices was provided by sources external to NEPC, and other data used to prepare this report was obtained directly from the investment manager(s). While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.**

## **Information Disclaimer**

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

## **Reporting Methodology**

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

