

3. Joint Meeting of the Board of Trustees and Investment Advisory Committee

December 11, 2019



Public Agenda #1.1

Call Meeting to Reconvene the Board of Trustees

December 11, 2019

Public Agenda #1.2

Call Meeting of the Investment Advisory Committee to Order

December 11, 2019

Public Agenda #2.1

Review and Approval of the Minutes to the August 21, 2019 Joint Meeting of the Board of Trustees and Investment Advisory Committee – (Action)

December 11, 2019

Questions?
Action Item

Public Agenda Item #3.1

Investment Advisory Committee Reappointment – **(Board Only Action)**

December 11, 2019

Tom Tull, CFA, Chief Investment Officer

IAC Skills Assessment

	Term Expiration	Investment Experience	Global Equity	Fixed Income	Private Equity	Real Estate	Hedge Funds	Infrastructure	Derivatives
IAC Chair, Bob Alley, CFA Retired from AIM Advisors, Inc. as Chief Fixed Income Officer	8/31/2021	43 years	X	X	X				
IAC Vice-Chair, Gene L. Needles, Jr. Chairman and CEO Resolute Investment Management	5/31/2020	25 years	X	X	X	X	X		X
Caroline Cooley Managing Partner – Hedge Funds Crestline Investors, Inc.	12/31/2019	34 years		X			X		X
James Hille, CFA, CAIA CIO Texas Christian University Endowment	8/31/2020	27 years	X	X	X	X	X		
Ken Mindell Sr. VP, Treasurer & Director of Investments Rosewood Management Corporation	5/31/2022	38 years	X	X	X	X	X		X
Laurie Dotter Retired from Transwestern Corporation Properties as President	5/31/2022	35 years				X		X	
Didi Weinblatt, Ph.D., CFA Retired from USAA Investment Mgmt Co as Vice President, Mutual Fund Portfolios	8/31/2020	38 years	X	X					

Agenda item 3.1 – Joint Meeting December 11, 2019

Questions?
Board Only Action Item

*Public Agenda Item #4.1

Investment Performance

Review of Investment Performance for Third Quarter of 2019

December 11, 2019

Tom Tull, CFA, Chief Investment Officer

Sam Austin and Tim Bruce, NEPC

QUARTERLY PERFORMANCE REPORT

EMPLOYEES RETIREMENT SYSTEM OF TEXAS

December 11, 2019

Sam Austin, Partner

Tim Bruce, Partner



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

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EXECUTIVE SUMMARY

NEPC, LLC

ERS TRUST DASHBOARD

	CYTD	FYTD
Fund Performance	10.2%	0.8%
Policy Benchmark	11.8%	0.9%
Excess Return	-1.6%	-0.1%

3 Yr Tracking Error 1.69%

5 Yr Sharpe Ratio 1.01

5 Yr Sortino Ratio 1.38

Largest Contributors (Quarter)

Private Equity outperformed and contributed +0.7% versus the policy benchmark

Largest Detractors (Quarter)

Public Equity and Global Credit underperformed and detracted -0.1% versus the policy benchmark

Profile

Market Value at 9/30/2019:

\$28.6 Billion

Actuarial Accrued Liability 8/31/18:

\$39.0 Billion

Actuarial Assumed Rate of Return:

7.50%

Retirees and Beneficiaries 8/31/2018:

111,361

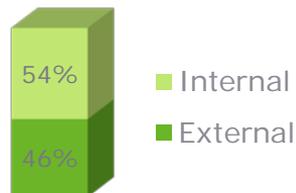
Retirement Payments Annually 8/31/2018:

\$2.4 Billion

ERS Trust Funding Ratio 8/31/2018

70.20%

Management



Allocation



Liquidity



TOTAL FUND PERFORMANCE DETAIL (NET OF FEES)

	Market Value(\$)	Fiscal YTD(%)	3 Mo(%)	YTD(%)	1 Yr(%)	3 Yrs(%)	5 Yrs(%)
Total Fund	28,644,607,856.00	0.8	1.0	10.2	3.7	8.2	6.6
<i>Total Fund Policy Index</i>		0.9	0.5	11.8	4.0	7.5	6.2
<i>Long Term Public Index</i>		1.5	0.4	14.3	2.8	8.0	6.0

- One-year ended September 30, 2019, the Fund underperformed the policy benchmark by 0.3%.
- The Fund's assets decreased from \$28.92 billion to \$28.64 billion in the past calendar year which includes a \$55.39 million investment gain in the third calendar quarter of 2019.



TOTAL FUND PERFORMANCE DETAIL (NET OF FEES)

3 Years Ending September 30, 2019				
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Sortino Ratio RF
Total Fund	8.23%	5.20%	1.29	1.43
Total Fund Policy Index	7.45%	6.51%	0.91	1.07

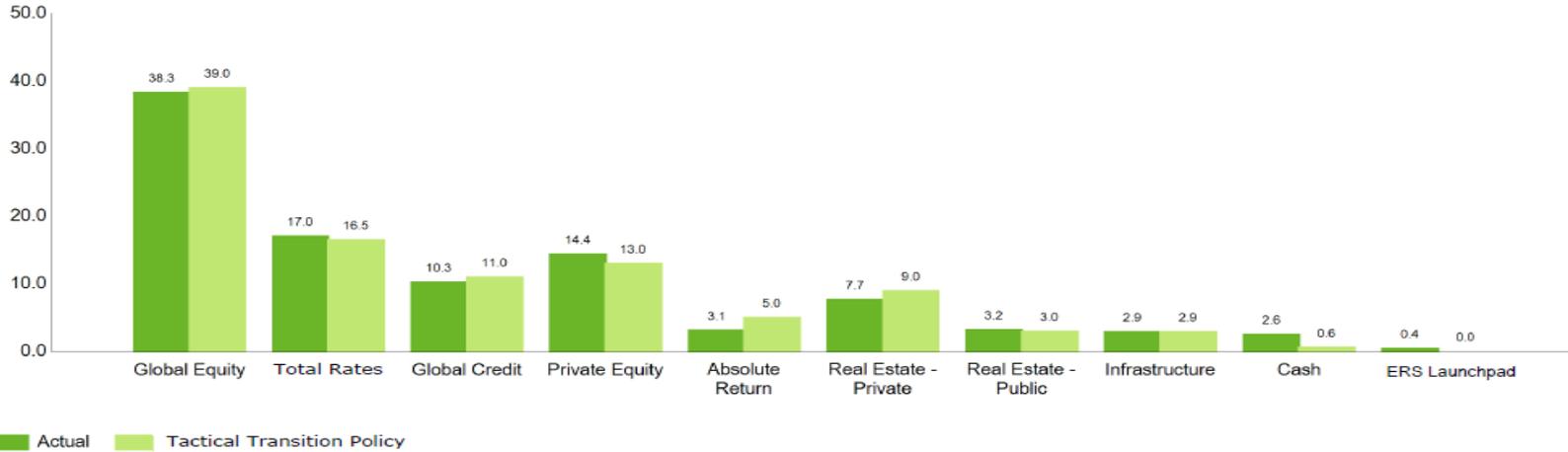
5 Years Ending September 30, 2019				
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Sortino Ratio RF
Total Fund	6.60%	5.55%	1.01	1.38
Total Fund Policy Index	6.21%	6.75%	0.77	1.10

- **Three-year period ended September 30, 2019, the return of 8.23% outperformed the benchmark by 0.78%. On a risk-adjusted basis, the Sharpe and Sortino Ratios over this period indicate active management benefited the Plan.**
- **Five-year period ended September 30, 2019, the Fund returned 6.60% and outperformed the policy benchmark by 0.39%. On a risk-adjusted basis, the Fund's Sharpe Ratio (1.01 vs. 0.77) and Sortino Ratio (1.38 vs. 1.10) indicate strong returns per unit of risk taken and strong returns per unit of downside risk experienced relative to the policy benchmark.**



TOTAL FUND ASSET GROWTH SUMMARY

Actual vs Target Allocation (%)



Summary of Cash Flows

Fiscal Year-To-Date

Last Three Months

Year-To-Date

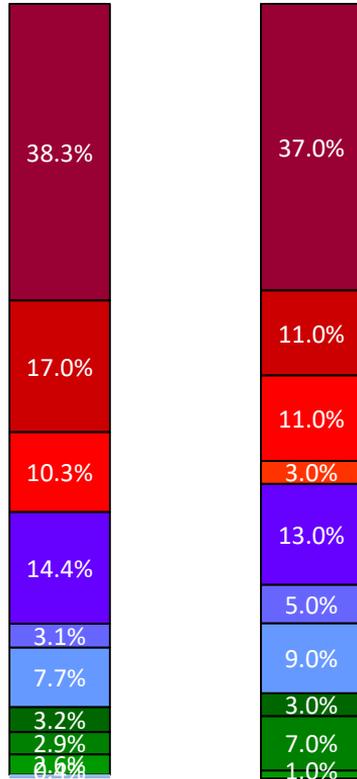
One Year

Three Years

Beginning Market Value	\$28,518,729,026	\$28,668,965,891	\$26,873,073,745	\$28,923,385,305	\$25,570,386,973
Contributions	\$3,614,391,458	\$5,197,682,646	\$9,974,079,846	\$12,370,856,781	\$30,059,692,457
Withdrawals	-\$3,651,602,657	-\$5,277,431,055	-\$10,358,758,440	-\$13,122,373,602	-\$32,978,988,251
Net Cash Flow	-\$37,211,198	-\$79,748,409	-\$337,944,293	-\$704,782,520	-\$2,872,561,493
Net Investment Change	\$163,090,028	\$55,390,374	\$2,109,478,404	\$426,005,071	\$5,946,782,376
Ending Market Value	\$28,644,607,856	\$28,644,607,856	\$28,644,607,856	\$28,644,607,856	\$28,644,607,856



FUND ASSET ALLOCATION VS. POLICY TARGETS

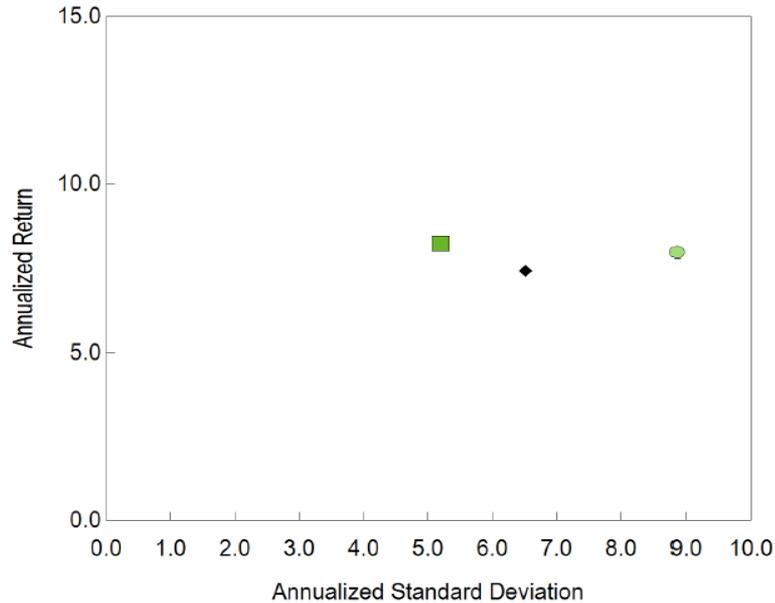


Asset Allocation on September 30, 2019				
	Current	Current	Long-Term Target	Long-Term Target Range
Public Equity	\$10,984,291,221	38.3%	37.0%	27.0% - 47.0%
Total Rates	\$4,883,655,514	17.0%	11.0%	
Global Credit	\$2,936,676,480	10.3%	11.0%	1.0% - 21.0%
Opportunistic Credit	-	-	3.0%	0.0% - 8.0%
Private Equity	\$4,119,815,359	14.4%	13.0%	8.0% - 18.0%
Absolute Return	\$897,996,277	3.1%	5.0%	0.0% - 10.0%
Real Estate - Private	\$2,206,115,545	7.7%	9.0%	4.0% - 14.0%
Real Estate - Public	\$917,761,701	3.2%	3.0%	0.0% - 13.0%
Infrastructure	\$840,069,532	2.9%	7.0%	2.0% - 12.0%
Cash	\$732,606,536	2.6%	1.0%	0.0% - 1.0%
ERS Launchpad	\$125,619,691	0.4%		
Total	\$28,644,607,856	100.0%	100.0%	



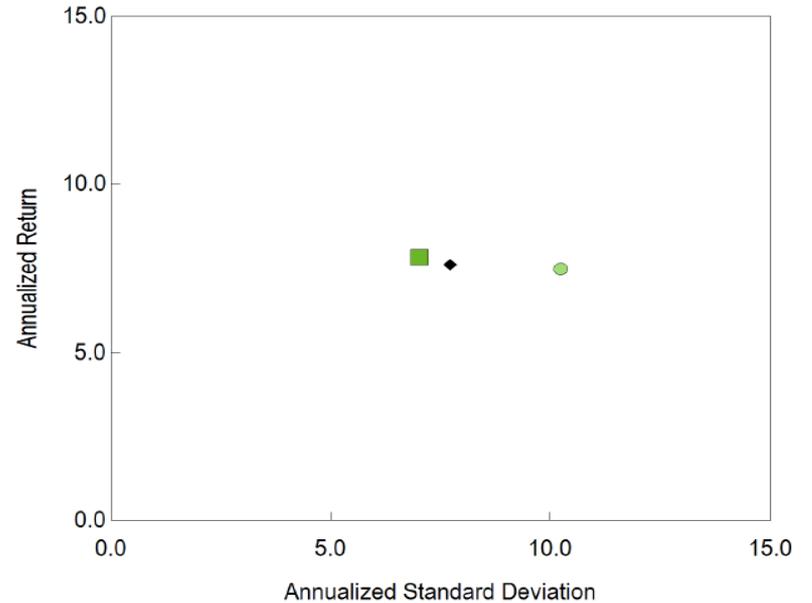
TOTAL FUND RISK/ RETURN

3 Years Ending September 30, 2019



- Total Fund
- ◆ Total Fund Policy Index
- Long Term Public Index

10 Years Ending September 30, 2019



- Total Fund
- ◆ Total Fund Policy Index
- Long Term Public Index

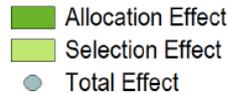
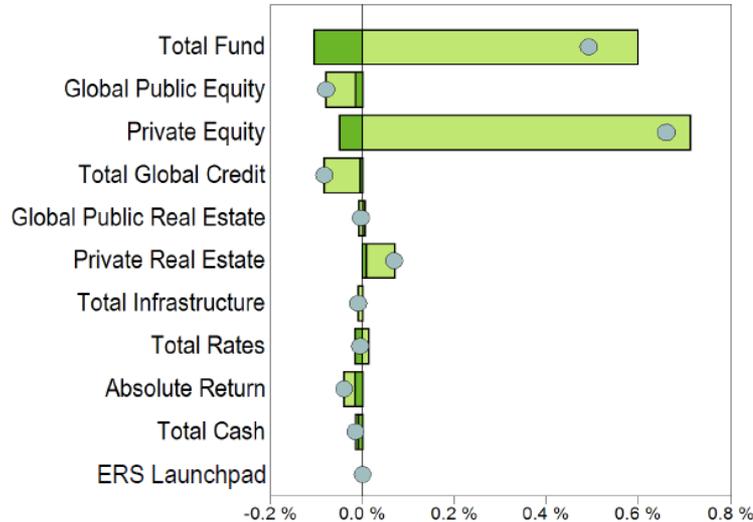


Note: Long Term Public Index is comprised of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index. Index Definitions can be found in the appendix.

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects

3 Months Ending September 30, 2019



Attribution Summary

3 Months Ending September 30, 2019

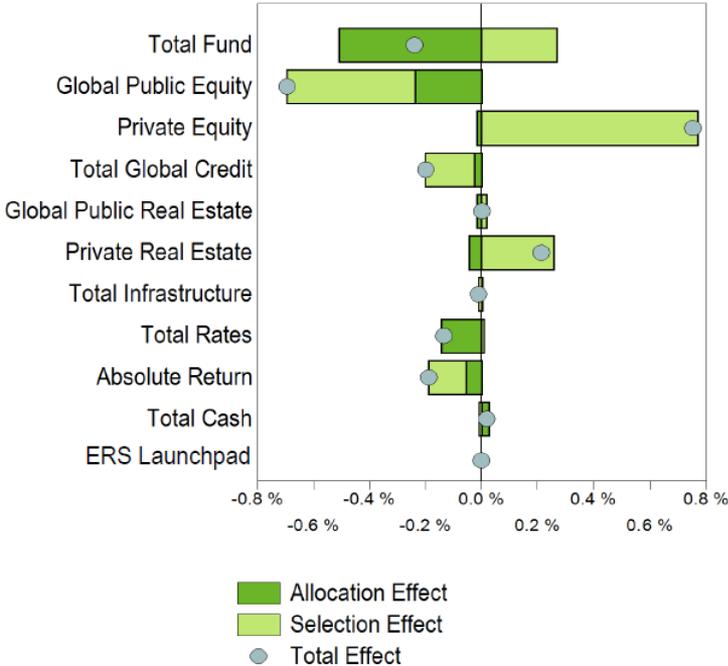
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Global Public Equity	-0.3%	-0.1%	-0.2%	-0.1%	0.0%	-0.1%
Private Equity	2.9%	-2.1%	5.0%	0.7%	0.0%	0.7%
Total Global Credit	0.6%	1.3%	-0.7%	-0.1%	0.0%	-0.1%
Global Public Real Estate	4.5%	4.8%	-0.3%	0.0%	0.0%	0.0%
Private Real Estate	1.6%	0.8%	0.8%	0.1%	0.0%	0.1%
Total Infrastructure	5.2%	5.6%	-0.3%	0.0%	0.0%	0.0%
Total Rates	1.2%	1.2%	0.1%	0.0%	0.0%	0.0%
Absolute Return	0.9%	1.6%	-0.7%	0.0%	0.0%	0.0%
Total Cash	0.3%	0.5%	-0.2%	0.0%	0.0%	0.0%
ERS Launchpad	--	--	--	--	--	--
Total	1.0%	0.5%	0.5%	0.6%	-0.1%	0.5%

* Total Fund Attribution Analysis uses policy weights.



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending September 30, 2019



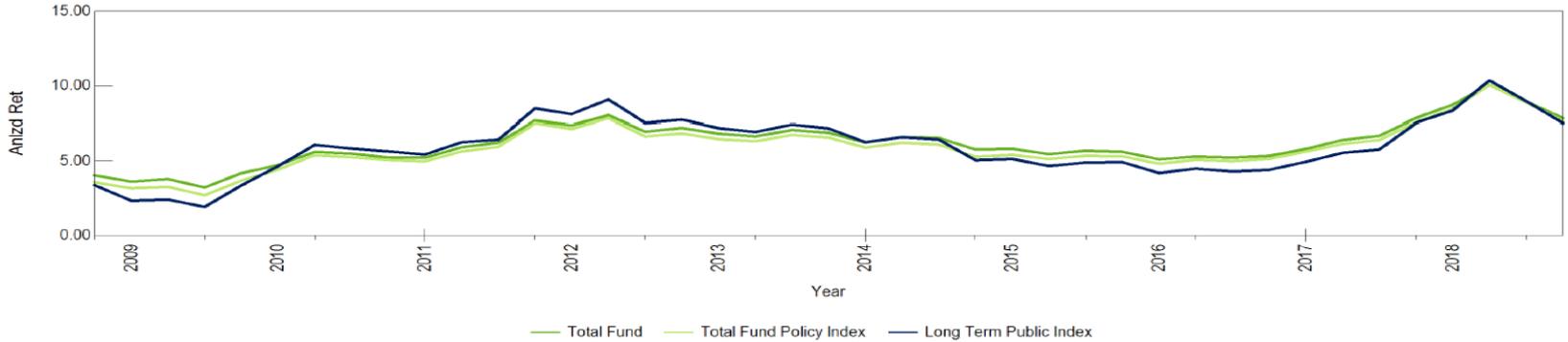
Attribution Summary						
1 Year Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Global Public Equity	-0.3%	0.8%	-1.1%	-0.5%	-0.2%	-0.7%
Private Equity	5.8%	-1.0%	6.9%	0.8%	0.0%	0.8%
Total Global Credit	4.8%	6.4%	-1.6%	-0.2%	0.0%	-0.2%
Global Public Real Estate	14.4%	13.8%	0.6%	0.0%	0.0%	0.0%
Private Real Estate	8.9%	5.5%	3.5%	0.3%	0.0%	0.2%
Total Infrastructure	9.3%	9.6%	-0.3%	0.0%	0.0%	0.0%
Total Rates	7.6%	7.6%	0.1%	0.0%	-0.1%	-0.1%
Absolute Return	2.9%	6.4%	-3.5%	-0.1%	-0.1%	-0.2%
Total Cash	2.2%	2.3%	0.0%	0.0%	0.0%	0.0%
ERS Launchpad	--	--	--	--	--	--
Total	3.7%	4.0%	-0.2%	0.3%	-0.5%	-0.2%

* Total Fund Attribution Analysis uses policy weights.

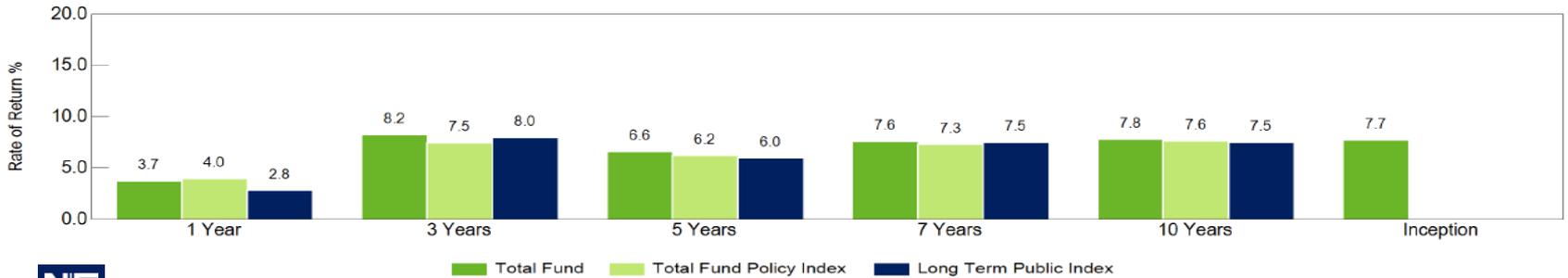


LONG TERM INVESTMENT RESULTS

Rolling 10 Year Annualized Return (%)



Return Summary
Ending September 30, 2019



Note: Long Term Public Index is comprised of 79% MSCI ACW IMI and 21% Barclays Intermediate Treasury Index. Index Definitions can be found in the appendix.

ROLLING INFORMATION RATIO AND TRACKING ERROR

Rolling 3 Year Information Ratio



Rolling 3 Year Tracking Error



SUMMARY PERFORMANCE COMMENTARY

- **Over the past 10 years Total Fund returns outperformed the policy benchmark by 0.2%. Returns have also outperformed the Fund's actuarial rate of return.**
- **In the past one-year period ended September 30,2019 the Fund underperformed (0.3%) against the policy benchmark.**
 - Global Public Equity detracted -0.7% from Fund returns vs. the policy benchmark primarily due to underperformance in Domestic and International Equity
 - Global Credit and Absolute Return detracted -0.2% from Fund returns vs. the policy benchmark
- **In the past one-year portfolio positioning at the asset class level has had a negative impact (-0.5%) on Total Fund returns vs. policy benchmark.**
 - An over-weight position to Global Public Equity contributed negatively (-0.2%) to total fund returns vs. the policy benchmark.
 - An under-weight position to Absolute Return contributed negatively (-0.1%) to total fund returns versus the policy benchmark.



Questions?

*Public Agenda Item #5.1

Risk Management

Review and Discussion of the Risk Management Program

December 11, 2019

Carlos Chujoy, CFA, Risk Officer, Risk Management & Applied Research
Stuart Williams, CFA, Senior Portfolio Manager, Risk Management & Applied Research

Agenda



- Overview and Background
- Economic Conditions
- Market Stress Levels
- ERS Portfolio and Current Positioning
- Review of Tactical Investment Recommendations
- Q&A

Overview and Background

Team



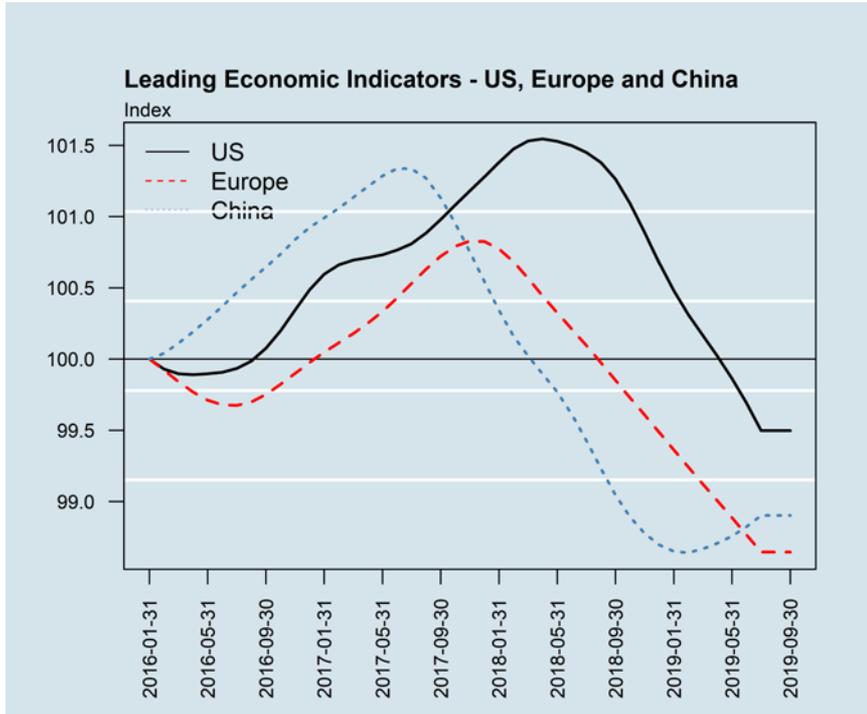
RMAR Team

- **Carlos Chujoy, CFA**
Risk Officer
- **Stuart Williams, CFA**
Senior Portfolio Manager
- **Joy Seth, CFA**
Investment Analyst
- **Yu Tang, CFA**
Investment Analyst
- **(Vacancy)**
Investment Analyst

Voting Risk Committee Members

- **Tom Tull, CFA**
Chief Investment Officer
- **Carlos Chujoy, CFA**
Risk Officer
- **Leighton Shantz, CFA**
Director of Fixed Income
- **John Streun, CFA**
Director of Public Equity
- **Anthony Curtiss, CFA**
Director of Hedge Funds

Global Economic Activity is Slowing



Manufacturing PMI's around the World

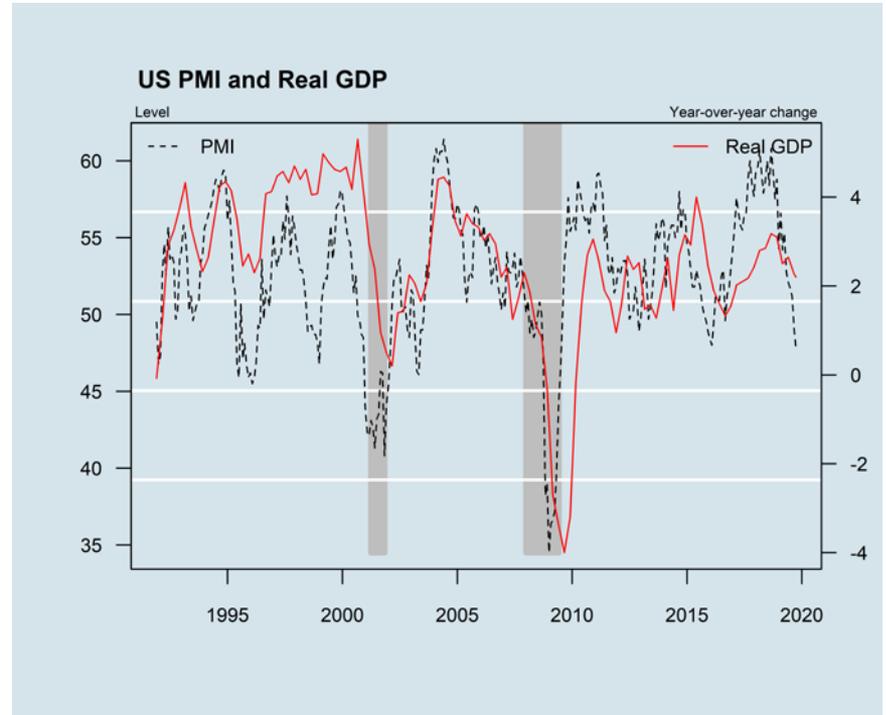
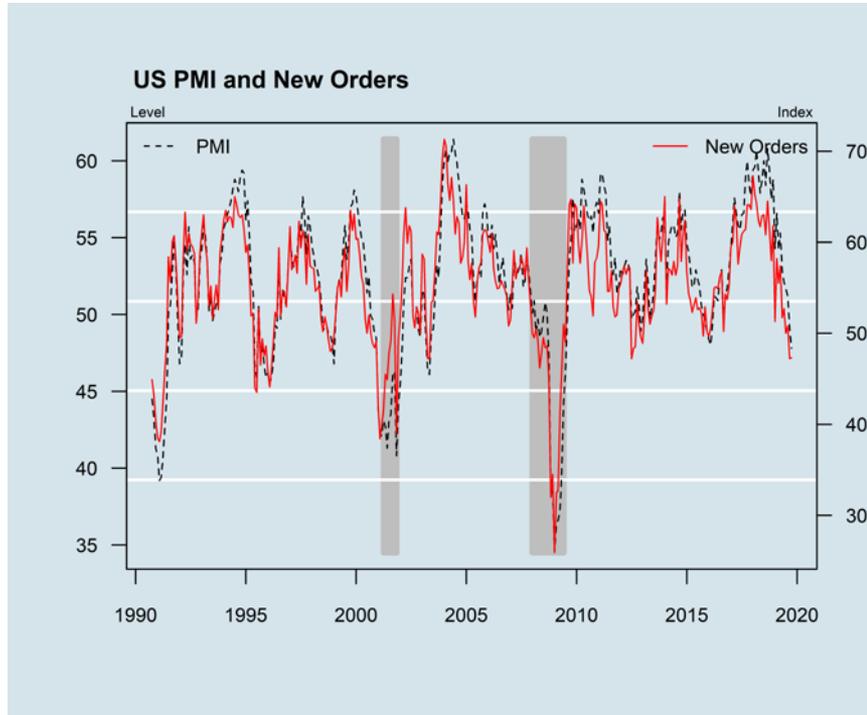
	2018-12-31	2019-03-31	2019-06-30	2019-09-30
Regions				
Global	51.40	50.50	49.40	49.70
Developed	52.30	49.90	48.90	48.60
Emerging	50.20	51.00	49.90	51.00
America				
USA	54.30	55.30	51.70	47.80
Canada	53.60	50.50	49.20	51.00
Mexico	49.70	49.80	49.20	49.10
Europe				
Europe	51.40	47.50	47.60	45.70
Germany	51.50	44.10	45.00	41.70
UK	54.30	55.10	48.00	48.30
France	49.70	49.70	51.90	50.10
Italy	49.20	47.40	48.40	47.80
Spain	51.10	50.90	47.90	47.70
Asia				
China	49.40	50.50	49.40	49.80
Japan	52.60	49.20	49.30	48.90

Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

(Left) The Conference Board's Leading Economic Indexes, which measure global business cycle conditions.

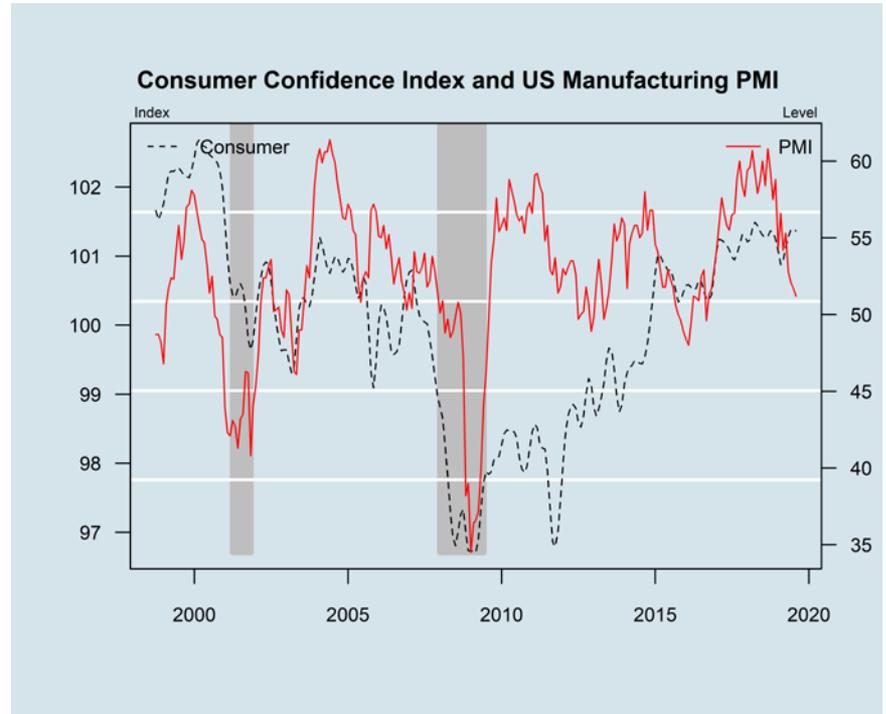
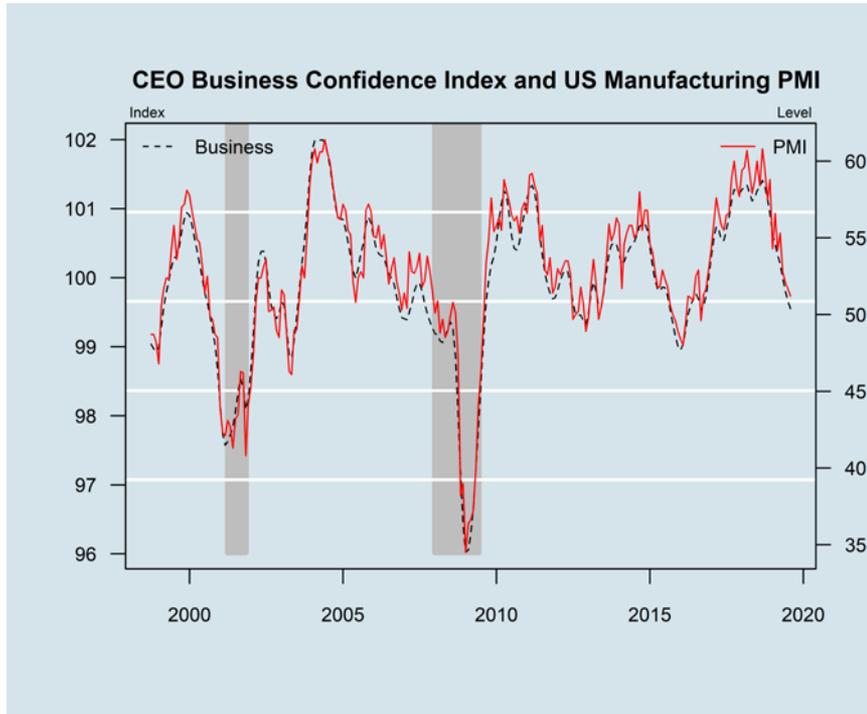
(Right) The Institute for Supply Management's Purchasing Managers' Index for selected regions.

Slowdown in New Orders Suggests Further Weakness in US Economy



Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

Business Confidence Declining, Consumer Confidence Stable

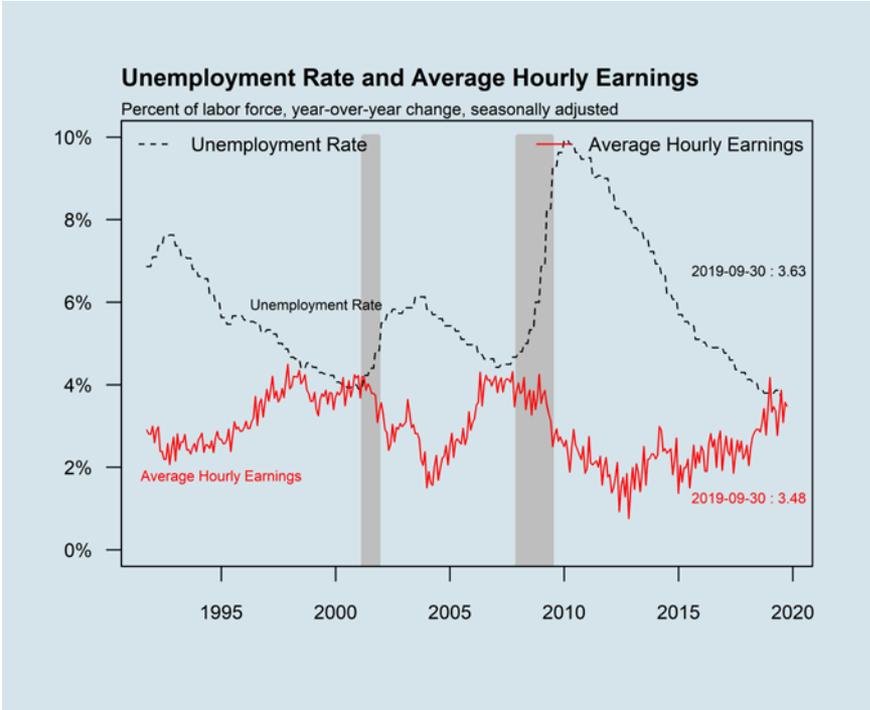
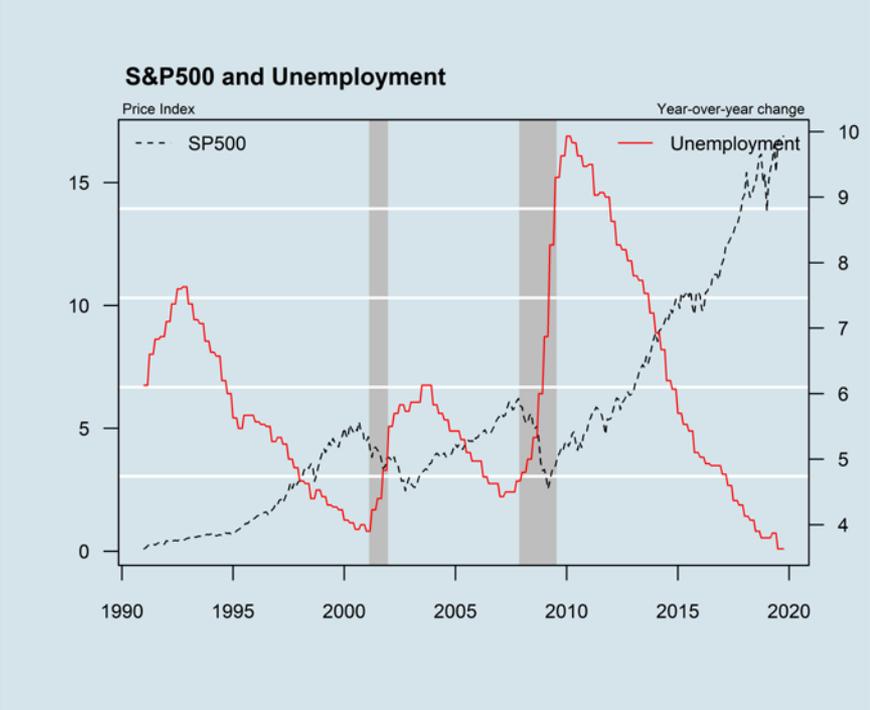


Source: ERS, OECD data from Federal Reserve Bank of St. Louis. Recession bands use the NBER's business cycle dates. Data reflect most recently available as of 09/30/2019.

(Left) CEO Business Confidence Index is a survey of business tendency for manufacturing in the US.

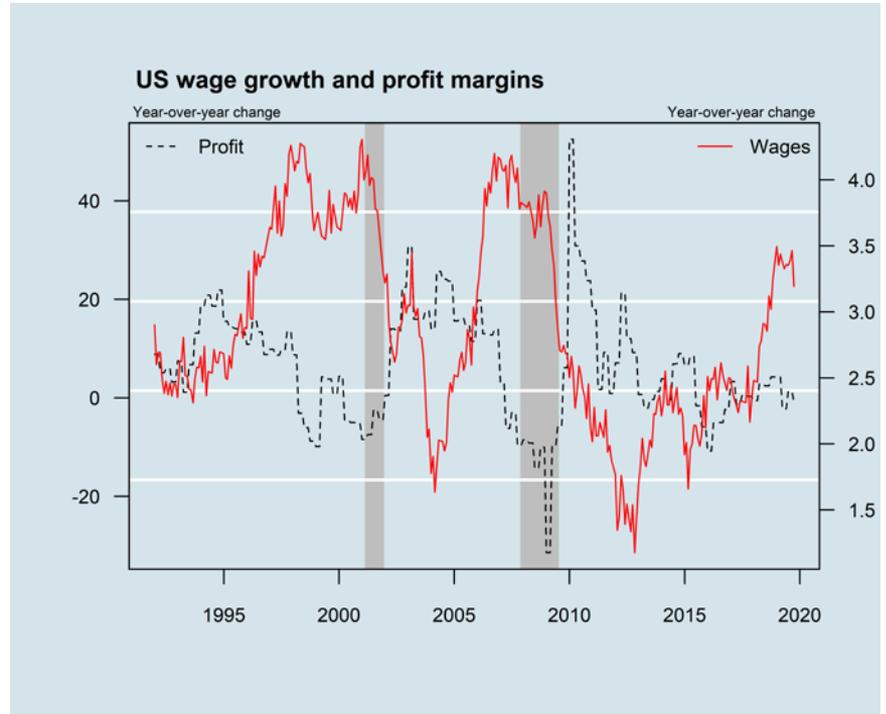
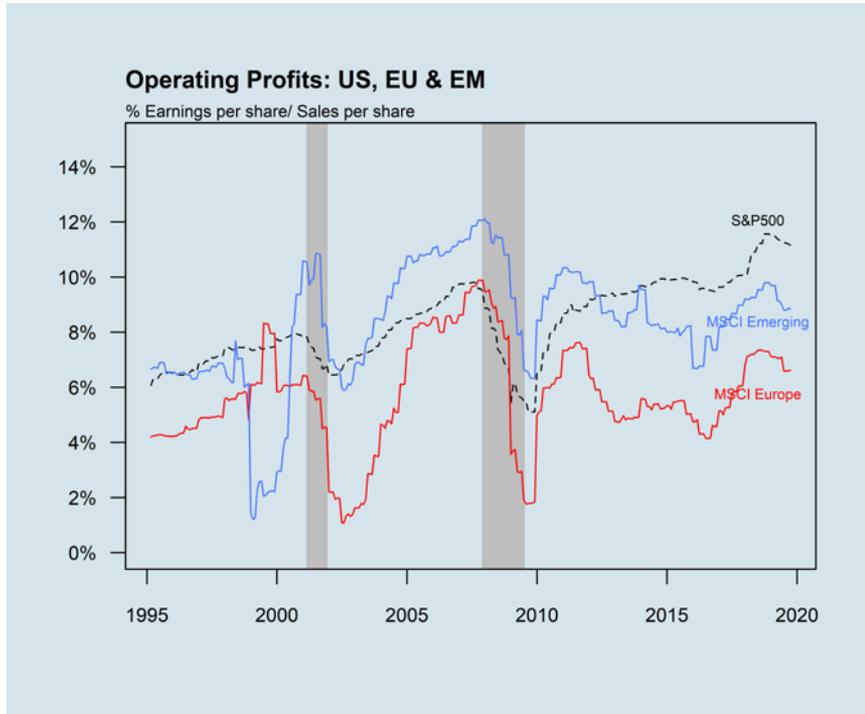
(Right) Consumer Confidence Index is a survey of consumer opinion in the US.

Unemployment the Lowest in 50 Years. As a Result, Average Hourly Earnings Trending Up



Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

Corporate Profits Decelerating, with Wage Growth Pressuring Margins

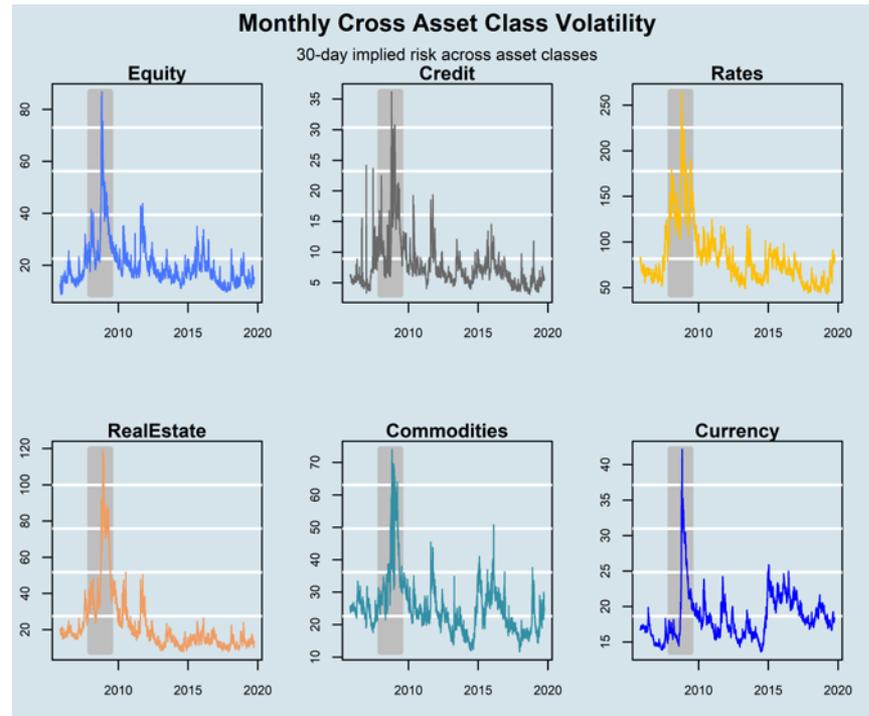
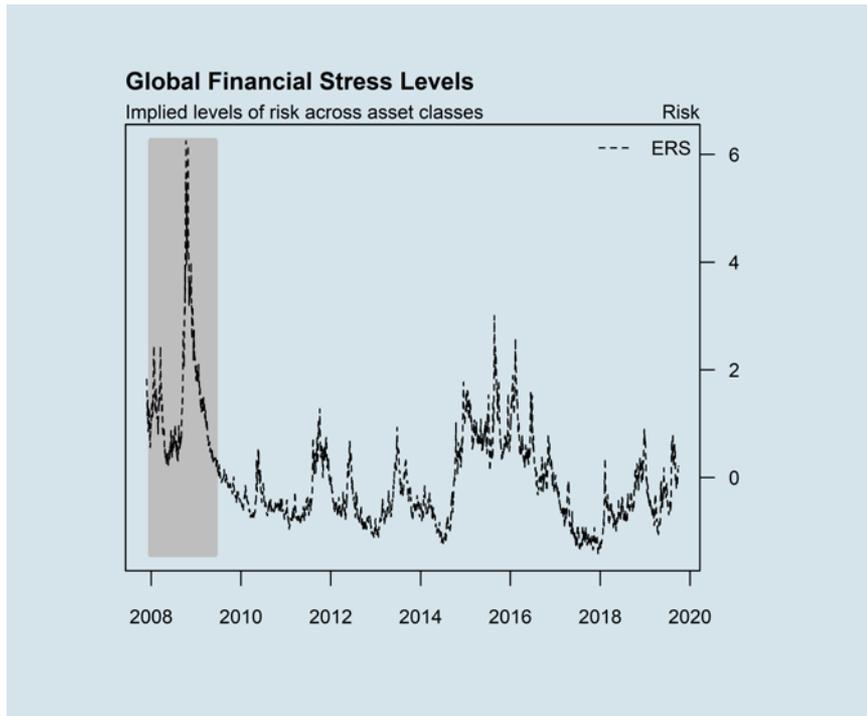


Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

ERS Portfolio



Market Stress Levels On The Rise



Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

(Left) A composite of implied levels of risk across 23 markets and 6 asset classes. Reflects the level of expected risk 30 days into the future based on option prices.

(Right) Shows the components of the ERS financial stress indicator.

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Performance Tied To The Business Cycle

The Classic Business Cycle

EARLY

- Activity rebounds
- Credit grows
- Profits grow fast
- Policy stimulative

MID

- Growth peaking
- Credit grows fast
- Profit growth peaks
- Policy neutral

LATE

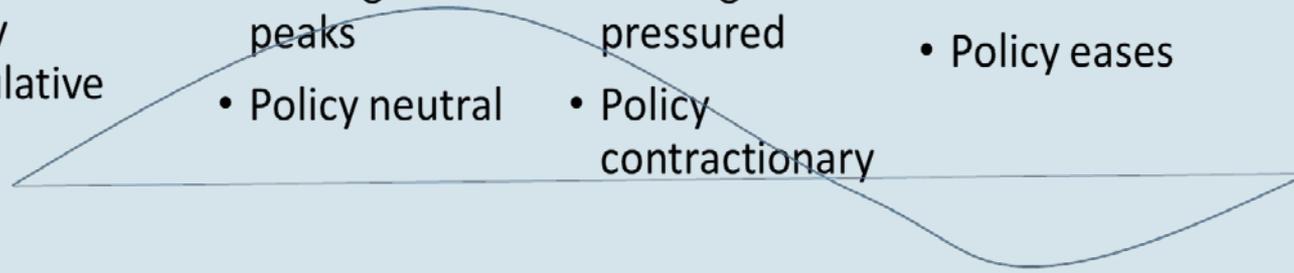
- Growth slows
- Credit tightens
- Earnings pressured
- Policy contractionary

RECESSION

- Falling activity
- Credit dries up
- Profits decline
- Policy eases



We are here!

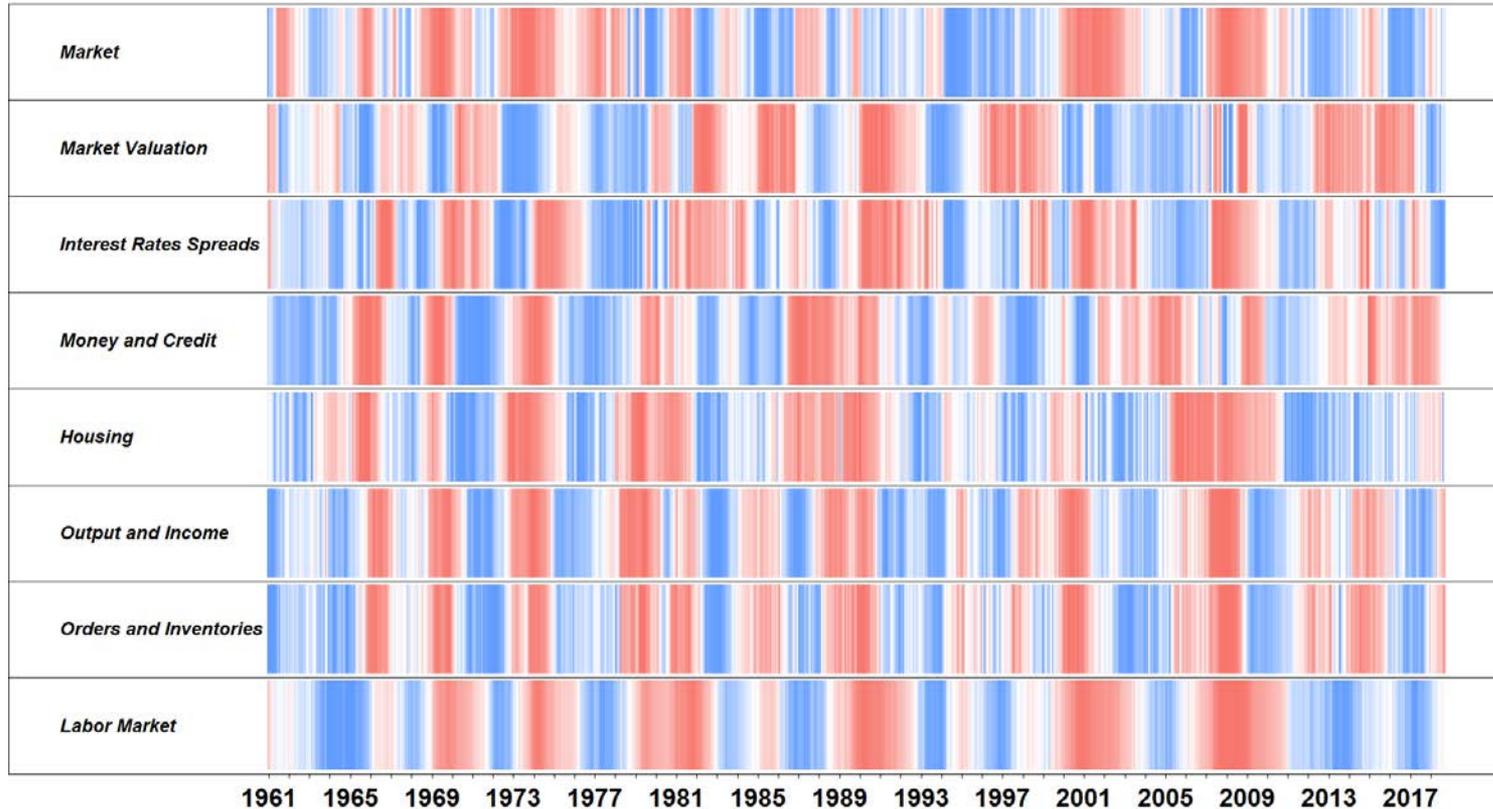


Macroeconomic Conditions

US



FRED Macro Economic Data Aggregated



Source: ERS, Federal Reserve Bank of St. Louis.

Market segments are composites derived from calculating the mean of the z-scores of underlying economic indicators over a 36-month rolling period.

Data reflect most recently available as of 09/1/2019.

Asset Class Performance And The Business Cycle



Source: ERS, BNY Mellon. Data reflect most recently available as of 07/31/2019.

Performance shown is for ERS Policy benchmarks. Returns are annualized. Beginning period is based on asset class inception date; it ranges from 2001 (public equities) to 2012 (hedge funds). Real estate begins in 2005.

Estimated Risk in a Possible Recession

If the Slowdown Continues, How will that Affect the Trust?

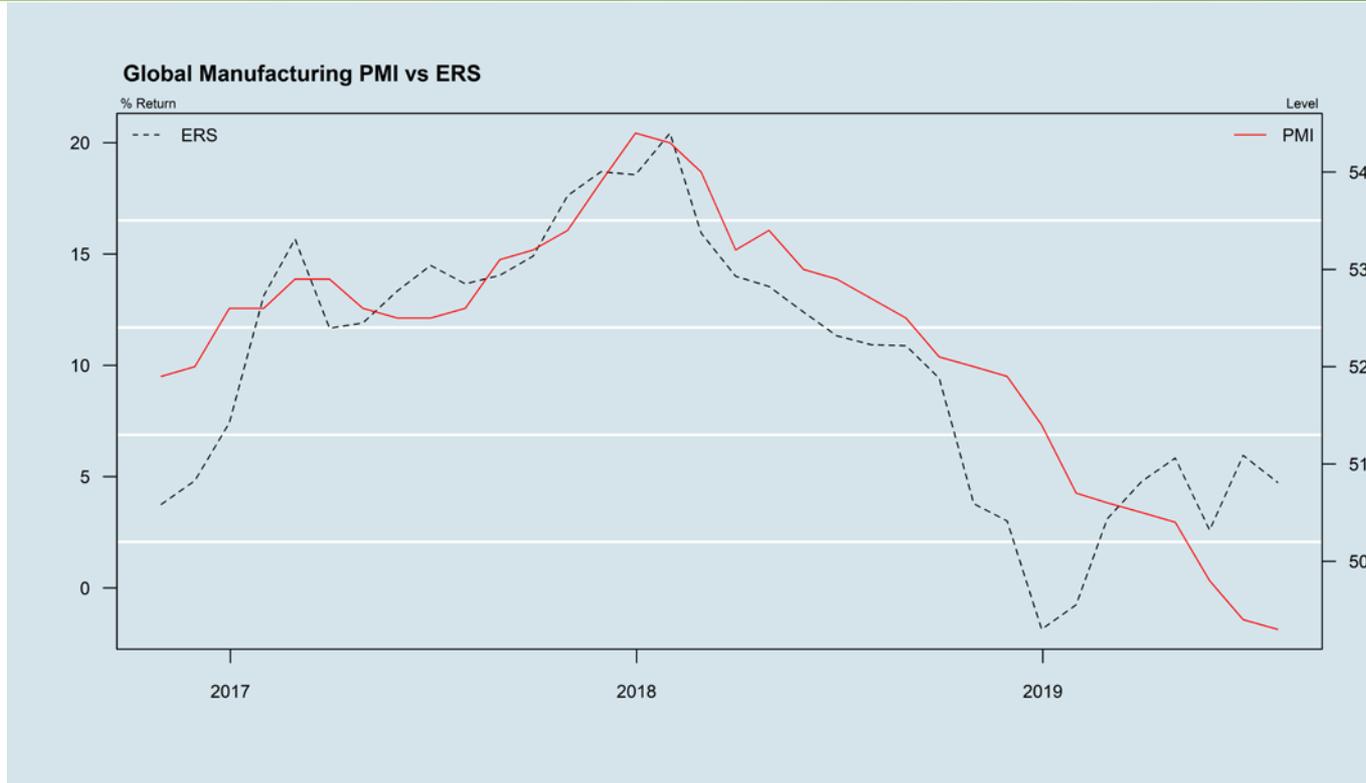


	Low	Medium	High
Rates	★		
Hedge Funds	★		
Credit		★	
Real Estate		★	
Private Equity		★	
Public Equity			★

Source: ERS Valuation

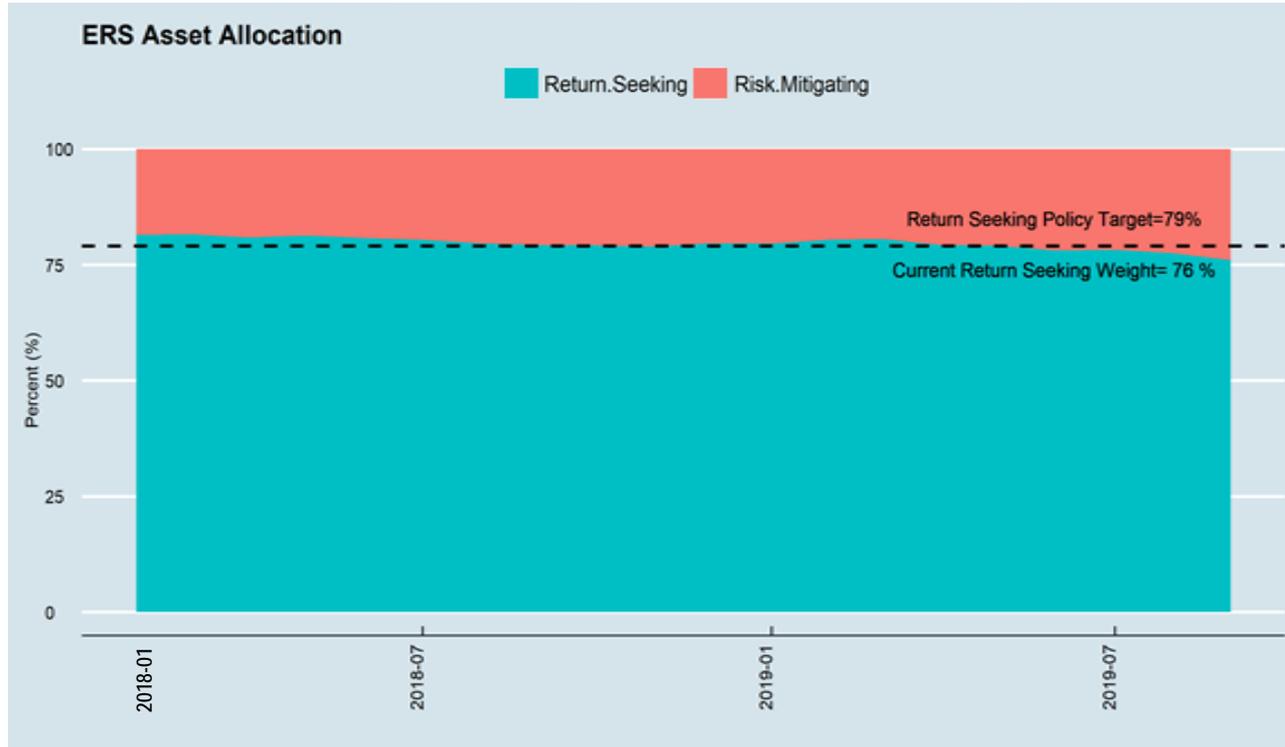
ERS Portfolio

Performance Tied To The Business Cycle



ERS Portfolio

Holdings of Low-Risk Assets are Increasing



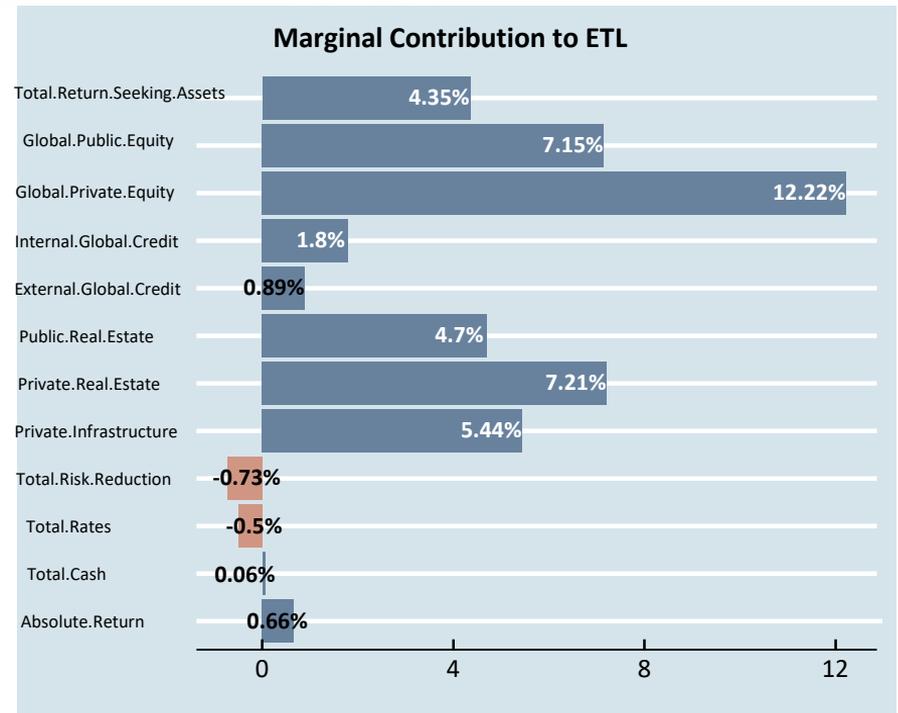
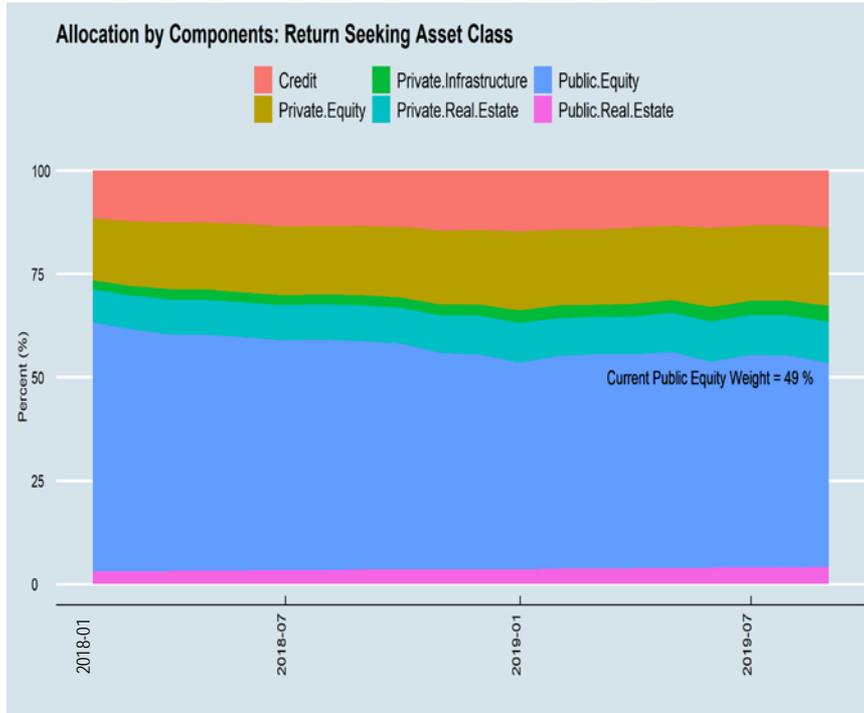
Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

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ERS Portfolio



Allocations to Private Markets Increasing



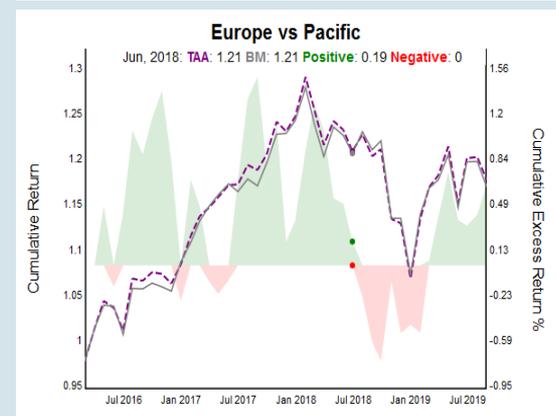
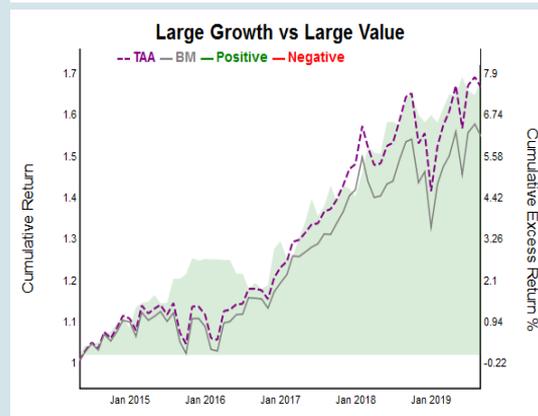
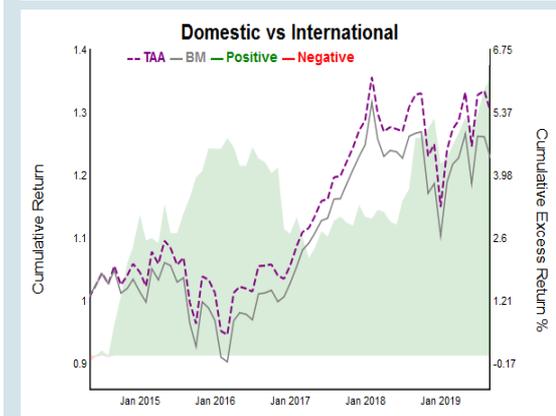
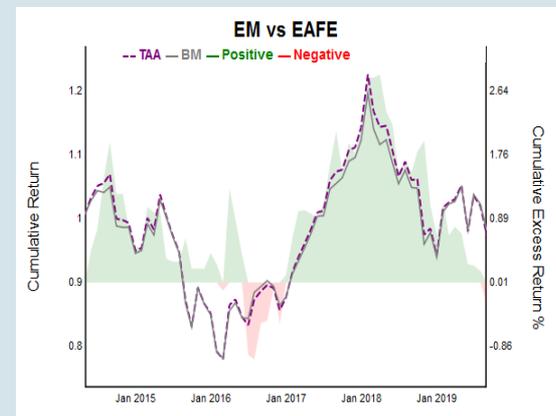
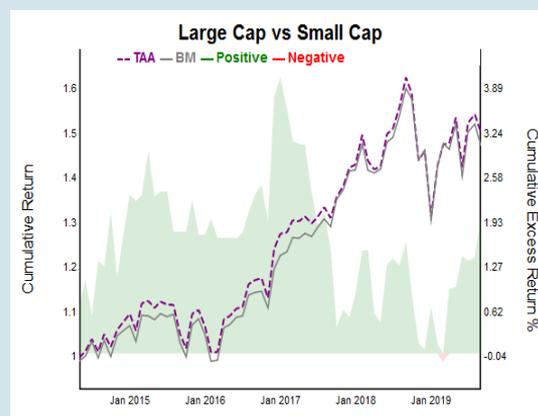
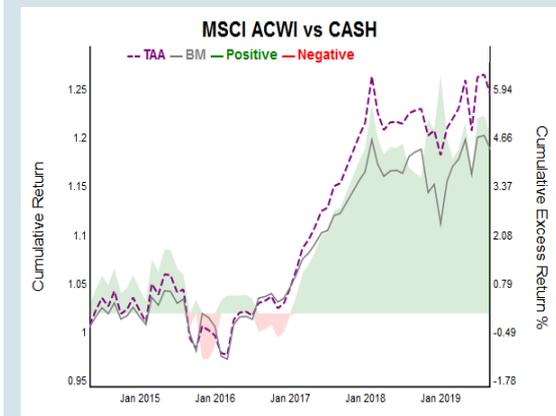
Source: ERS, Bloomberg. Data reflect most recently available as of 09/30/2019.

(Right) ETL is Expected Tail Loss. Measures the degree to which an additional allocation to the asset class would increase downside risk.

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Tactical Asset Allocation Recommendations

Cumulative Excess Returns (Shaded Green) Show Model Works



Conclusions



- Current global economic conditions point to a global slowdown.
- The US is currently the best market around the globe due to the strong consumer.
- Unemployment is the lowest in 50 years. However, the strong labor market may be pressuring corporate margins.
- ERS' business cycle analysis points to modest domestic economic deceleration. This is seen in the heat map of economic indicators, in which current conditions continue to be mixed.
- ERS' portfolio returns are tied to the business cycle. The fund is diversified across a variety of asset classes and it is positioned conservatively through a rising allocation to the risk mitigating asset class.

Questions?

*Public Agenda Item #6.1

Ethics Training
Discussion and Training Regarding Ethics

December 11, 2019

Paula A. Jones, Deputy Executive Director and General Counsel
Dr. Robert Prentice, Department Chair and Professor, University of Texas at Austin, McCombs
School of Business

Ethics Training



- ERS policy requires employees to perform their duties in an ethical manner
- ERS works diligently to maintain and promote an ethical work environment
- The 2018 Survey of Employee Engagement (SEE) responses reflected employees' belief that ERS adheres to an ethical environment, and employees demonstrate high ethical standards in their work. SEE will be conducted again in early 2020.

Ethics Training



- Employees are encouraged to discuss issues with their supervisors, Human Resources or the Deputy Executive Director and General Counsel (DED&GC) who is also the ERS Ethics Officer
- ERS Intranet or external website available for anonymous report of any alleged ethics violations
- Reports go to Directors of Human Resources, Internal Audit and to DED&GC
- All reports are investigated

Ethics Training



- Any relevant ethics-related matters were communicated to the Board this year
- ERS staff is required to complete annual ethics training
 - All ERS staff completed ethics training in FY19
- ERS Investment Policy requires that the ERS Board of Trustees and IAC members receive ethics training annually

Ethics Training



- Ethics training will be presented by **Dr. Robert Prentice**
 - Department Chair and Professor, Department of Business
 - Government & Society and BHP Director
 - University of Texas at Austin, McCombs School of Business

“It’s Not Easy Being Ethical”



December 11, 2019

Robert Prentice
McCombs School of Business
Center for Leadership & Ethics





IT'S NOT EASY BEING ETHICAL.



*... It is not easy
being green...*





My approach to teaching business ethics is based upon a couple of meals I had a few years ago....





Rather than focus on philosophy, I focus on the science of how we make the ethical and unethical decision that we do.

Behavioral Ethics encompasses:

- Cognitive Science
- Behavioral Psychology
- Evolutionary Biology
- Primatology
- Child Psychology
- Etc.



Most ethics training assumes:

Want to do the right thing

+

= Do the right thing

Know what the right thing is



Behavioral Ethics assumes:

Intention

+

Knowledge

≠

Action

Behavioral Ethics assumes:

Intention

+

Knowledge



The Grand Canyon



In 2017 and 2018, I spoke about factors that make it difficult to be as ethical as you want to be:

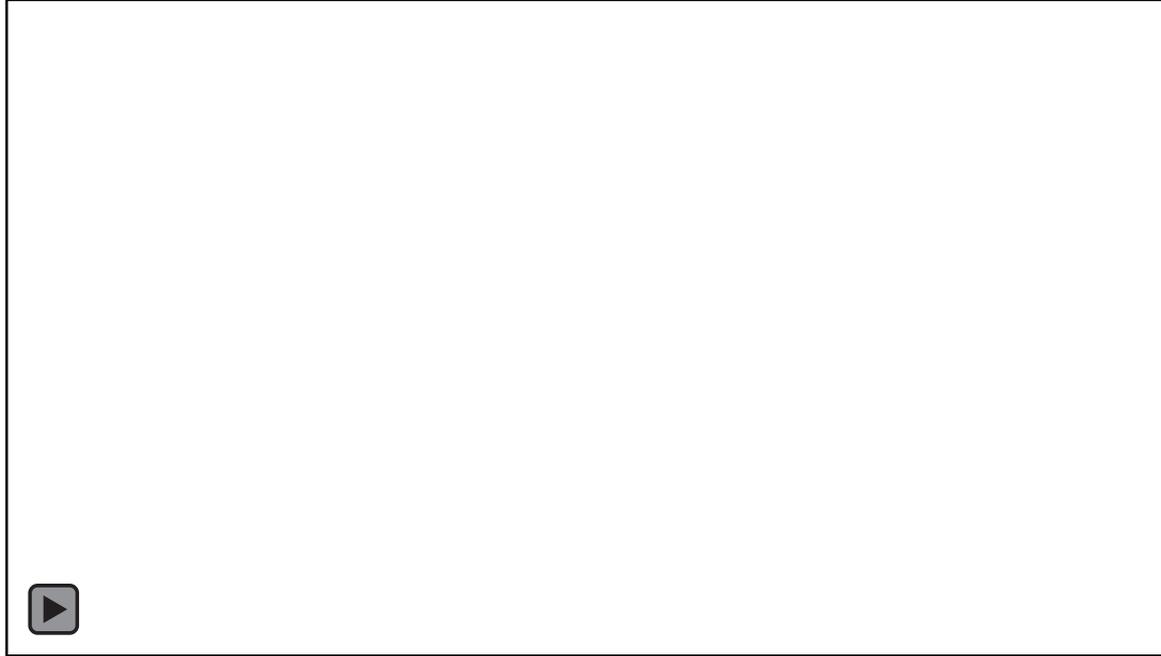
1) Social & Organizational Pressures

- **Obedience to Authority**
- **The Conformity Bias**





The Candid Camera Elevator Video



The Conformity Bias

Petrified Forest Sign: “Your heritage is being stolen. Fourteen tons of rock a year are disappearing, mostly by visitors pilfering of small amounts.”

Effect:





The Conformity Bias

Petrified Forest Sign: “Your heritage is being stolen. Fourteen tons of rock a year are disappearing, mostly by visitors pilfering of small amounts.”

Effect: Pilfering tripled.



2) Cognitive Heuristics and Biases

- **Overconfidence Bias**
- **Self-Serving Bias**
- **Moral Licensing**
- **Framing**
- **Loss Aversion**
- **Tangible & Abstract**
- **Incrementalism**



Incrementalism



Incrementalism

“One thing common in all spiraling loan fraud cases, however, is that dealers seem to dig a hole that gets larger, [Mark] Johnson [president of dealership advisory group MD Johnson Inc.] said. “People just take too long to come to terms with the fact that it's over, ... thinking, 'This is just another problem; I'm going to work out of it,' ” he said. “And it's not.”

Seven employees
have pled guilty to
fraud

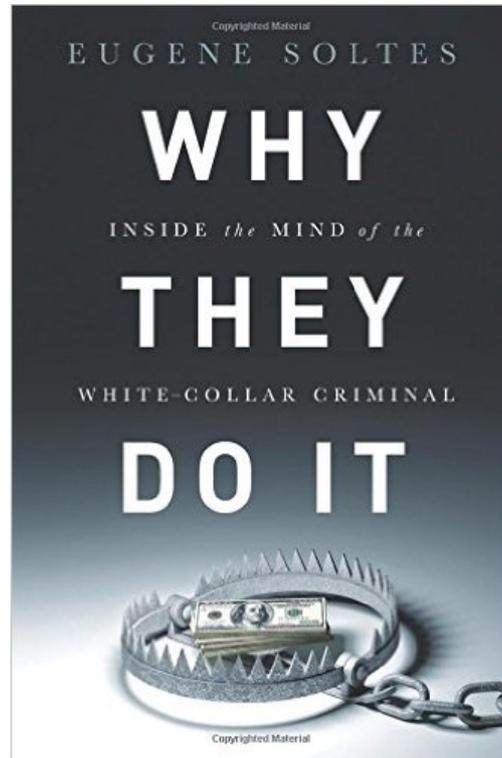




Most people do not screw up because:

- 1) They are inherently evil**
- 2) They just get up one morning and say:
“Today’s the day I start my life of
crime”**
- 3) They cannot figure out the right
answer to an ethical dilemma**

Behavioral Ethics



Ikseon Suh et al., *Boiling the Frog Slowly: The Immersion of C-Suite Financial Executives into Fraud*, JOURNAL OF BUSINESS ETHICS (July 27, 2018), p. 8.



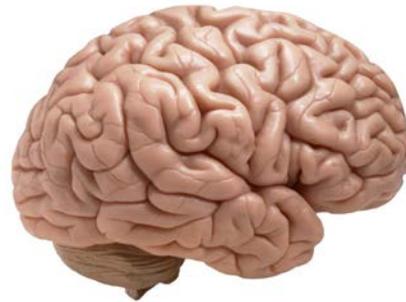


Despite how brilliant I was....





- ***Most people want to think of themselves as good people***
- ***Most people frequently act unethically, usually in minor ways***
- ***Our accomplice:***





I. Temporal Effects

A. We tend to be of two minds:



A. We tend to be of two minds:

1. Our “should” self, and

2.





A. We tend to be of two minds:

1. Our “should” self, and

2. Our “want” self.



“I can resist anything but temptation.”

--Oscar Wilde



B. Overall we tend to:

1. Predict: we'll act ethically
2. Remember: we acted ethically
3. Act: not so ethically because of
“ethical fading”



II. Explaining the Problem

A. Why do we predict we will act more ethically than we do?



1. When we predict how we'll act: ethical issues are salient.

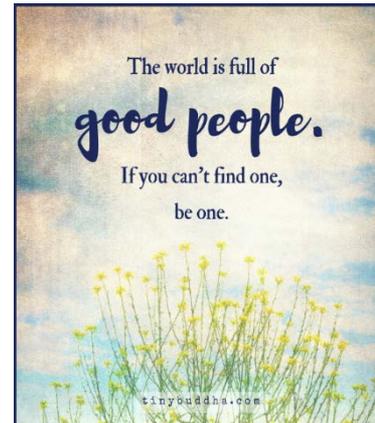


1. When we predict how we'll act: ethical issues are salient.

But in real life, ethical issues often tiptoe in on little cat feet.



- 
1. When we predict how we'll act: we just know that we are “good people,” but we ignore “bounded ethicality” (*conformity bias, incrementalism, etc.*).





1. When we predict how we'll act: we just know that we are “good people,” but we ignore “bounded ethicality” (*conformity bias, incrementalism, etc.*).

--studies of cooperation and generosity



B. Why do we tend to remember that we acted more ethically than we did?



B. Why do we tend to remember that we acted more ethically than we did?

- 1. Our “should” self reconstructs our memories to preserve our moral self-esteem.**





2. Gino: People's memories of bad behavior gradually become less clear than other memories. "Unethical behavior creates psychological distress which is lowered by: *ethical amnesia.*"



Francesca Gino

3. The more important ethical self-image is to people, *the greater they exhibit selective memory.*



C. Why do we fail to act ethically?





C. Why do we fail to act ethically?

1. At the time of action, the “want” self tends to dominate.



C. Why do we fail to act ethically?

1. At the time of action, the “want” self tends to dominate.
2. When visceral motivations enter the picture (hunger, greed, sex, pleasing the boss, getting along with co-workers, hitting a performance goal), ethical issues tend to fade into the background.

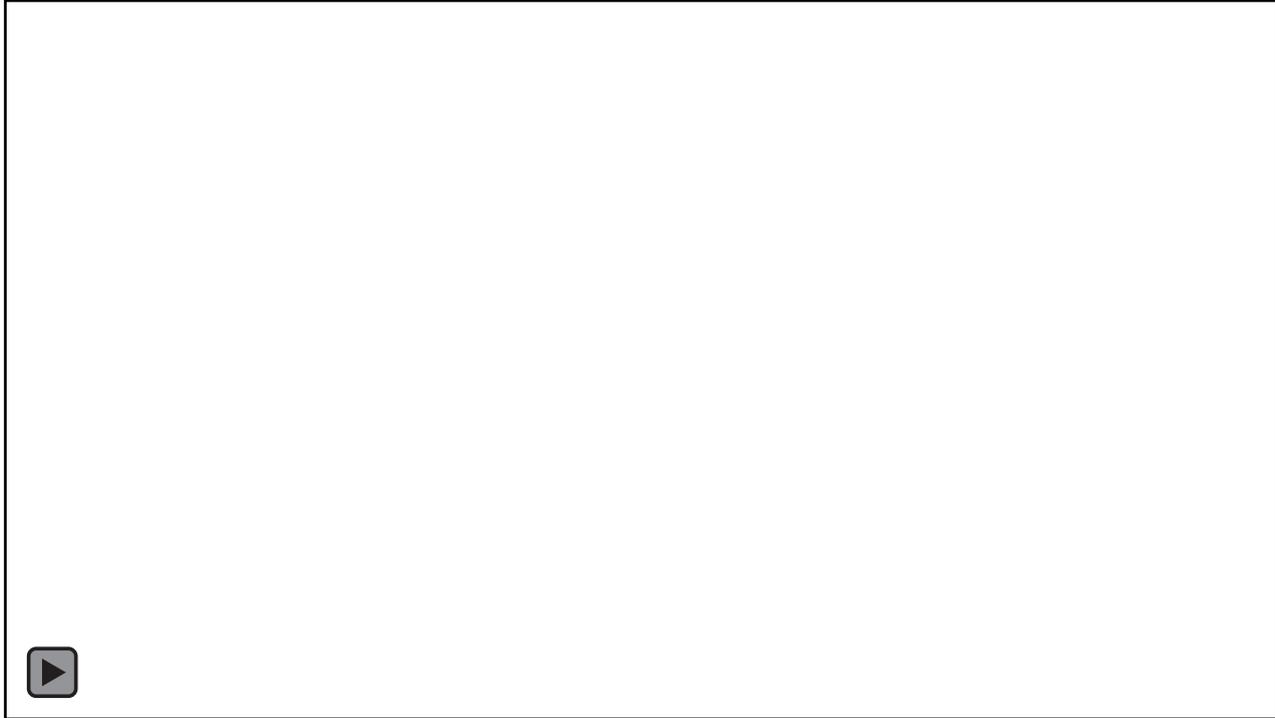


2. When visceral motivations enter the picture (hunger, greed, sex, pleasing the boss, getting along with co-workers, hitting a performance goal), ethical issues tend to fade into the background.

3. We tend to **reframe** the issue to minimize or omit the ethical dimension (“ethical fading”).



Ethical Fading



4. Examples of Mis-Prediction

- **Job Interview**





When actual students were put into what they thought were real interviews and these exact things happened, how many took action?





ZERO

4. Examples

- **Nurses**





III. RECOMMENDATIONS FOR ALIGNING OUR WANT AND SHOULD SELVES.



III. RECOMMENDATIONS FOR ALIGNING OUR WANT AND SHOULD SELVES.

A. Recognize Our Multiple Selves.

B.





III. RECOMMENDATIONS FOR ALIGNING OUR WANT AND SHOULD SELVES.

A. Recognize Our Multiple Selves.

**B. During Prediction, Listen to and Incorporate
the Needs of the “Want” Self.**



A. Recognize Our Multiple Selves.

B. During Prediction, Listen to and Incorporate the Needs of the “Want” Self.

1. *To be successful in your career, would you...?*



To achieve the success in your career that you desire, what would you be willing to do (assuming you would not get caught or punished)?





Would you detonate an atom bomb in downtown Dallas?





Murder a business rival?



Rob a bank?



Bonnie & Clyde

Help your boss cover up his insider trading?





Prof. Marianne Jennings



Now you may say: “This is ERS! I would never be asked to do anything wrong!”

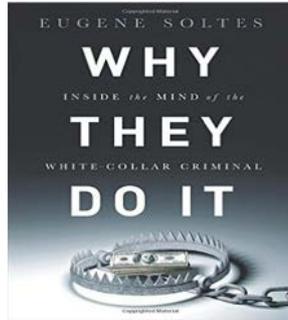




Now you may say: “This is ERS! I would never be asked to do anything wrong!”

If that’s true, then good on you and good on ERS!

However.....



Ikseon Suh et al., *Boiling the Frog Slowly: The Immersion of C-Suite Financial Executives into Fraud*, JOURNAL OF BUSINESS ETHICS (July 27, 2018), p. 8.



2. “Prescript”

2. “Prescript.”

Why are some people heroes?





It's hard to be ethical on the fly.



**Helen Sharkey
Dynegy**



**Helen Doing the
“Perp Walk”**

C. During Action, Increase the Influence of the “Should” Self.

1.





C. During Action, Increase the Influence of the “Should” Self.

1. Find and focus on ethical issues.



Keep Ethical Antennae
Up



2. Act within an ethical infrastructure such as a company's code of ethics.

3.



3. Monitor your own rationalizations.



“The Big Chill”

“Rationalizations are more important than sex.”



Anand et al., Categories of Rationalizations:



PLEASE WAIT...

RATIONALIZATION
IN PROGRESS.



3. Monitor Your Own Rationalizations.

Denial of Responsibility

- “I know it was wrong, but my boss ordered me.”
- “I know it was wrong, but it’s what my client wanted.”

3. Monitor Your Own Rationalizations.

Denial of Responsibility:

Adolf Eichmann (one of Hitler's major organizers of the Holocaust): "What I said to myself was this: The head of State has ordered it, and those exercising judicial authority over me are now transmitting it. So, deep down, I did not consider myself responsible and I felt free of guilt. I was greatly relieved that I had nothing to do with the actual physical extermination."



Eichman



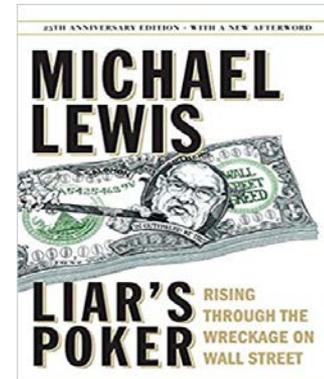


Denial of Injury

- “I know it was wrong, but no one was really hurt.”
- “I know it was wrong, but it could have been worse.”

Denial of Injury

- Michael Lewis, LIAR'S POKER: “There was a convenient way of looking at this situation ... Anyway, who was hurt besides my German? ... The German’s bank had lost sixty thousand dollars. The bank’s shareholders, the Austrian Government, were therefore the losers. *But compared with the assets of the nation as a whole, sixty thousand dollars was a ridiculously small sum.*”





Denial of Victim

- **“I know it was wrong, but my client is an idiot; he deserves to be screwed.”**



Denial of Victim

--Jack Abramoff referred to his Indian clients as “monkeys” and “troglodytes.”





Social Weighting

- **Condemn the condemner**
 - “What I did was wrong, but you have no right to criticize me.”





Social Weighting

- **Condemn the condemner**
 - “What I did was wrong, but you have no right to criticize me.”
- **Selective comparisons**
 - “I know it was wrong, but others are worse than we are.”





“Don’t worry mate—there’s bigger crooks in the market than us guys!” wrote an official of Rabobank, the large Dutch lender after he agreed to a request from one of the bank’s traders in 2007 to submit a phony rate for Libor rates in yen.”

A word cloud where the word "LIBOR" is the largest and most prominent. Other words scattered around it include "rate", "interbank", "london", "offered", "LIBOR", "rate", "london", "offered", "LIBOR", "rate", "london", "offered", "LIBOR", "rate", "london", "offered", "LIBOR".



Rabobank





Appeal to Higher Loyalties

“I know this was wrong, but I had to be loyal to my firm.”

“I know this was wrong, but I had a family to feed.”



B.F. Goodrich made fighter plane brakes it sold to the Air Force. They kept flunking safety tests. Gretzinger went to talk to his superiors. “An hour passed and Gretzinger returned. Looking dejected, he told the engineers: ‘I’ve always believed that ethics and integrity were every bit as important as theorems and formulas, and never once has anything happened to change my beliefs. Now this....*Hell, I’ve got two sons I’ve got to put through school...*’”



Metaphor of the Ledger

“I work lots of extra hours, so it’s ok if I pad my expense account.”

“I’m underpaid, so it’s ok if I take some office supplies home.”



Metaphor of the Ledger

Jack Abramoff: “I give 80% of my income to charity, so my actions are justified”





D. During Action, Decrease the Influence of the “Want” Self.

1.

D. During Action, Decrease the Influence of the “Want” Self.

1. Use Pre-Commitment Devices.

a. Odysseus

Odysseus Tied to the Mast





2. Set aside: *“screw you” funds.*



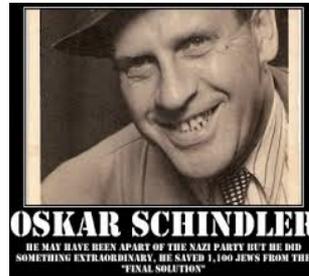
E. Find a Role Model.

1. Studies show that when business leaders act as moral exemplars, it reduces subordinates' moral disengagement, strengthens the magnets inside their moral compass, and can create: "*virtuous synergy.*"



2. Ex:

Those who helped Jews in WWII were more likely: *to have models in their social circle who acted similarly*



F. Act Courageously.

1. Remember the “Courage of One”



Malala
Yousafzai

Somaly
Mam

F. Act Courageously.

1. Remember the “Courage of One”

a. Bay of Pigs



- 
- **Staub study: A subject is working in a room when there is a cry of distress from an adjoining room.**

- 
- **Staub study: A subject is working in a room when there is a cry of distress in an adjoining room.**
 - **If only the subject is in the room: 70% go help**

- 
- **Staub study: A subject is working in a room when there is a cry of distress in an adjoining room.**
 - **If only the subject is in the room: 70% go help**
 - **If another is in the room and ignores the cry: 7% help**

- 
- **Staub study: A subject is working in a room when there is a cry of distress in an adjoining room.**
 - **If only the subject is in the room: 70% go help**
 - **If another is in the room and ignores the cry, 7% help**
 - **If another person is in the room and says: “You go help, I’ll find the person in charge:**

- 
- **Staub study: A subject is working in a room when there is a cry of distress in an adjoining room.**
 - **If only the subject is in the room: 70% go help**
 - **If another is in the room and ignores the cry, 7% help**
 - **If another person is in the room and says: “You go help, I’ll find the person in charge”: 100% help**

- **Columbia MBA study**



Mary Gentile





***--many who don't have the courage to lead do
have the courage to follow***

2. Take responsibility.



3. Remember, most heroes (like most villains) are just normal people like you and me.





BOTTOM LINE:

Acting ethically is not easy, *but you can increase your chances of living the kind of life you can be proud of.*





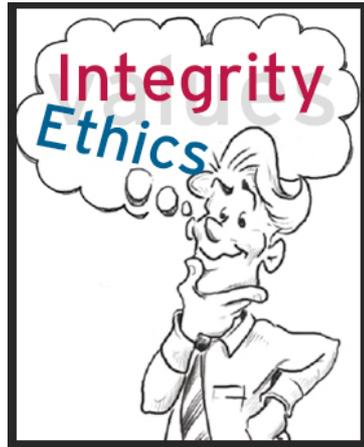
Thanks for a fun (for me) hour!



Ethics Unwrapped

Free ethics video series brought to you by Texas McCombs School of Business

<http://ethicsunwrapped.utexas.edu/>



Cara Biasucci,
Film Maker

Questions?

*Public Agenda Item #7.1

Emerging Manager Program Market Update and Program Overview

December 11, 2019

Lauren Honza, CFA, External Management Portfolio Manager
Panayiotis Lambropoulos, CFA, FRM, CAIA, Hedge Funds Portfolio Manager
Richard Schimel, Co-Founder and Co-CIO, Cinctive Capital Management

Emerging Manager Program

Agenda



- Background
- Calendar Year 2019 Highlights
- Calendar Year 2020 Initiatives
- Emerging Manager Program – Hedge Funds
- ERS Launchpad – Cinctive Capital Management

Emerging Manager Program

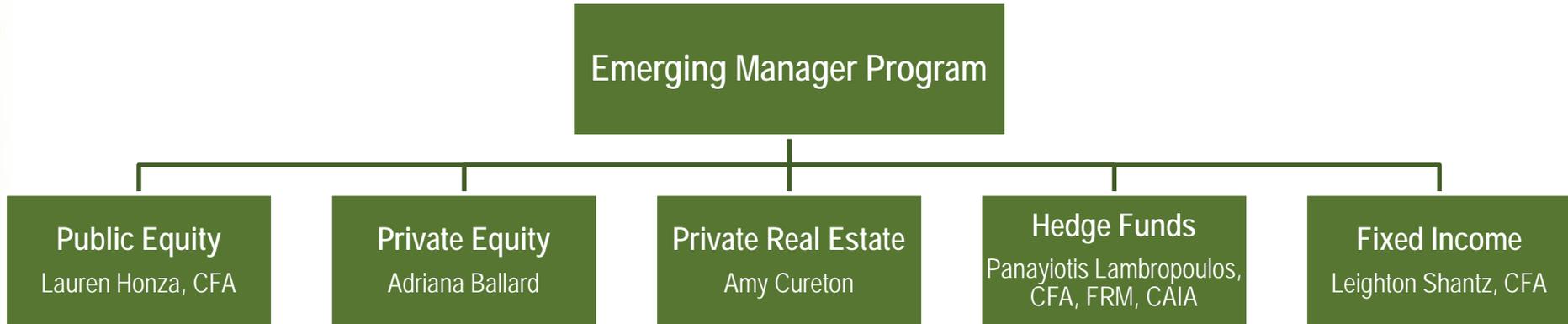
Defined



- Texas Government Code §815.301 (g), (h) and (i) requires the Employees Retirement System of Texas to make a good faith effort to acquire financial services from emerging managers. Emerging managers are defined in the statute as private professional investment managers with less than \$2 billion in assets who provide pension fund management, consulting, investment advising, brokerage services, hedge fund management, private equity management, and real estate investment.

Emerging Manager Program

Team



Emerging Manager Program efforts are coordinated by Lauren Honza in conjunction with the CIO

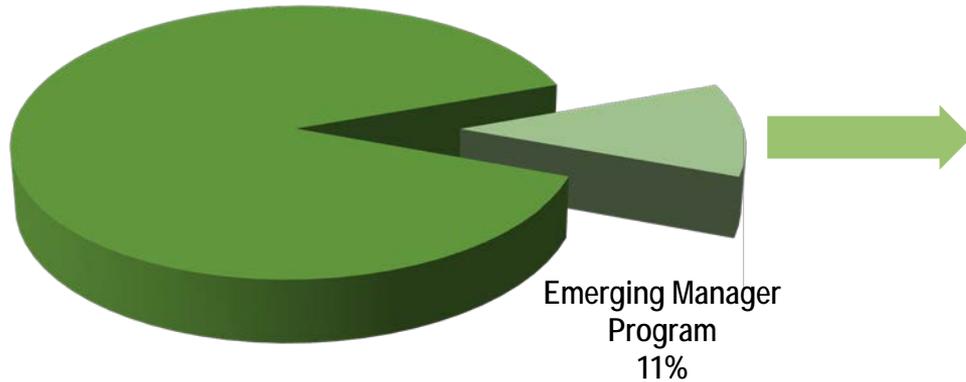
Agenda item 7.1 – Joint Meeting December 11, 2019

Emerging Manager Program

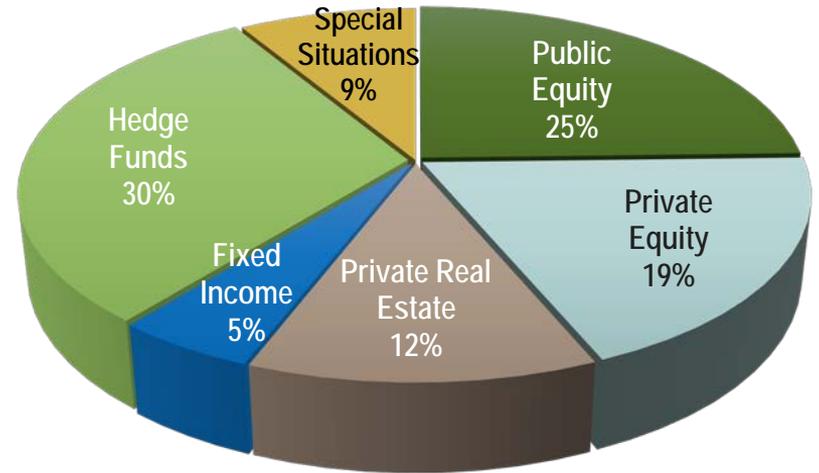
Investments and Commitments as of September 30, 2019



ERS' Total Externally Managed Assets
\$12.47 billion



Current Emerging Manager Allocation
by Asset Class



Emerging Manager Program

Calendar Year 2019 Highlights



- Hedge Funds: ERS PAAMCO Launchpad
- Public Equity: International Small Cap Select Pool
- Public Equity: Emerging Markets Mandate
- Private Equity: New Emerging Manager Fund

Emerging Manager Program

Calendar Year 2020 Initiatives



- Maintain the target of 10% of externally managed assets with emerging managers
- Focus on relevant direct relationships with emerging managers in ERS Portfolio
- Promote emerging manager program best practices by working with other investors
- Continue to work on ERS PAAMCO Launchpad
- 2020 Real Estate Emerging Managers (REEM) Summit – January 8th and 9th, 2020
- 2020 ERS & TRS Emerging Manager Conference – February 26th, 2020

Emerging Manager Program

Performance



Private Real Estate	Net IRR (08/31) Since Inception	Private Equity	Net IRR (08/31) Since Inception	Global Public Equity	Time Weighted Returns - Year Ending (9/30)	Time Weighted Returns - (09/30) Inception – February 2017
Total Emerging Manager Portfolio: Inception – December 2010	16.10%	Total Emerging Manager Portfolio: Inception - November 2010	13.89%	Legato International Small Cap Portfolio	(5.52%)	8.13%
Total Private Real Estate Portfolio	12.36%	Total Private Equity Portfolio	11.64%	MSCI EAFE Small Cap Net Index	(5.93%)	6.47%

Source: The Burgiss Group, LLC

Source: The Burgiss Group, LLC

Source: BNY Mellon

Hedge Fund Program Highlight

Panayiotis Lambropoulos, CFA, FRM, CAIA, Portfolio Manager

Emerging Manager Program – Hedge Funds



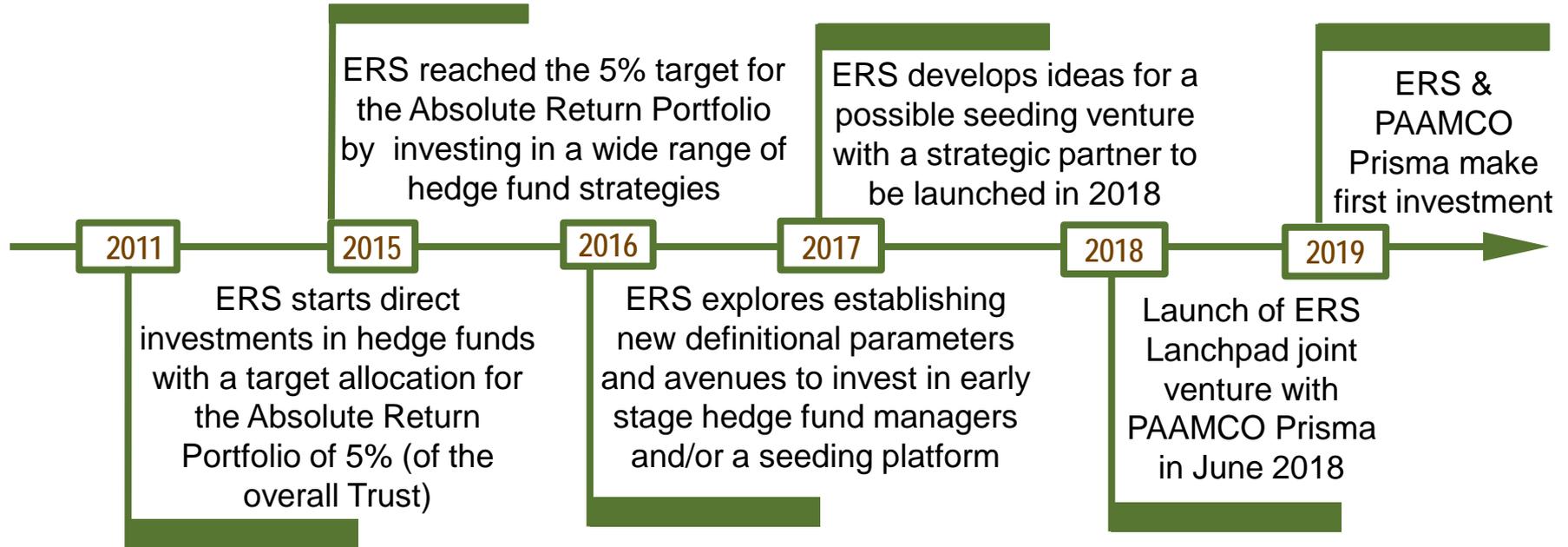
Agenda

- Background: Review genesis, purpose, and scope of Program
- Highlights and Pipeline Activity since launch of Launchpad
- Market and Industry Observations for Emerging Managers
- Introduction of Cinctive Capital Management by ERS and Richard Schimel (Co-Founder and Co-CIO)

Emerging Manager Program – Hedge Funds



Program Development Timeline



Emerging Manager Program – Hedge Funds



Purpose and Scope

Goals

To create a customized venture that aligns internal goals & external resources through a true Partnership.

ERS to benefit from a global network of external resources.

Synthetically extend internal staff bandwidth.

ERS to retain control on investment decisions and due diligence process.

ERS to create another source of “alpha”.

Results

Created and entered a true joint venture with heightened alignment of interests and shared economics. Investments are made through client-driven, customized structures.

PAAMCO Prisma is headquartered in Irvine, California, but has a global footprint that extends across North and South America, Europe and Asia.

PAAMCO has over 200 employees in 8 different cities in 7 different countries.

The new venture is a truly flat and collaborative effort between ERS and PAAMCO Prisma.

ERS retains the ability to make investment recommendations and retains all veto rights along any part of the due diligence process.

ERS negotiates preferred terms and will seek revenue sharing agreements with all managers.

Emerging Manager Program – Hedge Funds



Looking Ahead

Years 1-3

Migrate from theory to execution - Make sure infrastructure and jointly driven process functions as planned.

Target 1-3 manager investments.

Target a meaningful initial aggregate commitment within the Trust.

Beyond Year 3

Continue to review and enhance jointly driven due diligence process.

Target a total of 7-10 total investments.

Dependent on various factors such as opportunity set, past success etc.

In aggregate, target a sizeable allocation within the Trust.

Emerging Manager Program – Hedge Funds Highlights and Active Pipeline

Emerging Manager Program – Hedge Funds



Highlights

- Coverage and interest in Launchpad has been high and well-received.
- ERS & PAAMCO Prisma received National Association of Investment Companies (NAIC) Hedge Fund of the Year Award in recognition of the innovative Launchpad structure and partnership.
- Execution and communication between ERS and PAAMCO Prisma has been smooth and consistent.
- ERS and PAAMCO Prisma staff have been active in sourcing and building a healthy pipeline of ideas globally.
- ERS and PAAMCO Prisma announced investment and partnership with Cinctive Capital Management.

Emerging Manager Program – Hedge Funds



New Launch Pipeline – Proprietary CRM

- Launchpad team tracks hundreds of hedge fund launches - Capital introductions, PAAMCO Prisma sector heads, press releases, industry contacts.



Commonwealth Asset Management

Strategy	Macro – Discretionary
CIO/PM	Adam Fisher
Prior Firm	Soros, CWOC
Head Office	Los Angeles, LA
Launch Date	Jan 2020

Commonwealth Asset Management Holdings LLC (“Commonwealth”) is an asset management platform founded in June 2019 and led by Adam Fisher, the former Head of Global Macro and Real Estate at Soros Fund Management LLC (“Soros”) and the former founder and CIO of Commonwealth Opportunity Capital, GP LLC (“CWOC”). The platform offers separate but complimentary products in the two business lines of Global Macro and Real Estate.

Prior to establishing Commonwealth, the founders and key investment professionals worked together as the core macro and real estate group at Soros, and before that at CWOC. CWOC, a \$2.3bn discretionary global macro platform, launched in 2008 and began the process of returning capital to investors in July 2017 when the investment team moved to Soros. The firm was founded and led by CIO Adam Fisher and offered two commingled hedge funds as well as multiple co-investment opportunities in both the liquid and illiquid space.

The investment process will feature significant continuity with how the team invested at both Soros

Manager	Strategy	CIO/PM	Head Office	Launch Date
Commonwealth Asset Management	Macro – Discretionary	Adam Fisher	Los Angeles, CA	Jan 2020
Highwest Global Management	Emerging Market L/S Equity - Fundamental	Andrew Nash-Webber	Bend, OR	Q4 2019
Infini Capital Management	Multi-Strategy – Multi-PM	Tony Chin	Hong Kong	Jun 2019
Jones Road Capital Management	Credit Special Situations Drawdown	Aaron Wertentheil	New York, NY	Jan 2019
Lioness Capital	Event Driven – Policy & Political	Asli Ay	New York, NY	Q4 2019
MingHong Investment Management	China A Quant Equity MN – Stat Arb	Jason Xie	Shanghai	Q4 2019
Panview Capital Management	Pan Asia L/S Equity - Fundamental	Ryan Thall	Hong Kong	Jan 2020
Sakonnet Point Capital	Global Quant Equity MN – Index Event Driven/Stat Arb	Steve Garnett, Ed Tom	New York, NY	Nov 2019
SILQ Capital	Japan L/S Equity	Hideki Kinuhata	Tokyo	Q1 2020
Trikon Asset Management	Pan Asia L/S Equity - Fundamental	Gaurav Grover	Hong Kong	Nov 2018
Yamawa Asset Management	Japan L/S Equity	Tetsuya Kudo	Singapore	May 2019
Yaupon Capital Management	L/S Equity - Energy	Steven Pattyn	New York, NY	Oct 2018

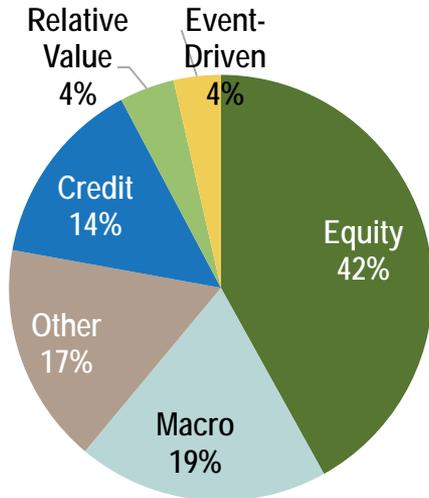
Emerging Manager Program – Hedge Funds



Active Pipeline

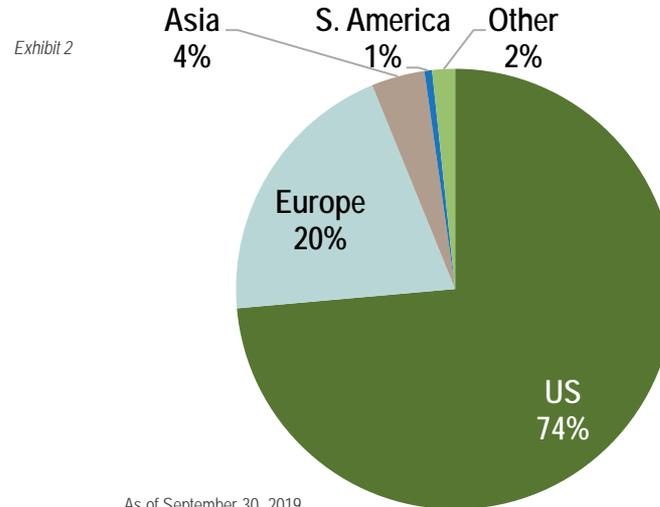
- 2019: Over 120 calls and meetings
- Last 12 months: In contact with nearly ~300 emerging hedge fund managers

LAUNCHPAD PIPELINE MANAGERS:
STRATEGY BREAKDOWN



As of September 30, 2019

LAUNCHPAD PIPELINE MANAGERS:
GEOGRAPHIC LOCATION



As of September 30, 2019

Emerging Manager Program – Hedge Funds



High Priority Pipeline

- Our top priority prospects have impressive backgrounds with a focus on a variety of investment strategies.

Pedigrees Include:

- Citadel
- Millennium
- Soros
- PIMCO
- Cantor Fitzgerald
- Balyasny
- Tudor
- Pine River
- Brigade

Strategies Include:

- Commodities Relative Value
- Asian Equity Long/Short
 - Global Macro
 - Chinese Credit
- Financials Equity Long/Short
 - Structured Credit
 - Event Driven
 - European Credit
 - Volatility Trading

Emerging Manager Program – Hedge Funds Market and Industry Observations

Emerging Manager Program – Hedge Funds

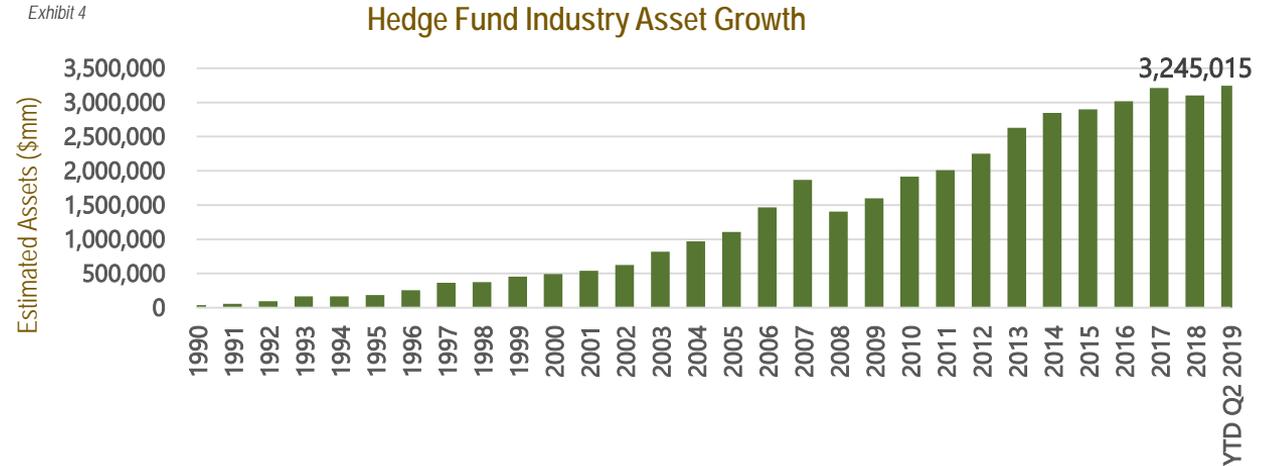
Trends and Data



Exhibit 3

\$3.2 Trillion
Hedge Fund
Industry Assets
Under
Management

Exhibit 4



- From 2010-2015, the hedge fund industry saw asset growth; last 3 years have been more challenging for asset-raising
- Early-stage capital is in high demand and critical to launch and sustain a hedge fund business
- Strong demand for seed or acceleration capital gives Limited Partners opportunity to negotiate favorable terms, attractive revenue share agreements

Emerging Manager Program – Hedge Funds

Trends and Data (cont.) – Rebound in Launches



289 new funds launched in the first half of 2019, outpacing 2018 launches YTD

Exhibit 5



Launches YTD 2019 set to hit and likely outpace 2018's record low launch year (561 HFs)

Source: HFR Market Microstructure Report Q2/19.

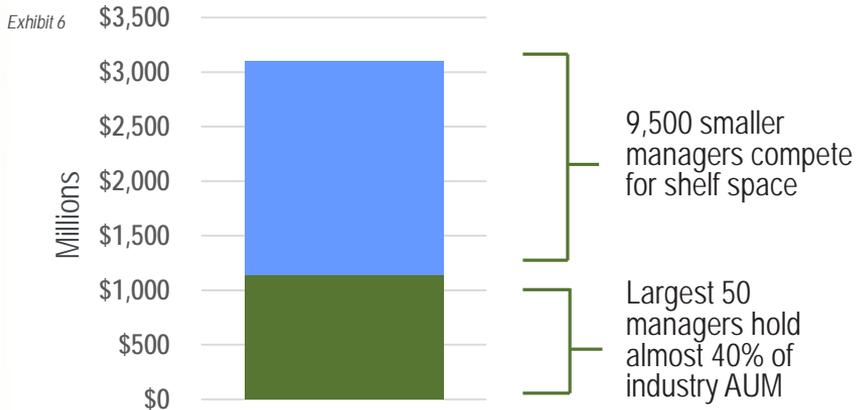
Emerging Manager Program – Hedge Funds



Trends and Data (cont.)

- The costs of launching or sustaining a new hedge fund have increased over the past several years
- Despite “smaller” hedge funds, can offer attractive returns, running or sustaining a start-up hedge fund is more difficult than ever
- Although “smaller” managers are in need of capital, institutions continue to give capital to more established or larger funds

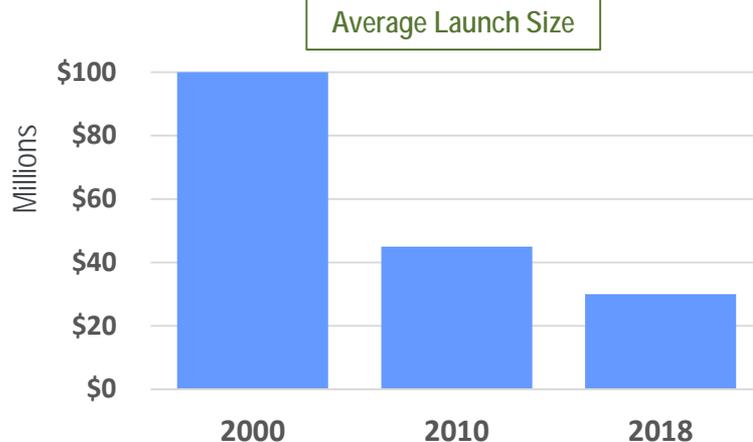
TOP 50 HF MANAGERS HOLD 40% OF AUM



Source: P&I survey, 2Q18; HFR Global Hedge Fund Industry Report

MOST HF MANAGERS CAN'T ACCESS CAPITAL

Exhibit 7



Date: June 2018
Source: Bloomberg, PAAMCO Prisma

Emerging Manager Program – Hedge Funds Looking Ahead

Emerging Manager Program – Hedge Funds



Looking Ahead

- Continue to speak about and present new Launchpad venture to industry stakeholders.
- Continue industry outreach to discuss best practices and highlight performance contribution of emerging manager programs.
- Continue to review and enhance jointly driven sourcing and due diligence process.
- Participate in 2020 ERS & TRS Emerging Manager Conference (February 2020)
- Given the success of inaugural Forum in New York City (Oct. 2018), Launchpad team may host another Forum (location to be determined).
- Stay on track by targeting 1-2 hedge fund manager investments.

Emerging Manager Program – Hedge Funds Introduction to Cinctive Capital Management

Emerging Manager Program – Hedge Funds

Cinctive Capital Management



Richard Schimel
Co-Founder and Co-CIO



Lawrence Sapanski
Co-Founder and Co-CIO

Launch Date: September 2019

Assets Under Management: \$1 Billion committed

Strategy: US Equity Market Neutral

Investors Include: ERS, PAAMCO Prisma, Morgan Stanley, Large Private Corporation

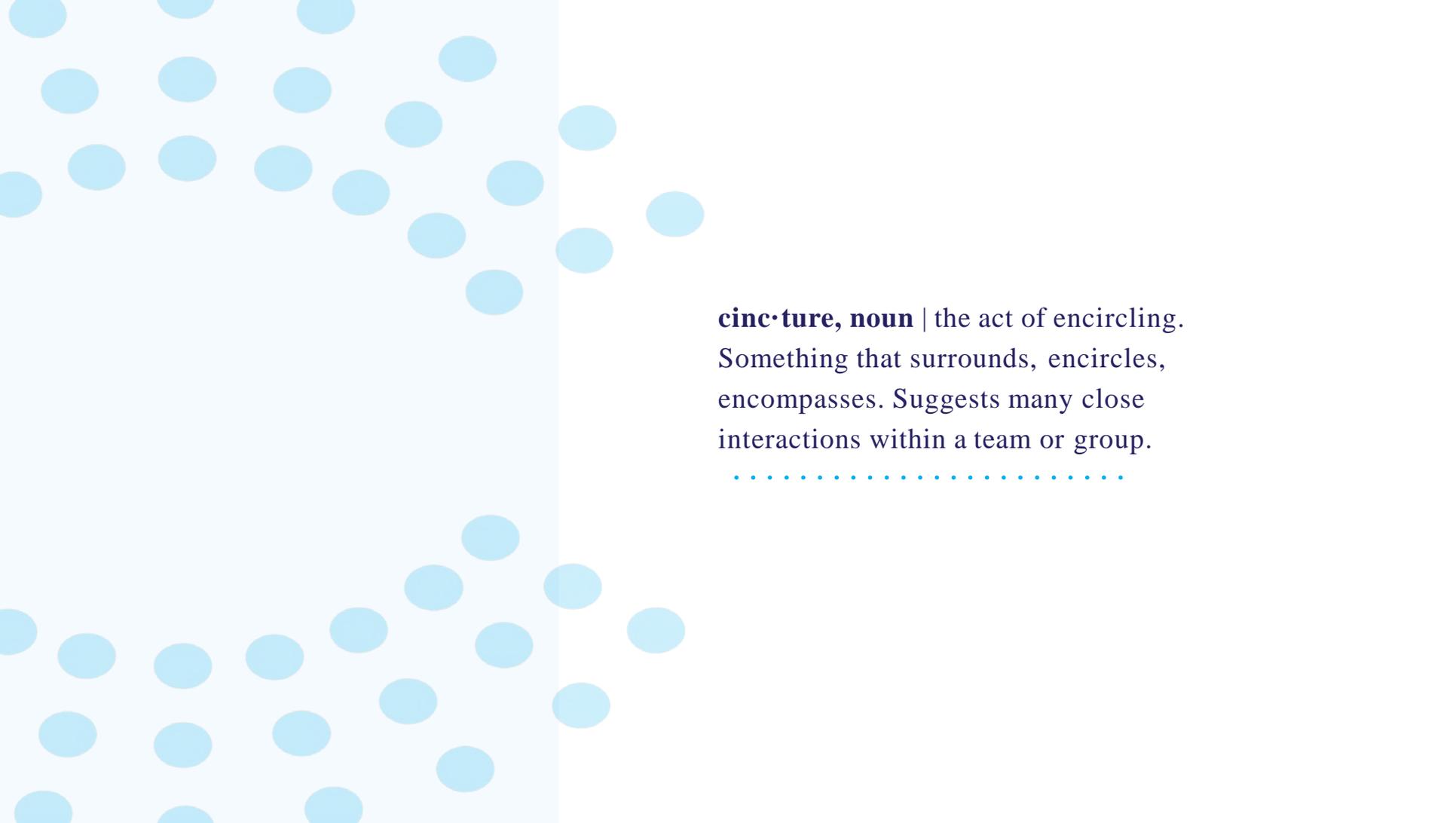
Investor Types: Public Pension, Asset Management, Private Wealth & Family Office

- First Launchpad investment is among the top launches of 2018-2019; marks Launchpad as a top investor in the seeding business

2018 & 2019 Top Launches (by AUM)	Strategy	Headquarters	PM(s) (Previous Fund(s))	Launch AUM / Commitments
Exodus Point	Equity/Fixed Income Platform	New York	Michael Gelband (Millennium)	\$8 Billion
D1 Capital Partners	Equity Long/Short	New York	Daniel Sundheim (Viking)	\$5 Billion
Point72	LSE / Macro / Systematic	Stamford	Steve Cohen (SAC Capital)	\$3 Billion
Woodline Partners	Healthcare / Tech	San Francisco	Michael Rockefeller & Karl Kroeker (Citadel)	\$2 Billion
Crake Asset Management	Commodities	London	Martin Taylor (Nevsky Capital)	\$1.6 Billion
Cinctive Capital Management	Platform Equity Long/Short	New York	Rich Schimel & Larry Sapanski (Aptigon – Citadel, Scoria, Diamondback)	\$1 Billion

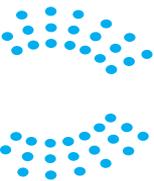


CINCTIVE



cinc•ture, noun | the act of encircling.
Something that surrounds, encircles,
encompasses. Suggests many close
interactions within a team or group.





Introduction – The Next Generation of Multi-Manager Platform



Founders

- Co-founders
Lawrence Sapanski
and Richard Schimel
form the core
management team



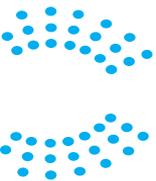
Strategy

- Equity long/short multi-
manager platform
- Investing in small, mid, and
large market capitalization
stocks
- Specialized sector coverage
- Co-CIOs manage Fund risk
and factor exposures at the
Fund level



Potential Competitive Advantages

- Specialized coverage enables
better domain expertise,
higher idea conviction, more
diversification, and limits
crowding at the Fund level
- Smaller relative capital
allocations reduce liquidity
concerns while enlarging
potential investment
universe



Attracting and Supporting Investment Team through Growth and Retention

 **Challenge:**
Poor communication and high investment team turnover

 **Solution:**
A culture of mentorship, collaboration, team development, and continuous improvement

Challenge

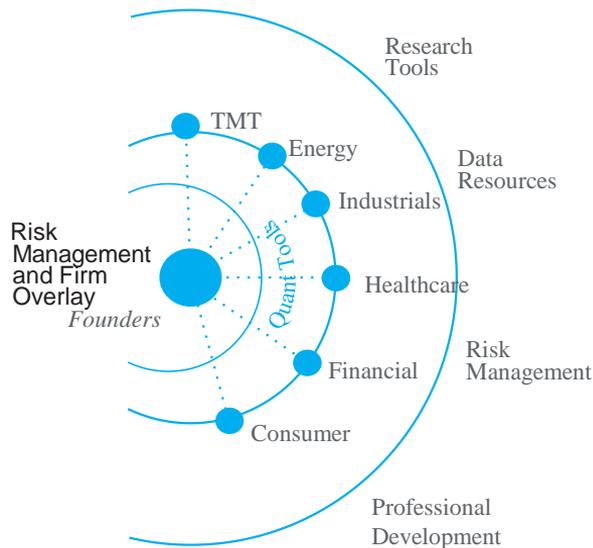
High Investment Team Turnover

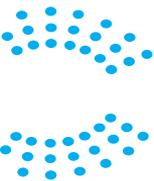
Poor Communication

Cinctive Solution

Mentorship
Focused career path

Collaboration





Addressing Changing Market Liquidity



Challenge:

Decreased liquidity due to evolving financial markets as traditional players are supplanted by algos, quants, and ETFs



Solution:

Specialized coverage, smaller allocations, risk management tools

Challenge

Low Liquidity

Cinctive Solution

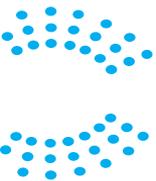
Holding periods will vary, which enables Portfolio Managers to take advantage of dislocations

Encourage **increased idea velocity**

Proprietary optimization tools for portfolio construction

Specialized subsector coverage

Quantitative tools, including cluster analysis, principal component analysis, and distance correlation



A Paradigm that Supports Nimble, Quantamental Decision Making



**Multifaceted
decisions**



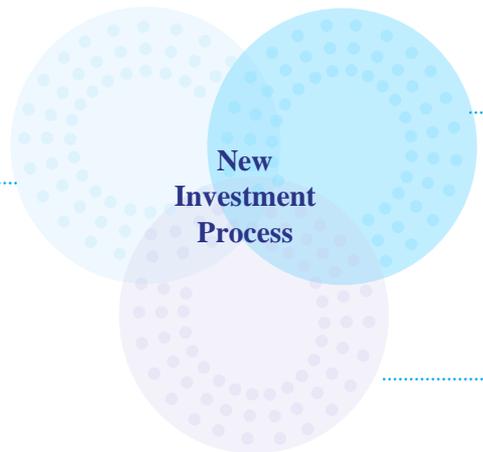
**Systems that
“learn”**



**Technology-aided
portfolio
construction**

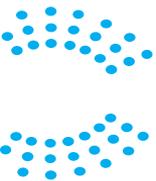
Speed: Analyst talent
data facility drives agile
decision-making

1.....



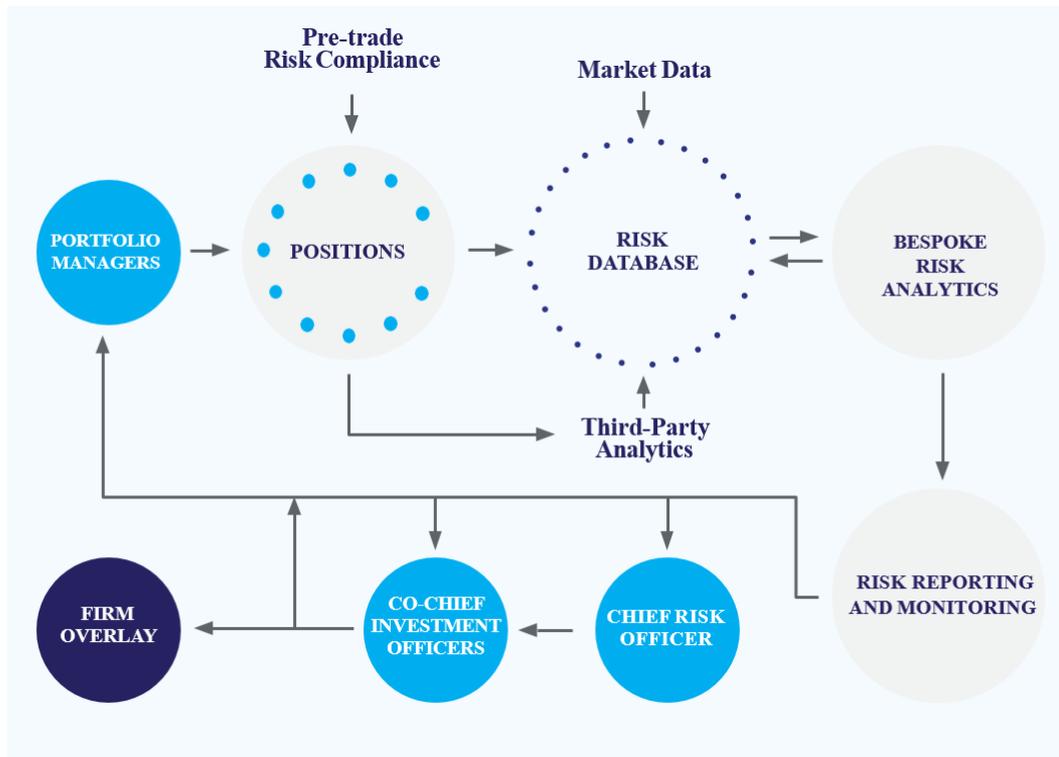
Efficacy:
Quantitative tools
optimize implementation

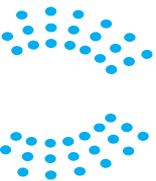
Accuracy:
Machine learning can
improve both process and
idea selection



Risk Management

- **Style** – Interactive, real-time and hands-on
- **Governance** – Risk policies and procedures, active discussions
- **Information** – Risk awareness monitoring and communication
- **Control** – Risk limits and guidelines compliance





State of the Industry

Single-Manager Fund



↑ Higher concentration risk and higher volatility

Multi-Manager Platforms

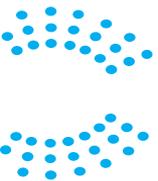


↓ Lower concentration risk and lower volatility

Seek to provide investors with high absolute returns

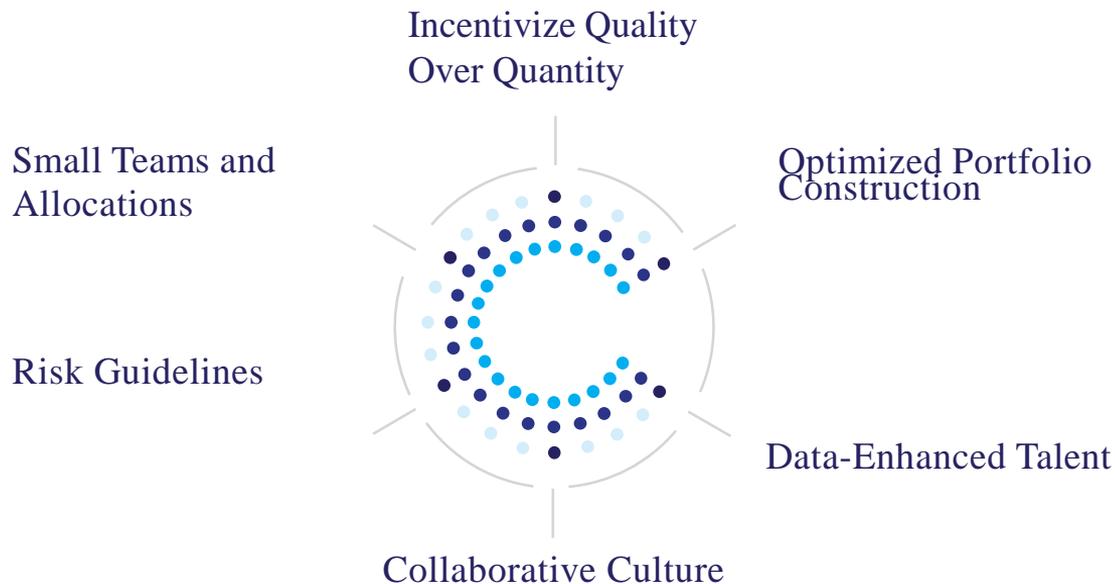
Seek to provide investors with attractive, risk-adjusted returns

This page represents our general views on the state of the industry.



The Cinctive Advantage – Key Differentiators

We seek to augment the benefits of the traditional multi-manager model to capitalize on the evolving market environment and to attract and retain top talent.



Questions?

Public Agenda Item #8.1

Chief Investment Officer's Report

December 11, 2019

Tom Tull, CFA, Chief Investment Officer

Chief Investment Officer's Report

Investment Division Appreciation



- IAC has increased time commitments and involvement:
 - New Asset Class Investment Committee meeting participation as voting members (41 in 2019)
- Legal is negotiating new deals and maintaining contract relationships

Chief Investment Officer's Report

Investment Challenges for Fiscal Year 2020



- Challenging investment environment
- Slowing economic growth and increased market volatility
- Geopolitical and trade risks
- Fatigue in corporate fundamentals

Chief Investment Officer's Report

Investment Opportunities for Fiscal Year 2020



- Opportunistic Credit Portfolio Development
- Focus on Infrastructure Portfolio Development
- Ramping up the seeding platform for Hedge Funds
- Enhancement of risk management and risk reporting to Board

Chief Investment Officer's Report

Major Initiatives for Fiscal Year 2020



- Continue implementation of new asset allocation mix
- Support legislative initiatives for addressing unfunded pension liabilities
- Expand existing core competencies for innovative investment management by exploring new investment opportunities
- Refresh Select Pool of external advisors/managers
- Initiate searches to refine mix of internal and external management

Chief Investment Officer's Report

Major Initiatives for Fiscal Year 2020



- Diligent negotiation of best economic deal terms
- Continue development of ERS emerging manager program
- Leverage external relationships for strategic resources and opportunities
- Enhance Investment Division career path development, communication, succession planning and team development

Questions?

Public Agenda Item #9.1

*Adjournment of the Joint Meeting of the Board of Trustees
and
Investment Advisory Committee*

December 11, 2019