

COMMONWEALTH OF MASSACHUSETTS
PENSION RESERVES INVESTMENT MANAGEMENT BOARD

Minutes of the May 16, 2017 Board Meeting
commencing at 9:31 a.m.

in the
PRIM Board Offices
at 84 State Street
Boston, Massachusetts
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

	I N D E X	
		PAGE NO.
1		
2		
3	List of Documents and Other Exhibits	4
4	Attendance	5
5	Call to Order	6
6	Minutes	8
7	Committee Membership Recommendation	8
8	Project Save: Phase II Update	10
9	Introduction of SEIU 509 President Peter	
10	MacKinnon and Fran Ludwig (Co-Founder	
11	of DivestOurPensionsNow.org) and then	
12	brief remarks by Mr. MacKinnon	19
13	Executive Director/Chief Investment	
14	Officer Report	34
15	Investment Report:	
16	Public Markets Performance Summary	66
17	Hedge Funds and Portfolio Completion	
18	Strategies Performance Summary	74
19	Portfolio Completion Strategies	
20	Investment Recommendation: Goldman	
21	Sachs Asset Management Put Spread	
22	Collar (PSC) Strategy	79
23	Private Equity:	
24	Performance Summary and Cash Flows	99
25	Investment Opportunity: CVC Capital	
	Partners VII, L.P.	106
	Investment Opportunity: Chequers	
	Capital XVII	110
	Co-Investment Manager: Chequers Capital	112
	Benchmark Recommendations	113
	PRIM Board Meeting Minutes of 5/16/2017	
	For Approval at the August 2017 Meeting	

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

PAGE NO.

Real Estate and Timberland:

Performance Summary 121

Consulting RFP Recommendations 122

REIT Portfolio Recommendations 127

Finance & Administration Report:

Draft Fiscal Year 2018 Operating Budget 131

Results of Equal Pay Audit and Equal Pay
Presentation 139

Results of PRIM Board Self-Evaluation 155

Adjournment 163

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

D O C U M E N T S*

- A. Minutes of the February 14, 2017, PRIM Board Meeting
- B. Biography of Philip Rotner
- C. Request of Peter MacKinnon to Address the Board
- D. Project SAVE: Phase II Internal Investment Management
- E. PRIT Fund Performance Report
- F. BNY Mellon Gross of Fees Performance Report
- G. Portfolio Completion Strategies - Put Spread Collar Strategy S&P 500 Analysis
- H. Benchmark Review and Recommendations Presentation
- I. Real Estate and Timberland Performance Charts
- J. Consulting RFP - Evaluation Committee Recommendations
- K. REIT Portfolio - Current Manager Recommendation Presentation
- L. McLagan Equal Pay Audit Presentation
- M. Draft Fiscal Year 2018 Operating Budget
- N. March 2017 PRIM Operating Budget
- O. Travel and Staff Development Report

*Referred to and/or used at the meeting and retained at the PRIM Board offices

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A T T E N D E E S

Board Members

- Treasurer Deborah B. Goldberg, Chair
- Robert L. Brousseau
- Ruth Ellen Fitch
- James B.G. Hearty
- Theresa F. McGoldrick, Esq.
- Peter Monaco
- Dennis J. Naughton
- Carly Rose
- Paul E. Shanley, Esq.

Other Attendees:

- Patrick Brock, Admin & Audit Committee Member
- Shawn Collins, Treasury
- Megan Costa, Standard Life Insurance
- Michael DeVito, PERAC
- Michael Even, Investment Committee Member
- Nick Favorito, MSRB
- Jim Kane, Unite Here
- Sarah Kim, Treasury
- Chuck Kostro, Essex Regional Retirement System
- Fran Ludwig, Pensioner
- Peter MacKinnon, SEIU 509
- James Michel, Mass Divest
- Sharon Moulton, Mass Divest
- Thomas O'Donnell, PERAC
- Jon Ostrowsky, Treasury
- Matthew Patsky, Trillium
- Sue Perez, Treasury
- James Quirk, Barnstable Retirement Board
- John Regier, Mintz Levin
- Glenn Strehle, Investment Committee Member

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 P R O C E E D I N G S

2 A meeting of the Pension Reserves
3 Investment Management Board (PRIM Board) was held
4 on May 16, 2017, at the PRIM Board offices located
5 at 84 State Street, Boston, Massachusetts.

6 Call to Order:

7 The meeting was called to order and
8 convened at 9:31 a.m. Treasurer and Receiver-
9 General Deborah Goldberg chaired the meeting.

10 MS. KIM: Good morning, everyone. We should
11 get started in the interest of time.

12 Good morning. My name is Sarah Kim.
13 I'm Deputy Treasurer and General Counsel. The
14 Treasurer's running a little late so she asked
15 that I start the meeting for her until she
16 arrives.

17 So to start, the Massachusetts Open
18 Meeting Law permits meetings to be recorded and
19 states that the chair shall inform attendees at
20 the beginning of the meeting of any such
21 recording.

22 So accordingly, I am informing you that
23 Virginia Dodge, seated here to my left, is
24 transcribing and also recording this meeting. And
25 if anyone else in attendance today is recording

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 the meeting, I would ask that you identify
2 yourself.

3 And we have one person recording -- no,
4 not recording? Okay.

5 So for the benefit of the stenographer
6 and those who are listening, please identify
7 yourself for the record and speak clearly and
8 audibly. Thank you.

9 So we're going to take a few things a
10 little bit out of order. We're going to do the
11 minutes and then recommendation from the
12 Investment Committee. And then we'll hear from
13 Michael Even on Project SAVE. And then after
14 that, the SEIU 509 folks will be speaking.

15 So the first item on the agenda is
16 approval of the minutes of February 14, 2017, PRIM
17 Board meeting, which was attached to the materials
18 you received at Appendix A.

19 Are there any questions or comments on
20 the minutes?

21 MR. BROUSSEAU: Move to accept the minutes.

22 MR. SHANLEY: Second.

23 MS. KIM: I take that as a no.

24 So we have a motion and a second. Any
25 further discussion?

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 All those in favor?

2 BOARD MEMBERS: Aye.

3 MS. KIM: Any opposed?

4 Hearing none, the motion carries.

5 (VOTED: To approve the February 14,
2017, minutes.)

6

7 MS. KIM: So next, recommendation for a new
8 appointee to the Investment Committee. Michael.

9 MR. TROTSKY: Sure. Thank you, Sarah.

10 And welcome, everyone, to a beautiful
11 spring day, I think, finally.

12 Many of you have already heard me say
13 this, but about a year ago, Ed Kane, on our
14 Investment Committee, indicated that he would like
15 to step down after serving for six years.

16 Ed was founder of HarbourVest, he was
17 our resident private equity expert, and he was
18 invaluable to me and to the team during a very
19 difficult time for the private equity team. You
20 remember about six years ago, we had to hire every
21 single member on the team. And Ed definitely was
22 a part of that. We restaffed the group.

23 We have, obviously, a difficult
24 investment environment to navigate. We completed
25 very complex research, which focused our private

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 equity on middle market buyouts predominantly.
2 And of course, we developed a unique co-investment
3 program.

4 So at the Investment Committee, we
5 thanked Ed profusely for his great service to us.
6 And he was really terrific.

7 Meanwhile, the Treasurer and I were
8 seeking to identify a candidate with private
9 equity experience and expertise that would fill
10 Ed's shoes, and that's what we're going to talk
11 about today.

12 Phil Rotner will be proposed as our new
13 Investment Committee member with private equity
14 expertise. Phil is the chief investment officer
15 at Boston Children's Hospital.

16 And before that, he served as managing
17 director of private equity for 18 years at the MIT
18 endowment. In that capacity, he was responsible
19 for evaluating and investing in private equity
20 opportunities in the United States and
21 internationally. And we think he'll be of
22 tremendous value to our team.

23 I might also add that in his current
24 capacity as CIO at the Boston Children's Hospital
25 endowment, he has a unique way of thinking about

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 portfolio risk, which I think will be additive to
2 our self-evaluation, if you will.

3 And we're delighted to present him to
4 you. He's excited and raring to go. He's not
5 here today, but his bio was passed around, and
6 we'd be very lucky, and I'd be appreciative, if
7 you could ratify him.

8 So thank you.

9 MR. NAUGHTON: Do you need a motion? Make a
10 motion.

11 MR. BROUSSEAU: Second.

12 MS. KIM: Okay. We have a motion and it's
13 been seconded to have Mr. Rotner join the
14 Investment Committee.

15 All those in favor.

16 BOARD MEMBERS: Aye.

17 MS. KIM: Any opposed?

18 Motion passes.

19 (VOTED: To approve Phil Rotner as an
Investment Committee member.)

20

21 MS. KIM: So next, I'd like to invite Michael
22 Even to join us.

23 MR. EVEN: Thank you very much.

24 Good morning, ladies and gentlemen. I
25 think I'm going to Appendix D.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 So this is a presentation that we did at
2 the Investment Committee, and Mike asked me to
3 repeat it for the Board. So I'm happy to go
4 through it as quickly or as slowly as you'd like.
5 Just please direct me and interrupt me.

6 So we are continuing Project SAVE with
7 Phase II. And Phase II is focused on building up
8 PRIM's internal asset management capabilities.

9 If you go with me to page 1, this
10 project was started about a year ago, and I've
11 been involved with it mostly with David since the
12 beginning. And we started with a review of the
13 state of the industry.

14 For those of you who are not aware,
15 internal money management has been a huge growth
16 area amongst large plans, with many plans shifting
17 significant assets to internal. And we've found
18 not only evidence of that through our research,
19 but we found many different ways that different
20 plans have approached it and many different
21 results.

22 To review the benefits we're hoping to
23 establish with this, we're hoping to improve
24 performance and, equally important, flexibility of
25 our investment capabilities. We hope to reduce

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 fees and costs. And we want to increase staff
2 expertise and professional growth through this
3 program.

4 So those were the goals, and this is
5 what we kind of found out about the state of the
6 industry.

7 However, initially the project scope was
8 a little bit overwhelming. We basically opened it
9 up to any possibility of internal management. And
10 frankly, we do not at this point have the
11 infrastructure to handle day-to-day money
12 management in general. Although we do do internal
13 money management -- I'll get to that in a
14 second -- in various forms already, we generally
15 don't have the trading infrastructure, the
16 operation, the oversight infrastructure to do so.

17 So the project was a little bit
18 overwhelming. And I wouldn't say we tabled it,
19 but, Dave, would you say we pursued it a little
20 bit -- we slowed it down a little bit.

21 So a few months ago, I offered Mike -- I
22 have a little more personal time. I offered Mike
23 to focus a little bit on it with his team. And we
24 kind of refocused it.

25 And we focused on rather than being a
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 large-scale top-down, we're going to do internal
2 money management. We said, "What would it look
3 like bottoms up? What would look like if we went
4 to each of the teams and said to them, 'Where are
5 your points of interest? Where would you like to
6 do internal management if you were able to do it
7 and why?'"

8 And we wanted to focus on areas that
9 were high impact and low operational demand. And
10 what that roughly means is we wanted areas that
11 were going to be low turnover, where there's not
12 going to be a lot of trading, small number of
13 securities, and a potential for a third party to
14 help us with some of the fiduciary day-to-day
15 capabilities.

16 And the plan is to collect ideas from
17 the team, which is partially done, and you'll see
18 that on my last page -- I'll give you a feel for
19 some of the ideas that were floated -- to create
20 the initial project plan, which we will do once we
21 have some direction from both you and the
22 Investment Committee.

23 And to connect with other asset
24 allocators on specific projects and understand how
25 they have approached, particularly, areas where we

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 think we have a significant interest.

2 And finally end with budget deliverables
3 and dates and specifics for the project. So
4 that's the project plan.

5 Any questions so far?

6 Let's talk about the challenges for a
7 second because this is potentially a really
8 interesting project and will have a lot of
9 potential impact.

10 The first challenge that I saw almost
11 immediately was staffing. We need more staff,
12 particularly at the entry and research levels, if
13 we're going to pursue this.

14 In my opinion, PRIM runs very lean right
15 now, and to add additional responsibilities on top
16 of the current focus is difficult. And to
17 potentially add entry and research level folks
18 will help us in general, as well as on this
19 particular project.

20 And some of that staffing may require
21 specific expertise. We'll know more about that as
22 we move along. But generally speaking, the
23 projects we've been exploring so far, we probably
24 have the beginning expertise in-house to start
25 them and explore them.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 The second key challenge, I've already
2 touched upon. It's infrastructure. And this is
3 not because there's a problem with PRIM's
4 infrastructure, but because PRIM's infrastructure
5 is meant to manage managers, not to manage
6 internal assets.

7 So if you want to start managing
8 internal assets, we will have to shift the
9 infrastructure a little bit, or I should say add
10 to it. And what we hope to do is do it in a very
11 gradual way that is not going to impose a huge
12 burden on either the people or the budget or the
13 team in general.

14 So those are the main challenges.

15 Again, any particular questions or
16 points?

17 Yes, ma'am.

18 MS. FITCH: What kind of internal resource
19 are you looking at? I know it's people, but
20 skills, numbers? Or can you even determine that
21 yet?

22 MR. EVEN: I will be able to tell you more,
23 once we agree on some projects. The number-one
24 resource we need right now, in my opinion, is
25 generic research capabilities, the ability to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 follow the senior people and do some of the work
2 for them.

3 So at this point, I'm thinking more of
4 entry-level and research-level folks. It is
5 absolutely possible as we define the projects, it
6 would be nice to have very specific kind of
7 expertise, skill here.

8 MS. FITCH: Okay. Thanks.

9 MR. EVEN: So this is not a long
10 presentation. This is my last page.

11 The last page is the preliminary project
12 list. And again, this was done in collaboration
13 with each of the teams.

14 And please don't take this as written in
15 stone. It's absolutely not so. It's generally to
16 give you an idea of the kind of things we're
17 thinking about and what the requirements might be.

18 So the public markets team came up with
19 some very specialized smarter indexing things that
20 we want to build in-house that are very hard to
21 get externally.

22 And I just talked to Sarah a couple days
23 ago. To give you an example of one of them, we
24 run a portfolio of STRIPS, bond STRIPS. And the
25 benchmark for those changes fairly frequently, and

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 transaction costs are fairly high.

2 We probably don't need to adhere as
3 closely to the benchmark as every single manager
4 wants to adhere. So it could be a situation where
5 we own relatively few securities, very low
6 turnover. And the savings in transaction costs
7 can more than make up for any of the effort
8 involved in it.

9 So that's an example in that space of
10 the kind of things we're thinking about.

11 In the private equity space, Mike Bailey
12 has intended for a long time to do co-investments,
13 and co-investments is a nice first step towards
14 doing more independent kind of thinking and
15 investing.

16 (Treasurer Goldberg and Ms. McGoldrick
17 joined the meeting.)

18 And the idea would be to allow Mike to
19 staff up sufficiently to be more proactive in that
20 area and to allow him to do a few more projects in
21 an area than he has the ability to do today.

22 Eric had an idea, which is a very
23 interesting idea, that would involve multiple
24 teams, of doing what I call private equity
25 replication. And the idea behind that is not to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 copy the returns of private equity, but to use
2 public market securities in order to allow
3 intermediate investments. So when we allocate
4 money to private equity, for example, since it
5 takes a long time to invest it, to have a place to
6 park it that gives returns that are roughly
7 similar to private equity. It's a very, very
8 interesting project.

9 Finally, and I wanted to mention this
10 specifically because I said that we do do a lot of
11 investing in-house already, the real estate team
12 effectively does direct investment. And one of my
13 intents is to work a little bit more closely with
14 them to see if there's more that they want to do
15 and more that they want to put on their plate in
16 that area.

17 So that's an overview of what we're
18 thinking. Mike and I both wanted to introduce the
19 Board to this as soon as possible and make sure we
20 address any kind of questions or issues as they
21 come up. But I'm happy to come back anytime as
22 well. So --

23 MR. TROTSKY: My only comment would be that
24 sometimes a fresh look on a project is really
25 helpful.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And in this case, I have to thank you,
2 Mike, because you simplified this so much in our
3 eyes. It was a daunting task. We were thinking
4 top-down, what do we need to build? Is this going
5 to be transformative?

6 And I think this is much more
7 grassroots-oriented and organic, and I think it
8 makes a heck of a lot of sense to really pivot
9 180 degrees and grow this organically on a project
10 basis.

11 So simple but elegant, Michael.

12 MR. EVEN: Thank you.

13 TREASURER GOLDBERG: His retirement accrues
14 to our benefit.

15 MR. TROTSKY: Yes, it does. Congratulations
16 on your retirement.

17 MR. EVEN: Absolutely. Thank you very much.

18 TREASURER GOLDBERG: You're not intended to
19 be retired. You're just shifting gears.

20 MR. EVEN: Shifting gears. Absolutely.
21 Thank you.

22 TREASURER GOLDBERG: So I want to invite
23 SEIU, President of SEIU 509, Peter MacKinnon, and
24 Fran Ludwig, cofounder of DivestPensionNow.org, to
25 give some brief remarks together.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Can you please join us at the head of
2 the table.

3 MR. MacKINNON: Thank you. Good morning.

4 As Treasurer Goldberg said, I'm Peter
5 MacKinnon. I'm the president of SEIU Local 509.
6 And thank you for this opportunity to speak to the
7 Board this morning about what we believe are
8 pressing needs to divest from fossil fuels in the
9 state retirement system.

10 I want to say that I'm here today as an
11 active contributor to the state retirement system.
12 I pay into it. I've been a state employee for
13 almost 19 years now.

14 And I'm here also on behalf of
15 Local 509's more than 8,000 members who are state
16 employees and pay into the state retirement system
17 every two weeks.

18 I'm here as a social worker who spent my
19 career trying to protect children. And I'm here
20 as a father who cares about the future for this
21 planet for my daughter.

22 And I'd like to share some of the
23 reasons why Local 509 supports divesting from
24 fossil fuels.

25 Burning fossil fuels is causing
 PRIM Board Meeting Minutes of 5/16/2017
 For Approval at the August 2017 Meeting

1 significant climate change, which in turn is
2 causing harm to our people and our world. There
3 is no reasonable doubt about the science.

4 This is why we do not believe it is in
5 the interest of our members, who are future
6 retirees, to continue to invest in fossil fuel
7 companies. In principal, the harm being done
8 outweighs whatever short-term profits are
9 available. But in practice, investing in fossil
10 fuels will actually increase the cost for retirees
11 as we are forced to adapt to an earth that is
12 gradually becoming less habitable.

13 Whether it's rising sea levels, severe
14 storms, increased droughts or heatwaves; whether
15 it's the spread of disease as viruses migrate
16 through the changing climate, or food shortages,
17 where the land has become less sustainable for
18 farming, or whether it's the projected migration
19 of thousands of people as their homelands become
20 no longer habitable, there is no doubt that
21 burning fossil fuels is changing our climate in
22 ways that will significantly decrease the quality
23 of life and increase the cost of basic survival.

24 Most of us wouldn't bet against that
25 outcome, so why is our retirement system?

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 If potential investment would increase
2 future costs for retirees, that consideration
3 should be factored into the decision about whether
4 or not to make the investment. Investment in
5 fossil fuels increases our future costs of living
6 by encouraging the degradation of our planet.

7 It's about more than just our ability to
8 retire with dignity. It's about how our
9 retirement contributions are being invested.

10 Members of Local 509 are human service
11 workers like myself and educators. Our belief in
12 the pressing need to divest is driven by the work
13 that we do every day to improve people's lives and
14 our communities.

15 I'm a social worker. I work with
16 children and families. And I don't want the money
17 that I earn to be invested in an industry that
18 makes children's lives, including my daughter's,
19 more difficult as they grow up.

20 Not only is divestment from fossil fuels
21 in the interest of the members of Local 509 and
22 that of the communities we serve, it is also clear
23 that it is in the Commonwealth's financial
24 interests.

25 Now, I know what you're thinking. Why
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 should you take advice from a social worker, which
2 is a legitimate question, but I am an expert in
3 human welfare. And it's not just the long-term
4 welfare of our whole species that's at stake here.
5 The risks posed by stranded assets is both
6 existential and financial.

7 If fossil fuel companies burn all of the
8 fuel reserves they claim as assets, our world will
9 be in serious peril. Divestment will help to slow
10 this disturbing trend.

11 With the long-term damage of climate
12 change clear and the short-term benefit of
13 continued fossil fuel investments up in the air,
14 the rational decision is to divest. This is why
15 over \$5.5 trillion worth of funds have already
16 divested from fossil fuels. It's time for our
17 pension system to join them.

18 As a union leader, I can tell when a
19 movement is growing. And the movement away from
20 fossil fuels and toward clean renewable energy is
21 growing. We are not going to stand by and let
22 maximum climate change happen to us.

23 As this movement grows, continuing
24 investment in fossil fuel companies becomes
25 riskier. The recent changes in Washington make

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 your actions all the more important. While the
2 Trump administration's failure of leadership on
3 climate change should be cause for concern to all
4 of us, it is particularly acute for working people
5 like the brothers and sisters of Local 509.

6 The 1 percent are less worried about
7 climate change. They know they'll have the
8 resources to cope. But for the rest of us working
9 people, we need action.

10 If the federal government won't lead, we
11 must rely on the states. What we do here in
12 Massachusetts becomes even more important.
13 Whether on the issues of equality, freedom or
14 renewable energy, I am proud that our state has
15 often led the way toward progress on defining
16 issues of my lifetime. It's time for us to do the
17 same in climate change by divesting from fossil
18 fuels.

19 I thank you for your time.

20 TREASURER GOLDBERG: Thank you.

21 MS. LUDWIG: So thank you for the opportunity
22 to speak.

23 My name is Fran Ludwig, and I echo
24 President MacKinnon's sentiments. I receive a
25 pension from the funds that you manage, and I

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 depend on that for my income.

2 As a retired teacher, I appreciate that
3 you're focused on trying to maximize the benefits
4 for my pension. However, as a science teacher in
5 Lexington for 50 years, I know that we cannot
6 continue to pollute the natural systems that keep
7 us alive, yet that's what I see my pension fund
8 endorsing by investing in fossil fuels. I believe
9 3 percent of our holdings are in fossil fuels.

10 When coal, oil and natural gas are
11 burned, as Peter mentioned, we jeopardize our
12 health, number 1, but number 2, our climate. And
13 there's no question about that.

14 I'm sure that we're all concerned about
15 this on a personal level as well. Our kids, our
16 grandchildren and all the children in the world
17 are going to be impacted by this.

18 We in the Divest Our Pensions Now group
19 believe that Massachusetts should divest from
20 fossil fuel holdings in the same way that we
21 eliminated our tobacco and South African interests
22 in the past since these were deemed to be
23 antithetical to the values of the Commonwealth.

24 Given our significant efforts as a state
25 to combat climate change, which I'm very proud of,

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 eliminating investments in fossil fuels is a
2 consistent measure.

3 But in addition to these moral
4 arguments, which Peter so eloquently delineated,
5 there's a compelling case to be made for
6 divestment on a strictly financial basis. I make
7 no pretense, as Peter does, to be an expert in the
8 field of wealth management.

9 But as an engaged citizen and as an
10 investor myself, I've been trying to educate
11 myself. And everything that I've learned
12 indicates that coal, oil and gas assets are likely
13 poor long-term investments.

14 Scientists have introduced the concept
15 of a carbon budget. And the consensus is that we,
16 all of humanity, can only burn about 20 percent of
17 the proven fossil reserves, the ones that are
18 still in the ground, if we are to limit the amount
19 of carbon dioxide in the atmosphere to a, quote,
20 "safe level." We're actually beyond that at this
21 point so we'd better hurry up.

22 An important implication to investors,
23 though, is that if we take that into account, the
24 major fossil fuel companies are significantly
25 overvalued. We've already seen some implications

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 of that. Their market values are predicated on
2 their proven reserves, which we can't burn.

3 In addition, in the long term, the
4 ravages of unchecked climate change will
5 negatively impact almost all of our investments.
6 The Trump phenomenon notwithstanding, the trend
7 worldwide has been to acknowledge the need to
8 transition away from fossil fuels to a renewable
9 energy economy. 160 nations signed that Paris
10 agreement.

11 For example, Christiana Figueres, the
12 former executive secretary of the United Nations
13 Framework Convention on Climate Change, warns that
14 "Institutional investors who ignore climate risk
15 are increasingly seen as blatantly in breach of
16 their fiduciary duty to the beneficiaries of their
17 funds, men and women who have worked hard all
18 their lives to put away something for their
19 retirement and for their children." That's a
20 quote from her.

21 World Bank president Jim Yong Kim, the
22 former president of Dartmouth, includes fossil
23 fuel divestment as a legitimate tactic. He goes
24 on to urge, "Be the first mover. Use smart due
25 diligence. Rethink what fiduciary responsibility

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 means in this changing world."

2 These advisories on fiduciary duty are
3 consistent, by the way, with those of Bevis
4 Longstreth, former commissioner of the U.S.
5 Securities and Exchange Commission, and I'll give
6 you a handout with his remarks.

7 In response to these caveats, to date,
8 over 700 institutions worth, as Peter mentioned,
9 \$5.5 trillion, have divested from some or all of
10 their fossil fuel holdings for financial and, in
11 some cases, for moral reasons as well.

12 These include the world's largest
13 Sovereign Wealth Fund, Norway's GPF, the
14 insurance giant Allianz, the Republic of Ireland,
15 the Rockefeller Brothers Fund, UMass, Syracuse
16 University, Stanford and the retirement systems of
17 California.

18 In addition, Goldman Sachs, HSBC and
19 BlackRock have issued climate change warnings and
20 call on investors to incorporate climate risk
21 screenings for new investment decisions.

22 And by the way, even the U.S. military
23 is concerned about climate risk. Not for
24 financial reasons -- well, actually for financial
25 reasons too.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 New York City's Mayor de Blasio has
2 recently instructed his controller to tell their
3 money managers that they want a responsible plan
4 to minimize carbon risk in their five retirement
5 funds, a plan that will also achieve the fund's
6 targeted returns amid deep market changes.

7 If any of the words sound familiar in
8 the quotes earlier, it's because those quotes were
9 part of a letter that our group sent to the PRIM
10 Board in July of 2015.

11 Since then, we've submitted to this
12 board an analysis performed by Trillium Asset
13 Management that shows that PRIT's holdings in
14 coal, gas and oil lost over 500 million in 2015
15 and that these assets seriously underperformed
16 over a three-year period compared to the rest of
17 the portfolio.

18 Matt Patsky, CEO of Trillium, who is
19 over here, is here to attend with us today and is
20 available to answer questions, should you have
21 them.

22 In summary, we have been at this, trying
23 to move on fossil fuel divestment, for a few years
24 now. Our main questions for the PRIM Board
25 remain.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Do you believe that investing in fossil
2 fuels is in the long-term interests of the pension
3 fund? What are you doing to assess the pension
4 fund's exposure to the risks of owning fossil fuel
5 assets? And will you share your position on
6 fossil fuel divestment with your pensioners?

7 I believe before, it was sort of put
8 over to the pension fund managers. But certainly
9 you have an opinion about this, and you must give
10 instructions to your money managers.

11 Given the urgency of the climate issue
12 and our concern, we believe your pensioners
13 deserve to know the answers to these questions.

14 I hope that we can engage in productive
15 dialogue on fossil fuel divestment. We'd be
16 pleased to assemble the right experts to give a
17 more robust presentation on the finances in the
18 future.

19 Thank you for your time today.

20 TREASURER GOLDBERG: Thank you, Fran.

21 Any comments or questions?

22 I appreciate your coming today. And I
23 know that we have expressed to you our desire to
24 participate with the Legislature in these
25 discussions. I think that that's the right venue

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 for this to be taking place, and I'm assuming that
2 you are working with them.

3 And I am working very close with a lot
4 of the Treasurers from the northeast region on
5 these issues. There is a difference of opinion on
6 how to attack fossil fuel investment.

7 I happen to be a person who takes the
8 position that -- and have worked very closely with
9 Seth Magaziner who did do the energy sector at
10 Trillium, who is one of my advisors and who is
11 also planning on speaking with this board.

12 And we have a difference of opinion as
13 to where this divestment should begin with, which
14 is the Legislature, and two, that we believe in
15 active engagement and that that is working.

16 And I won't go into details on some of
17 the things that you've cited as to whether I
18 believe that they are correct or not. I just want
19 to let you know that personally, I don't disagree
20 with you -- my daughter is a social worker, by the
21 way.

22 MR. MacKINNON: And my condolences to you.

23 TREASURER GOLDBERG: In terms of issues of
24 the climate, I feel that what you're saying today
25 needs to be discussed with the Legislature.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And in the meantime, we as a group are
2 working on active engagement and being able to
3 take positions, along with other Treasurers and
4 investors, on how to move the needle with fossil
5 fuel companies.

6 Beth Pearce of Vermont has done a
7 significant amount of work on this and feels that
8 many of these fossil fuel companies are working
9 toward shifting their investments to renewables.
10 They have the resources to actually get that
11 going. And so this is a moving target.

12 And I appreciate your coming today and
13 sharing your positions with us. And we will
14 continue to work together with you.

15 MR. BROUSSEAU: Just a brief comment, Madam
16 Chair.

17 I've been on this board for 30 years,
18 and we've had divestments and divestments. And
19 they've always come from the Legislature, be it
20 from the Northern Ireland divestments, South
21 Africa, tobacco, Sudan, Iran.

22 And in terms -- I mean we've had our
23 discussions on fiduciary responsibilities of the
24 Board. And we invest not only for just the state
25 employees and teachers but for 90 local systems.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 A lot of these are their assets.

2 I would feel very -- if the Legislature
3 wanted us to move in that direction, we've done it
4 in the past, and we can do it in the future.

5 But if anybody's going to turn around
6 and see that they're losing possible benefits for
7 their retirees and the cause of it is that a Board
8 has taken investment decision that injured their
9 investments, we're open to fiduciary suits.

10 And we've met with attorneys. Some of
11 us have sat down. You know, Fran, Dennis and I
12 sat down with you. I think it was two years ago.

13 MS. LUDWIG: It was.

14 MR. BROUSSEAU: And we've had these
15 discussions.

16 I welcome the Legislature getting
17 involved in this. And it's an education process,
18 having been -- a retired teacher myself, a lot of
19 people in the state have got to be educated to it,
20 especially the Legislature, before we move in that
21 direction.

22 MR. MacKINNON: Sure. And just say we have
23 legislation pending. There are discussions going
24 on there. It's a multipronged discussion.

25 And it's a discussion, as the Treasurer

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 said, and we welcome that continued discussion.
2 We know it can't come from any one particular
3 source, but we believe it is such an important
4 issue that if we're not all talking about, at
5 least talking about, it, and acknowledging where
6 the differences are, then we can't move forward.

7 So point's well-taken, but --

8 I appreciate the time sincerely.

9 TREASURER GOLDBERG: Okay. Thank you for
10 coming. Thank you very much.

11 MS. LUDWIG: Could I leave these copies with
12 somebody?

13 MS. FITCH: Yes.

14 TREASURER GOLDBERG: So you're up, Michael.

15 MR. TROTSKY: I guess I'm up. Thank you.

16 Well, welcome again. Welcome to our
17 Committee members who are here today.

18 Tim Vaill, welcome back. Glenn Strehle,
19 and you've already heard from Michael Even.
20 They're on the Investment Committee.

21 We have Patrick Brock in the back, who
22 is on the Hampshire County Retirement Board plus
23 on the Admin and Audit and Compensation Committee.
24 Thanks for making your long trip here.

25 Clients, Chuck Kostro is here from
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Essex.

2 And Jim Quirk, you're here representing
3 Barnstable County and how many more? 10?

4 MR. QUIRK: Nine.

5 MR. TROTSKY: Nine more. Ten in total.

6 Am I missing anyone else?

7 MR. SHANLEY: Yes. Nick Favorito from the
8 State board.

9 MR. TROTSKY: Nick Favorito from the State
10 board. Thanks for coming.

11 I think that's it. So thank you for
12 coming.

13 On today's agenda, I really intend to
14 speak to you a little bit about long-term
15 organizational strategy. I'm excited to do that
16 because it's something we don't often get to do,
17 and it's important.

18 It comes at a good time with only one
19 and a half months left in this fiscal year, which
20 is shaping up to be very strong. I'll talk to you
21 about performance in a minute, but we're happy so
22 far with this fiscal year.

23 But first, an organizational update.
24 Last week, we learned that both Bob Brousseau and
25 Paul Shanley have been reelected by members of

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 their respective and respected retirement systems
2 for new three-year terms beginning this July 1.

3 Congratulations to you both.

4 MR. BROUSSEAU: Thank you.

5 MR. TROTSKY: We are delighted to have you
6 both.

7 And Bob, you stole my thunder. I was
8 going to say as a retired teacher, Bob is PRIM's
9 longest-serving member, having joined way back in
10 1987.

11 So we're at 30 years and counting, and
12 we love having you part of the Board.

13 TREASURER GOLDBERG: You came with the
14 October crash of '87?

15 MR. BROUSSEAU: Yes. That was fun.

16 MR. TROTSKY: 30 years. You've been here
17 longer than some of our employees have been alive.

18 MR. BROUSSEAU: You don't have to remind me,
19 Michael.

20 MR. TROTSKY: Sorry about that.

21 Speaking of being alive, next I wanted
22 to announce two new births to the PRIM family.

23 We're delighted to have both Sarah
24 Samuels and Christina Marcarelli -- Sarah is our
25 deputy CIO; Christina Marcarelli is on our real

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 estate team -- both back from their maternity
2 leaves, back in full swing.

3 TREASURER GOLDBERG: Paid parental leave.

4 MR. TROTSKY: Paid parental leave, but in
5 their case, I think it's maternity.

6 Paid parental leave. Please excuse me.

7 TREASURER GOLDBERG: We're just having
8 people -- the guys can do it too.

9 MR. TROTSKY: We're delighted to have you
10 both back.

11 TREASURER GOLDBERG: We smartly have more
12 women babies around.

13 MR. TROTSKY: Oddly enough, again, two new
14 baby girls. We seem to --

15 TREASURER GOLDBERG: They're all going to
16 work here.

17 MR. TROTSKY: We have baby girls consistently
18 here. It's something in the water.

19 And Matt Liposky is also -- his wife is
20 pregnant with a baby girl, another one. So the
21 trend continues.

22 Next I'd like to welcome our newest
23 employee to PRIM, Luis Roman. Luis joined the
24 PRIM team on April 17 as our new Senior Investment
25 Officer and Director of Risk Management.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Luis joins us after more than 20 years
2 in investments in academia. Prior to joining
3 PRIM, Luis was U.S. head of multi-class and
4 alternative investment risk at Columbia
5 Threadneedle Investments, global head of fixed
6 income investment risk at State Street Global
7 Advisors, and before that, a quantitative analyst
8 at Putnam Investments.

9 He really is a recognized expert in the
10 design and implementation of risk management
11 systems. We're really delighted to have him.

12 Luis began his career in academia, where
13 he was a visiting assistant professor at the
14 University of California in Irvine, and also at
15 the Worcester Polytechnic Institute.

16 He earned his master's in applied
17 mathematics from the University of Chicago and his
18 Ph.D. in mathematics from the University of
19 Minnesota.

20 So welcome to the team. We're delighted
21 to have you. Already some good work happening out
22 of your group.

23 Next, I want to highlight three
24 important developments in the hedge fund and PCS
25 group. Last week, there were only two highlights,

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 so I'm going to keep you guessing what the third
2 one is.

3 But first, earlier this month, we
4 learned that for the second consecutive year, our
5 hedge fund team, which is Eric Nierenberg and Bill
6 Li, have been named finalists at the Institutional
7 Investor magazine's 15th Annual Hedge Fund
8 Industry Awards, to be held in June in New York
9 City. The award recognizes excellence and
10 innovation in thought leadership in the hedge fund
11 space. And we are all aware of that.

12 Our team joins four others in North
13 America in the large public plan category. We
14 join CPPIB, the Canadian pension plan; Texas
15 Teachers; Texas State Retirement System; and SWIB,
16 which is the State of Wisconsin Investment Board.

17 If you remember, we were nominated for
18 this same award last year, and we actually won it
19 last year, which was terrific. And I'd highlight
20 that it is highly unusual to be nominated two
21 years in a row, and it's a huge testimony to the
22 work we do here.

23 Congratulations to Eric and Bill.

24 Additionally, last week, the same
25 publication -- this is the new development --

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Institutional Investor magazine announced the 2017
2 hedge fund rising stars, which is a list of 30 up-
3 and-comers in the hedge fund industry. It's split
4 between those who work for allocators and those
5 who work for hedge funds directly. The rising
6 stars are nominated by their colleagues and
7 industry peers.

8 And I'm delighted to announce that Sarah
9 Samuels will be honored this year at the same
10 exact event in June in New York City.
11 Congratulations.

12 This is another great honor for our
13 hedge fund effort and the great achievements of
14 the program that you've heard about through the
15 last few years.

16 And I'd highlight that it's also a deep
17 recognition of our very successful PRIM
18 Professional Development Program. The rotation
19 program initiated last year with Sarah as the
20 first participant, rotating through hedge funds,
21 private equity and real estate.

22 So congratulations.

23 And last, another accolade to our hedge
24 fund team, and this one to Bill Li. Last cycle,
25 you heard that Bill passed his Level 3 exam, the

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 CFA exam, and is now a CFA Charter holder after
2 completing the requisite work requirement.

3 I'm also pleased now to announce that he
4 passed his CAIA exam. The Chartered Alternative
5 Investment Analyst designation is earned after
6 passing a rigorous two-part exam.

7 You may remember that at the last cycle,
8 maybe two cycles ago, I had the pleasure of
9 announcing that Sarah also passed and is now a
10 CAIA. We have a lot of smart people.

11 The curriculum covers a broad knowledge
12 base in alternative investments, including hedge
13 funds, something that Bill already knows a lot
14 about, but also including private equity, real
15 assets and structured products.

16 Congratulations, Bill. We love your
17 ambition, we love your drive and of course your
18 many contributions to Eric and the hedge fund team
19 and the team in general throughout PRIM. And we
20 have very, very high hopes for you in this
21 organization.

22 So thank you, the whole hedge fund
23 group.

24 But I also want to mention that not all
25 our awards go to the investment team. And I'm

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 pleased to announce for the 12th consecutive year,
2 the Certificate of Achievement for Excellence in
3 Financial Reporting was awarded to PRIM on
4 April 10 by the Government Finance Officers
5 Association, GFOA.

6 This achievement of course recognizes
7 the highest form of recognition in the area of
8 governmental accounting and financial reporting.
9 It's really a testimony to the transparency,
10 completeness and timeliness of our financial
11 reports, including our CAFR, our Comprehensive
12 Annual Financial Report.

13 And a special recognition to Qingmei Li
14 on Dave Gurtz's finance team. She's not here now,
15 but she's really influential in getting everything
16 together to qualify us year after year for this
17 wonderful award. So thank you very much for that.

18 As you know, at a very high level, we
19 have a high-functioning organization, and everyone
20 has contributed to that here at PRIM. You hear me
21 talk about these awards at nearly every meeting.
22 Someone else is up. And we're very proud of the
23 credentials that we have on our staff and for the
24 achievements and of course our performance and
25 innovation.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 We see it in our investment results. We
2 see it in the thoughtfulness of our work. And of
3 course in everything we do, it's become a part of
4 who we are.

5 We have new initiatives across the
6 board. Today you heard Mike Even talk about the
7 next phase of Project SAVE. Of course Project
8 SAVE I under Tim Vaill's tutelage and direction
9 was a major success, and the Project SAVE numbers
10 are well above \$150 million in annualized cost
11 savings and value-enhancing activities.

12 Thank you very much, Tim. It's part of
13 our DNA now, and you're passing the baton to the
14 next qualified guy for Project SAVE II, Phase II.
15 We're excited about it.

16 Today you'll hear about innovative risk
17 mitigation strategies like the put spread collar
18 that you'll be voting on today. And you'll hear
19 about other different plans going on as usual.

20 In the past, we have implemented many
21 programs, including Project SAVE I, cash overlays,
22 securities lending, managed accounts and hedge
23 funds, really leading the country in managed
24 accounts, replication strategies, alternative risk
25 premia harvesting strategies, private equity

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 co-investment, direct real estate deals, just to
2 name a few. So we're firing on all cylinders.

3 But we are managing over \$65 billion now
4 with a staff of only 40 people, and less than half
5 of our staff are on the investment team. In fact,
6 we are very, very lean. We only have 13 direct
7 investment professionals managing this 65 billion,
8 plus two risk people now.

9 This is well below our comparator group.
10 In fact, it's well below even the lowest quartile
11 of our peers in terms of head count. We manage
12 this large, complex fund with fewer people than
13 our peers. It's important to know that.

14 You also know that we have a very strong
15 and capable staff. But I'm here to tell you today
16 that I believe we are too lean, and there is too
17 little room for error in our current organization.
18 There's little room to absorb promotions now, and
19 there's little room to absorb turnover, should we
20 have it.

21 And in this regard, with respect to
22 turnover, we have been very, very fortunate over
23 the past few years, and it really bucks the trend
24 at PRIM. I think we've been fortunate because
25 we're so innovative and successful. And hopefully

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 that enables us to retain and attract people.

2 But I believe, and several of you have
3 urged me to believe over the last few months, that
4 we actually have a strategic risk of being too
5 lean in our current state.

6 So I'm asking each asset class head in
7 light of this to add to his or her staff over the
8 next 12 to 18 months. We have many projects to
9 pursue. But I want to add this head count slowly
10 and carefully, again over the next 12 to
11 18 months. And we hope to find the right people
12 and add them at the right time.

13 We have put the full amount of this head
14 count increase in the budget that's in front of
15 you today. These are potential hires. They're in
16 the budget that you'll be evaluating today and I
17 hope you will vote to accept. It was unanimously
18 accepted at the Admin and Audit Committee meeting
19 two weeks ago.

20 It's a long-term plan, 12 to 18 months.
21 But importantly, it does not significantly raise
22 our expense ratios. In fact, salaries as a
23 percent of total expenses will remain at
24 approximately 1.5 percent. Only 1.5 percent of
25 our total expense structure will be used to pay

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 salaries, including these new additions.

2 Remember, our assets are growing. Our
3 performance is great, is good, solid. Our
4 innovation is great. And our expenses through
5 Project SAVE and other things we do have been
6 very, very well-controlled.

7 Any questions on that?

8 Last, before moving on to markets and
9 performance, I have announced a slight
10 reorganization to the investment staff. This
11 reorganization is intended to rejuvenate our
12 innovation. It's a shot in the arm, if you will,
13 and that's how I've been describing it.

14 And we must constantly evaluate
15 ourselves, self-reflect on the way we do things.
16 Can we do anything better? Are we missing
17 anything? Are we missing any investment
18 opportunities? Are we as good as we can be?

19 For many of you who know me personally,
20 this is what I'm all about. This is how I was
21 brought up in the business world. I was lucky
22 enough in my formative business career to work for
23 one of the industry's greats, Andy Grove at Intel
24 Corporation, who wrote a book actually that I've
25 read multiple times called Only the Paranoid

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Survive.

2 And during my career, nearly 30 years in
3 the business sector, I've come to realize that
4 those who don't innovate, those who don't question
5 how they do things, those who don't change with
6 the times, perish. And so I'm very much informed
7 by that. And this reorg is meant to be a shot in
8 the arm, if you will.

9 So first, Mike Bailey will be next in
10 the Professional Development Program that I spoke
11 about earlier. It's our rotation program. And
12 hopefully he will infuse some of his good ideas,
13 which he has many, he's a great investor. And
14 he'll infuse some of those ideas into other asset
15 classes around PRIM.

16 He'll be rotating beginning next fiscal
17 year through the different asset classes. It's a
18 great testimony to the faith and confidence I have
19 in Mike and his abilities.

20 Next, Eric Nierenberg will become our
21 Chief Strategy Officer. He will work
22 collaboratively with all members of the investment
23 staff to explore new opportunities that don't
24 easily fall into any other categories.

25 And he's essentially been doing that

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 already. We know that, with many of the
2 investments he's brought the Investment Committee
3 and to the Board pertaining to assets that don't
4 easily fit into any other category.

5 I'll be asking him to just do more of
6 that and to draw in other asset classes as he does
7 it. This is what he likes to do. He's very good
8 at it.

9 And I think, Eric, you'll be very
10 productive at that. I'm very excited about it.

11 As another added role, as Chief Strategy
12 Officer and our own internal professor -- you know
13 he is a professor at Brandeis; he's been teaching
14 for quite a long time -- I've asked him to develop
15 and administer an educational curriculum here at
16 PRIM for our employees.

17 And we'll be covering basics and also
18 advanced topics in finance and portfolio
19 management. Regression-based frameworks, forensic
20 accounting, risk modeling, factors, statistics,
21 portfolio management, finance theory, options and
22 derivatives, something that he teaches currently
23 to a graduate school class. And his favorite, his
24 Ph.D. thesis subject, behavioral finance.

25 So we're very, very lucky to have this
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 expertise in-house, and we're going to tap into
2 it. I know it's something that Eric likes to do,
3 and I for one am very excited to participate in
4 this curriculum.

5 And last, in order to do this, I'm
6 asking Eric to slowly transition hedge funds, his
7 day-to-day responsibility for hedge funds, to
8 Sarah Samuels and her Public Markets group.

9 Now, this makes a great deal of sense to
10 us, and you've heard us talk in the past that we
11 really don't think of hedge funds as an asset
12 class anyway. They are really a strategy that we
13 think can eventually fit into another category.

14 For example, long/short equity funds
15 should probably have a home in global equities
16 somewhere. And similarly, our credit hedge funds
17 should find a home somewhere eventually in our
18 fixed income bucket because they are strategies in
19 those buckets.

20 These moves, the three moves that I've
21 outlined, are designed to encourage cross-
22 pollination, bring down the silos that we're
23 beginning to do already, and allow all people at
24 all levels to become more involved in more
25 interesting work that spans different asset

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 classes.

2 And of course we can only do this, we
3 can only have these opportunities for Mike, Sarah
4 and Eric, because of the great teams under them
5 and the confidence that I have in the teams under
6 them to give them this flexibility.

7 So we're excited about this. The end
8 result, we believe and we expect, will be more
9 innovation, more unique investment ideas, stronger
10 performance and lower portfolio risk.

11 And of course, this all fosters a team
12 that will collaborate and fire on all cylinders.
13 So we're really excited about these small but
14 incremental positive changes to the organization.

15 I'll take any questions there on that.
16 We expect this to go into effect in a month and a
17 half or so when we begin our next fiscal year.

18 MR. NAUGHTON: Just a comment, Madam Chair.

19 What we just heard is very exciting. I
20 look forward to it.

21 MR. TROTSKY: Thank you, Dennis.

22 MR. BROUSSEAU: Also I think here at PRIM we
23 have developed, being here 30 years, a very unique
24 culture that has -- Michael has led it, but we
25 have a culture and a climate that fosters this

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 kind of thinking. You get results. And that's
2 very important.

3 MR. TROTSKY: Thanks, Bob.

4 MR. SHANLEY: I agree.

5 MS. FITCH: I really think Chief Strategy
6 Officer and all that brings to the resources is
7 fascinating. And I think it's going to be a
8 national model in some ways. I really do.

9 MS. MCGOLDRICK: I just wanted to add that I
10 think anytime internal career development is on
11 the table, I'm in favor of it. And I think that
12 the more you build up your staff, cross-train them
13 to know all the asset classes, it will become, as
14 you said, a model across the nation and the world.

15 And I think that it will also eventually
16 bring in a lot of the work that we end up paying
17 exorbitant fees for as we've done with hedge
18 funds.

19 MR. TROTSKY: That's right.

20 TREASURER GOLDBERG: Well, though, I want to
21 comment that our fees are not as exorbitant as
22 some funds have because we've done such a great
23 job --

24 MS. MCGOLDRICK: No. I think we've done a
25 great job, Project SAVE.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 TREASURER GOLDBERG: -- doing managed
2 accounts and negotiating fees very, very
3 aggressively, which resulted from Project SAVE.

4 MS. MCGOLDRICK: I agree, Madam Treasurer.
5 All I mean is I think it will continue to bring in
6 the work in-house --

7 TREASURER GOLDBERG: Right. I think that
8 we're constant -- I mean we've led the way on
9 negotiating fees. When I talk to people across
10 the country, they're not there yet.

11 MS. MCGOLDRICK: Right.

12 TREASURER GOLDBERG: We're known for this.
13 So I think it's something that you want to
14 continue to highlight and support because I think
15 that the folks here have done a great job at it.

16 And I think it's telling that each of
17 them have grown in their areas on top of that and
18 are ready for new challenges. And there won't
19 even be a blip because they're all so talented.
20 That's everybody sitting around the perimeter of
21 this room.

22 MR. TROTSKY: Thank you. We do have a great
23 staff.

24 TREASURER GOLDBERG: Yes, we do.

25 MR. TROTSKY: Next, if there are no further
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 questions on that, I was going to turn your
2 attention to markets and performance. And we can
3 quickly go through that. We've covered it in
4 great detail at the Investment Committee and again
5 at the Real Estate Committee.

6 The punchline is that not much has
7 changed. We continue to see decent but
8 unremarkable economic growth with several
9 crosscurrents and economic indicators that I'll
10 mention.

11 (Mr. Monaco left the meeting.)

12 The markets continue to grind higher
13 despite signals that tax reform, deregulation and
14 infrastructure spending, essentially the Trump pro
15 growth agenda, may be hard to achieve with all the
16 infighting in Washington that we see every single
17 day.

18 There are still several crosscurrents in
19 economic indicators. We went over this in great
20 detail at the Investment Committee.

21 In the U.S., we saw lackluster GDP
22 growth of 0.7 percent in Q1. That was half of
23 expectations.

24 Bank lending -- we spent a lot of time
25 talking about bank lending -- has fallen sharply

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 in the U.S. That's not a positive indicator for
2 the future growth rate. But it has picked up
3 internationally, particularly in Europe and Japan.

4 Housing starts have been slower overall,
5 with existing home sales up actually 1.4 percent
6 in April, the highest since 2007. So two
7 indicators that conflict with each other a little
8 bit.

9 Retail sales up only 0.4 percent in
10 April. That was slightly below expectations, but
11 more important, brick-and-mortar stores, retail
12 stores like Macy's, for example, have been very,
13 very weak. The tide is changing for brick-and-
14 mortar stores.

15 S&P earnings so far in Q1: With
16 90 percent of companies reporting, S&P earnings
17 have been very strong, up 13.6 percent. That's
18 the strongest Q1 report since 2011.

19 Initial jobless claims came in below
20 expectations, and the job market is very strong.
21 Manufacturing is expanding, and inventories are
22 low. That's good. Industrial production up
23 1.5 percent in March. That's the highest since
24 2015.

25 So expectations through all of this are
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 really very, very high. And markets are higher as
2 a result of these expectations.

3 We talked in great length at the
4 Investment Committee about how this is not a
5 market to be layering on risk. No time to be
6 super aggressive.

7 Connie Everson spoke of several late-
8 cycle economic indicators at the Investment
9 Committee, and she mentioned that in fact this is
10 the fourth try at a global economic expansion that
11 holds.

12 (Mr. Monaco rejoined the meeting.)

13 Perhaps the fourth try, this try, will
14 stick. So we're hopeful of that, but don't have
15 enough evidence yet.

16 Protectionism is still a threat. China
17 is definitely slowing down. We see that in their
18 bank lending activity and other activity, but
19 there's a clear pickup in Europe.

20 Investor sentiment, importantly, is
21 diverging. Over the last quarter, we see equities
22 plowing ahead, yet bond yields are falling.
23 Whenever that happens, equity investors are being
24 optimistic, but the bond investors are seeing
25 something longer term which gives them pause, and

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 we're not sure what that is.

2 However, it was a good time -- as you
3 remember from our asset allocation plans, we sold
4 down our long-duration Treasury STRIPS portfolio
5 from 5 to 2 percent. And we sold those positions
6 into strength in the long-duration Treasury
7 market. That was really fortunate timing.

8 So in summary, markets are good. Our
9 performance has been strong, as I'll go through in
10 a minute, but we are mindful of the many economic
11 and geopolitical risks out there.

12 We believe this is a good time to remain
13 somewhat cautious, and we believe that the asset
14 allocation changes that we made earlier in the
15 year, and you will hear about some of the
16 implementation of those, will be well-timed.

17 For the quarter, for the March quarter,
18 market results were strong. The S&P in the March
19 quarter was up 6.3 percent. Developed
20 international markets -- that includes Europe and
21 Japan primarily -- up 7.8 percent. Emerging
22 markets up 12.7 percent.

23 And this serves us well because
24 throughout the last five years, we've maintained a
25 relatively high exposure to developed

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 international and emerging markets. And those
2 markets are finally beginning to outperform the
3 U.S. markets.

4 In April and May, we've seen a
5 continuation of this strength and a continuation
6 of the leadership, where developed international
7 and emerging markets have been outperforming.

8 Bonds in the March quarter were up
9 slightly, as I mentioned. When bonds and stocks
10 go up, there's a divergence of opinion. Bond
11 prices go up means yields are falling. Broad
12 bonds were up fractionally 0.7 percent. Long-
13 duration STRIPS were up about a percent and a
14 half.

15 Since the election in November through
16 yesterday, the S&P is up a staggering 14 percent.
17 Developed international markets up 15.5 percent.
18 And emerging markets up 13.8 percent. Broad bonds
19 slightly down, down 0.7 percent, and STRIPS have
20 been down more significantly, down about
21 9 percent.

22 Now turn to the performance slides in
23 front of you. Please turn to page 1 in your
24 Appendix E.

25 And you can see a very strong quarter
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 across the board in all asset classes. On the
2 left, you'll see that international equities lead
3 the way. Emerging markets, developed,
4 international and U.S. equities are the largest
5 gainers.

6 And on the right, you can see that bonds
7 have been weaker. In the middle, you see that the
8 PRIT Fund returned 4.9 percent for the quarter
9 versus a 60/40 mix of global stocks and bonds,
10 which was up 4.5 percent.

11 Turning to the next page, page 2, you
12 can see for the one-year ended March 31, a very
13 similar picture. You can see again the strength
14 of the equity markets with emerging markets up
15 21.4 percent, U.S. small caps up 20.8 percent,
16 U.S. large caps up 17.1 percent.

17 Anything with duration, on the right,
18 sold off with STRIPS for the March -- the one-year
19 ending March -- down 7 percent.

20 In the middle, you'll see that the PRIT
21 Fund is up 11.1 percent for the trailing 12 months
22 through March versus a 60/40 mix, which was up
23 9.2 percent. It's a very strong performance.

24 Turning to the next page, a little more
25 detail on the total PRIT Fund returns. For the

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 one-year period, the PRIT Fund ended up again
2 11.1 percent. That's an investment gain of
3 \$6.7 billion. We do pay benefits out of this pool
4 of assets. We paid over the last 12 months
5 1.5 billion in benefits.

6 And there is a slight one-year lag in
7 our relative performance. I'll talk about that in
8 a minute, but it's due to one asset class only,
9 distressed debt, which I will speak to you about
10 on the next slide.

11 Other than that, six of seven asset
12 classes outperformed. And you can see the strong
13 performance over 3, 5 and 10 years, where we're
14 comfortably above our benchmark. The three-year
15 number, of course, includes last fiscal year,
16 which was up 2.3 percent. Wasn't a great absolute
17 number, but again, 2.3 percent was among the
18 highest in the country. We believe it may have
19 been number 1 for public plans, 2.3 percent in the
20 fiscal year ending last June.

21 Turning to the next page, you can see
22 global equities and private equity leads the way.
23 Hedge funds were very strong, both on an absolute
24 and relative basis. Hedge funds up 9.5 percent
25 for the trailing 12 months. That's great work by

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Eric and his team, and you can see the relative
2 outperformance of 340 basis points.

3 When we look at the contribution to
4 relative performance for the fund, hedge funds
5 were actually number 1 in the year -- as a
6 contribution to relative performance.

7 Emerging markets equity was number 2.
8 Again, we're thankful for our commitment to
9 emerging markets equity.

10 And timberland, interestingly enough,
11 our third best contributor to relative
12 performance.

13 And you can also see that the largest
14 detractor was in the total value-added fixed
15 income, which lagged its benchmark. This was
16 entirely due to private debt, our distressed debt
17 portfolio, which in absolute was up 14.1 percent.
18 So a debt portfolio up 14.1 percent is really
19 pretty good performance.

20 However, our private portfolio in
21 distressed debt is compared to a public benchmark
22 currently. The Altman Public Defaulted Loan Index
23 was up 55 percent over the past year. So that's
24 what led to that outperformance. We still think
25 the 14.1 percent was very strong.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And we've told you in the past, and
2 Donnie will explain in a minute, that our
3 benchmark here has three to four times the
4 volatility that our less volatile private
5 portfolio has. So it's a benchmark anomaly, if
6 you will.

7 Then turning to the last page, the quilt
8 chart, you can see what has done well over
9 different time periods. Private equity, of
10 course, always very strong in all time periods.
11 Global equity strong, particularly in the one-
12 year.

13 And what's nice about this is I like
14 seeing the timber so solid in our long-term
15 results. And when you think about it, even the
16 10-year number for timber, up 6.6 percent, was
17 achieved during the world financial crisis. When
18 the whole world financial crisis was in large part
19 caused by decline in the housing market, still
20 timber did quite well.

21 And that's why we like timberland. It's
22 a great asset. It has biological growth, and you
23 can see it's been a very, very consistent
24 performer.

25 So that's all I had for my comments
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 today. I'd be happy to take any questions now,
2 and as is our custom, you'll be hearing more about
3 performance from each asset class head shortly.

4 MR. MONACO: Just a quick one, Mike. The
5 asset allocation review late last year at turn of
6 the year was obviously done not least in part with
7 the understanding that over the next several and
8 many years, it probably gets harder still to eke
9 out the 7.5 percent.

10 Time's flying. 15 months hence,
11 June '18 will be the end of a 10-year period that
12 is not reflective of the --

13 MR. TROTSKY: Right.

14 MR. MONACO: -- June '09 over June '08 period
15 in which global equities were probably down 30-odd
16 percent.

17 Obviously it will depend on how the
18 asset classes perform over the next year, but do
19 you have any kind of number off the top of your
20 head which is illustrative of what the 10-year
21 rolling is, once we lose the --

22 MR. TROTSKY: Yes. I'd have to get back to
23 you on that. I don't know off the top of my head,
24 but to your point, we hope that the 10-year number
25 improves dramatically when we drop off the results

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 of the world financial crisis.

2 I don't have a number handy for you,
3 though. I can get back to you on that. I don't
4 want to guess.

5 And you're right. We're dropping a
6 year, but we're also adding a year, so there's a
7 great deal of uncertainty with what we're adding.

8 But point well-taken. The 10-year
9 number does include the effect of the worst
10 downturn in my lifetime.

11 MR. BROUSSEAU: Michael, any ideas why bank
12 lending is off so much? Is it due to the
13 regulation, Dodd-Frank and all these things
14 they've been screaming about?

15 MR. TROTSKY: Interest rates are up. That is
16 maybe one of the reasons. When interest rates go
17 up, people borrow less or they try to lock in
18 rates at times when interest rates are low.

19 Connie and I went to see Eric Rosengren,
20 who's the president of the Boston Fed, present
21 here in town a month or two ago.

22 And she asked him that very question.
23 She said, "Will it give the Fed pause that our
24 loan growth, our bank loan numbers, are so low?"

25 And he actually said --

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Glenn, were you there, or are you --

2 MR. STREHLE: I watched the tape.

3 MR. TROTSKY: He said that it was due to
4 interest rates.

5 Now, we don't really know. It's one of
6 those indicators that we just watch, but it's
7 usually not a good sign for future growth. It
8 means that perhaps people aren't comfortable
9 borrowing for future expansion. So we'll keep our
10 eye on that.

11 MR. STREHLE: I think Connie's comments
12 actually showed, I think, and her analysis shows,
13 the Fed is a little too optimistic about the
14 outlook for the economy.

15 MR. TROTSKY: That's right.

16 MR. STREHLE: And when I looked -- I looked
17 at his comments because it's online. You can look
18 at it and get your view.

19 And I think that Connie brought up an
20 issue that we're going to hear a lot more about,
21 that in fact the economy is not that strong.

22 TREASURER GOLDBERG: It isn't.

23 MR. STREHLE: And for those who have to live
24 on the tax receipts in the state of Massachusetts,
25 it's not strong at all. Is it, Madam Treasurer?

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 TREASURER GOLDBERG: Let's discuss this.
2 This is the old retailer in me. Let's look at the
3 sales tax. That's what funds Mass. School
4 Building Authority. And then segment it out as to
5 where purchases are being made.

6 To me, always retail and where retail is
7 happening. Right now, car sales are being driven
8 by used cars, not by new cars. So last year, it
9 was luxury brands only were driving the market.
10 Now it's used car sales. That is a signal about
11 what is going on in the economy.

12 MR. STREHLE: And used car prices are not
13 that strong. Is that my understanding?

14 TREASURER GOLDBERG: So I am continuously in
15 awe of Connie's instincts. And I think there's
16 only uncertainty moving forward. I think a lot of
17 the gains in the market driven since November were
18 overly optimistic and based on --

19 MR. BROUSSEAU: The Trump effect.

20 TREASURER GOLDBERG: Well, lowering taxes,
21 creating more assets internally for businesses.

22 And I just think there's total
23 uncertainty. And I've continued to feel that we
24 need to just be conservative, not overreact, keep
25 on doing what we're doing and watch what's going

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 on. I've been saying that all along.

2 I think Eric is next, correct?

3 MR. TROTSKY: Public markets.

4 TREASURER GOLDBERG: Public markets. Sorry
5 about that.

6 MS. SAMUELS: Hello, everyone.

7 TREASURER GOLDBERG: Official welcome back.
8 If anyone has not seen the picture of London and
9 Holland, and I'm not talking about the countries,
10 it totally shows the baby's reaction to the
11 toddler's reaction to the baby.

12 MS. SAMUELS: Exactly.

13 TREASURER GOLDBERG: Do you still have that
14 picture on your phone?

15 MS. SAMUELS: I'll pull it up later, but it's
16 hilarious. Yes.

17 TREASURER GOLDBERG: You should submit that
18 to a contest.

19 MS. SAMUELS: I know. "Dear baby, I'm sorry
20 about the toddler." That's the tagline.

21 TREASURER GOLDBERG: I've never seen a baby
22 react quite that way.

23 MS. SAMUELS: She's terrified.

24 So it's great to be back, and it's great
25 to see all of you.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 I'm going to be on the same page that
2 Michael left off on, which is that garden chart in
3 Appendix E, page 6.

4 TREASURER GOLDBERG: Blooming.

5 MS. SAMUELS: As you can see in this chart,
6 and we go through this every time, in this one-
7 year time period, the assets in the top left
8 quadrant or the low growth, low inflation season
9 have really outperformed.

10 And I'll highlight a couple of market
11 themes that you can see play out over that
12 trailing one-year period. And we talked about a
13 lot of these themes in February at our board
14 meeting when we talked about our asset allocation
15 decisions and changes.

16 The first theme that you can see play
17 out on this page is that equities and risk assets
18 have done incredibly well in the last year across
19 the board. In many cases, valuations are quite
20 expensive. We have a lot of double-digit returns
21 here on that top left season or quadrant, and some
22 markets are arguably getting ahead of themselves
23 with prices growing faster than the underlying
24 earnings.

25 Equity valuations have continued to
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 increase. The S&P 500's trading at about 17.5
2 times forward earnings.

3 As we mentioned in February during our
4 asset allocation review, we have been exploring
5 alternative ways to hedge our equity risk. We
6 necessarily have a large equity bias in the PRIT
7 Fund in order to achieve our long-term actuarial
8 rate of return. And historically we've looked to
9 STRIPS, long Treasuries, to be that hedge.

10 You're going to hear later today about
11 an alternative that we've been discussing, we'll
12 be recommending.

13 The second theme is that quality
14 underperformed in the last year. So low quality
15 stocks and bonds did quite well in bond space,
16 especially in high yield. The lowest quality
17 portion of the high yield index was up
18 meaningfully in the last year, over 40 percent.
19 That outperformed the overall high yield index by
20 20 percent.

21 And you'll hear more from Mike Bailey
22 later today about what the high yield market means
23 for his world as well.

24 And stocks in equities, the more
25 heavy-levered, lower ROE, lower cash-flow-

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 generating companies did quite well in the last
2 year. And this had some negative implications for
3 some of our active managers, which I'll talk about
4 in a moment, because several of our active
5 managers have a higher quality bias. They tend to
6 be a little more conservatively positioned, and
7 they couldn't keep up with this low quality rally.

8 If we turn to page 7, I'll give you a
9 little more detail on our public equity portfolio.
10 Our public equity portfolios total about
11 \$29 billion. That's 45 percent of the PRIT Fund.

12 And if we look at absolute returns here,
13 small and SMID caps were up a whopping 23 percent
14 in the last year, mostly on optimism around tax
15 reform as you just mentioned, Madam Treasurer.
16 Tax cuts are a bigger deal for smaller cap
17 companies than they are for larger because smaller
18 cap companies have a higher effective tax rate.
19 So a tax cut is more beneficial.

20 Emerging market equities and U.S. large
21 cap stocks were both up 17 percent, and
22 international equities were up 12 percent. In all
23 markets, value outperformed growth over the last
24 year. And cyclical sectors like materials and
25 financials rose the most.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 In relative terms, if we look at that
2 green bar on each of these asset classes, our
3 emerging market equity managers on the left there
4 are really knocking the cover off the ball,
5 outperforming by over 4 percent.

6 U.S. SMID caps underperformed, and
7 international equities underperformed. And in
8 both cases, this is really due to that quality
9 rally, that low quality rally, and the fact that
10 our managers tended to have a higher quality
11 positioning, which we are comfortable with in the
12 long term, but it does explain the short-term
13 underperformance.

14 MR. BROUSSEAU: Sarah, at 45 percent and our
15 long-term goal has been 40 percent. We never seem
16 to be able to reach that. When does the
17 rebalancing issue kick in? Or is this --

18 MS. SAMUELS: It's a great question.

19 MR. BROUSSEAU: You're not concerned about
20 that.

21 MS. SAMUELS: Yes. It's a great question.

22 So we're within our rebalancing bands
23 currently. It's plus or minus 5 percent. We're
24 not quite at the 40 percent target yet. We're
25 legging in as we find opportunities in PCS. So

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 the target is more like 42, 41.5 percent.

2 We did some work last year on
3 rebalancing. And what we found is that it really
4 doesn't make a tremendous amount of sense from a
5 transaction cost perspective to always be spot on
6 your target. So in this case, we're comfortable
7 letting it drift.

8 And we also have some investments that
9 you're going to be hearing about that will take
10 equities down. You'll be hearing from Eric later
11 today about an investment that will take it down
12 by about 1.5 percent.

13 MR. TROTSKY: And it's actually -- as you
14 mentioned, the one-year performance number of
15 global equities was first. So it outperformed all
16 other asset classes. So that in itself will make
17 it rise as a percent. So it's a mathematical
18 thing too.

19 We'll work to get it back to our target.

20 MS. SAMUELS: Thanks, Bob.

21 If we turn to the next page to our fixed
22 income performance, there's a lot on this page. I
23 won't go through it all in the interest of time.

24 Our public fixed income portfolios total
25 about \$12 billion or 18 percent of the fund. And

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 I mentioned some themes at the outset today, and
2 this is really shown on this page, that higher
3 credit risk assets outperformed higher quality
4 fixed income assets. So if you look from left to
5 right, that basically is sort of a linear higher
6 risk to lower risk progression here.

7 I'll just focus on a few standouts on
8 this page in the interest of time, but I'm happy
9 to take any questions at all.

10 If you look to the far right-hand side
11 of the page, STRIPS fell 7 percent in the trailing
12 year as long rates rose 40 basis points to
13 3 percent in the year ended March 31.

14 And this rise in yields is a reminder
15 of -- the long end of the curve reflects growth
16 and inflationary expectations. This rise in yield
17 was really the market pricing in some optimism
18 around growth and inflation around Trump's
19 policies.

20 Importantly, though, the correlation of
21 STRIPS to equities has remained negative in the
22 trailing year about negative 30 percent, which is
23 what we would expect.

24 And just to give you an update on our
25 asset allocation moves, as Michael alluded to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 earlier, we recently completed our reduction to
2 STRIPS so we now have a 2 percent allocation
3 instead of a target of 5.

4 And soon, we'll be done with the rest of
5 our asset allocation moves, most of which are in
6 the fixed income space, at the end of this month.

7 On the positive side of the chart, if we
8 look to the left here, our EMD dollar portfolio,
9 emerging markets debt portfolio denominated in
10 dollars, outperformed the index by almost
11 7 percent. This is really due to an overweight to
12 some countries that are sensitive to oil. Oil was
13 up meaningfully in the last year, so that included
14 overweights to Venezuela, Brazil and Columbia.

15 And then I'll just highlight high yield
16 briefly. The high yield index was up almost
17 17 percent in the trailing year as spreads
18 compressed by 300 basis points.

19 This again is driven in large part by
20 the lower quality issuers, which really rallied in
21 the last year. And our managers were underweight
22 there, which explains a great deal of that
23 underperformance.

24 So with that, I'm happy to take any
25 questions.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Thank you.

2 TREASURER GOLDBERG: Any questions for Sarah?

3 Thank you, Sarah. You haven't missed a
4 beat.

5 Now, Eric, please join us.

6 For those who have not heard this
7 presentation, wait till you hear this
8 presentation.

9 MR. NIERENBERG: Thank you.

10 MR. TROTSKY: No pressure.

11 MR. NIERENBERG: Before we get to the put
12 spread collar, which Bill Li will be joining me
13 for, I'm just going to give you a little more
14 color on the performance update for hedge funds
15 and PCS. As always, if you have any questions,
16 please feel free to interject.

17 Michael already alluded to a lot of the
18 performance, but I would like to elaborate on it.
19 It was a solid first quarter for hedge funds,
20 rising 2.2 percent. That was about in line with
21 the benchmark.

22 The returns for the one-year period were
23 quite strong. The total portfolio was up
24 9.5 percent.

25 The direct hedge fund portfolio was up

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 more than 10 percent. And so we had alpha of
2 close to 340 basis points above the benchmark and
3 we're very happy with that.

4 As I often say, though, there's two
5 pieces to returns. One is the actual return
6 number, but the other is the risk that's
7 associated with generating that return.

8 We often use volatility as a measure of
9 risk. It's not a perfect measure of risk because
10 it doesn't incorporate non-capital markets
11 movements, but nevertheless, I think it is a
12 reasonably good proxy.

13 The volatility of our hedge fund
14 portfolio was extremely low over this period, only
15 1.6 percent compared to a 9.5 percent return.
16 This was far below all of the other PRIM asset
17 classes.

18 We talk about the Sharpe ratio, which is
19 one measure of risk-adjusted returns. And for
20 hedge funds over the last year, it was 5.6, which
21 is really impressively high. Usually we say
22 anything above one is good. This was very much a
23 kind of perfect storm in the right direction where
24 we were able to generate very good returns with
25 very low volatility.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 (Treasurer Goldberg left the meeting.)

2 MR. TROTSKY: Eric, our volatility of less
3 than 2 percent, roughly how does that compare to
4 equities and bonds?

5 MR. NIERENBERG: Equities over a long time
6 period usually have volatility of about 17 to
7 18 percent per year. Hedge fund volatility of
8 2 percent is on the order of 8 to 9 times less
9 than that of equities.

10 That's very important. That's why we
11 say when we're comparing returns, you have to
12 compare apples to apples. Hedge funds should
13 never be compared against an equity benchmark
14 because if you construct the hedge fund portfolio
15 appropriately, it has significantly less risk, at
16 least as measured by volatility, than you would
17 have in a straight equity portfolio.

18 Even fixed income, like the Barclays
19 Aggregate, has had a higher volatility than our
20 hedge fund portfolio that's on average, over the
21 long term, more along the lines of 5 to 7 percent.

22 Hedge funds have come in far below on
23 volatility, and at least in the last year and over
24 the longer time period, have actually outperformed
25 fixed income as well.

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 MR. TROTSKY: So this is a very important
2 thing to just digest for a minute -- sorry to
3 interrupt you -- because the general population
4 doesn't get this, that hedge funds, at least the
5 way we use hedge funds, are -- remember, I gave
6 Eric the initial title of director of hedge funds
7 and low volatility strategies.

8 We've designed our hedge fund program to
9 be a low volatility strategy. And in fact, it's
10 lower than equities and bonds with pretty decent
11 returns too and a great Sharpe ratio. So kind of
12 an important distinction on what sets our hedge
13 fund program apart from others.

14 MR. NIERENBERG: The dispersion between hedge
15 fund strategies was relatively low. If you look
16 over the year, most strategies performed pretty
17 well. The one laggard was some of the systematic
18 macro strategies, although those still did
19 reasonably well.

20 What that means is that of that
21 335 basis points in alpha, that came out of
22 manager selection. It wasn't because of our
23 underweighting or overweighting of particular
24 strategies.

25 And both Michael and the Treasurer
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 mentioned our managed account program. I'm happy
2 to say that of our roughly \$4.6 billion in direct
3 hedge funds, we've crossed the 50 percent mark in
4 managed accounts. We now have \$2.3 billion in
5 managed accounts. That's 50 percent of the entire
6 program plus another few hundred million in risk
7 premia managed accounts.

8 We have one of the largest, if not the
9 largest, managed account program in the U.S., and
10 maybe in North America as well. We're pleased
11 with that.

12 Any questions on performance?
13 Otherwise, we can turn to the next agenda item,
14 which is a voting item.

15 I'm going to ask Bill to join me.

16 The presentation here is Appendix G. We
17 were going to try to use our fancy screen up here,
18 but we seem to be missing our AV cord, so we can
19 use Appendix G instead. We'll just miss some of
20 the cute animations that Bill had put on today for
21 those of you who were at the Investment Committee
22 meeting. But we can go through it nonetheless.

23 What we're recommending today is an
24 options-based strategy that could potentially help
25 achieve equity-like returns with lower risk.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Looking at page 2, equity exposure is a
2 necessary component of the PRIT Fund. We have a
3 high return requirement of 7.5 percent. And we
4 need to have an asset allocation plan that can get
5 us there. Thus we need to have quite a bit of
6 equity risk in the PRIT Fund.

7 And while they do contribute to
8 performance over time, as I just mentioned, the
9 volatility of equity as an asset class is higher
10 than anything else.

11 Our objective was to try to find a way
12 to mitigate some of this potential volatility
13 that's associated with equity-type investments,
14 while without sacrificing much, if anything, in
15 the way of return.

16 We've partnered with an investment
17 manager to customize a put spread collar strategy,
18 which is an options-based overlay that sits on top
19 of an equity portfolio, to monetize what we see as
20 market anomalies, and we can talk more about what
21 we mean by that, through a thoughtful and dynamic
22 strategy design.

23 (Treasurer Goldberg rejoined the
24 meeting.)

25 And we feel that this put spread collar
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 will deliver better risk-adjusted returns for a
2 portion of our equity portfolio by reshaping the
3 distribution of public equity returns and gives us
4 a more advantageous risk-return profile.

5 That context, I just described how hedge
6 fund performance gives us a higher Sharpe ratio,
7 which is one way of thinking about return over
8 volatility.

9 We think this is an appropriate way for
10 PRIM to augment our public equity portfolio.

11 Turning to page 3, the strategy that
12 we're presenting is called a put spread collar.
13 It consists of three options that sit on top of
14 S&P 500 exposure.

15 First, you're purchasing a long put
16 option, which is the purple line on the left-hand
17 graph of the chart. It has a strike price close
18 to where the market currently sits, and it
19 generates positive return when the S&P 500
20 declines just a little bit.

21 Some terminology to know, we have two
22 major types of options. There are put options,
23 and there are call options. Both of those are
24 going to be present in the strategy.

25 A call option gives the holder of an
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 option the right, but not the obligation, to
2 exercise that option and buy an asset at a
3 predefined price at some point over the life of
4 the option.

5 A put option is kind of the converse.
6 It gives the holder of the option the right, but
7 not the obligation, to sell an asset at a
8 prearranged price at some point in the future.

9 For instance, if someone is very
10 concerned that a market might decline, a general
11 strategy would be to buy a put option because it
12 gives you the ability to say, "Well, if the market
13 goes down by 30 percent, I can sell my stock
14 exposure at only a 10 percent loss instead of a
15 30 percent loss."

16 That's what buying a put option means --
17 a call option would be for someone who might say,
18 "I want to have equity exposure -- I think the
19 market's going to go up." Rather than just buying
20 the stocks now, she can buy a call option that
21 will now be in the money if stocks go up by
22 20 percent. It gives you that optionality, which
23 we call a hockey stick effect when you look at the
24 picture of the payoffs.

25 The two other option legs, though, are
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 options that are being sold. The pink line
2 represents the sale of an out-of-the-money put.
3 This is selling protection to someone else who
4 wants to protect against a big downward move in
5 the market.

6 And you're also selling an out-of-the-
7 money call, which is the line in green, which
8 again is the person looking for a kind of lottery
9 ticket of price appreciation.

10 The trades of these three option legs
11 are structured to be a zero cost package, meaning
12 the protection that we're buying, the purple line,
13 is financed by the sale of the pink and green
14 lines. There's no net cost of putting this option
15 package together.

16 If you sum them up, moving to the middle
17 graph on page 3, the overlay has a payout profile
18 of the thick blue line, meaning that as the market
19 declines, you produce profits, i.e., finishing in
20 the money. If the market goes up a lot, then you
21 start to incur losses.

22 That's only part of the picture, though.
23 You then add to that the S&P 500 equity exposure,
24 which is the yellow line. That goes the
25 conventional way. Stocks go up, you make money.

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 Stocks go down, you lose money.

2 You combine these two pieces together,
3 the blue and the yellow, and then you have what's
4 in the chart on the right-hand side, the black
5 line, which is a kind of stylized example of the
6 payoff you get here.

7 What this does is it gives you some
8 protection on the downside. In particular, for
9 declines in the S&P, you now have that put
10 protection kicking in.

11 If the market declines a lot, your other
12 put protection that you've sold will be exercised
13 against you. You will no longer have the further
14 benefits of protection, but you've locked in that
15 upside, or I would say you've locked in having
16 less downside as a result because of the option
17 that you bought, which kicked in sooner than the
18 one you sold.

19 If the market goes up, you still
20 participate in the upside. If the market goes up
21 a lot in a short time period, that's when you
22 start to give up a little bit in terms of
23 performance.

24 The key, and Bill is going to go into
25 this in greater detail in a couple of minutes, is
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 that based on behavioral anomalies that have been
2 present over long periods of time in all
3 geographies, people tend to overpay for these
4 options, which are out of the money.

5 A put that's very far out of the money,
6 a call that's very far out of the money, people
7 systematically overpay for these options. And so
8 what we're trying to do is take advantage of that
9 effect, to be that liquidity provider, and use
10 that to our advantage to increase returns.

11 Some of you may have heard the term
12 "covered call strategy" before if you've ever read
13 an investment newsletter or anything. This is the
14 idea that if you own a stock, you can sell this
15 out-of-the-money call option against it, and you
16 receive premium income in return.

17 If the stock goes up a lot, well, then
18 you're basically just selling your stock at a
19 prearranged price. You're giving up a little bit
20 of the theoretical upside.

21 However, over time, what different
22 commentators have found is that people overpay for
23 those call options. They overestimate -- this is
24 where the behavioral element comes in. They
25 overestimate the probability of big moves in

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 either direction.

2 Adding a covered call to a stock holding
3 adds on average about 1 percent per year to
4 somebody's return. If you think about stocks with
5 a long-term average of 7 to 8 percent return,
6 adding 1 percent per year is a huge deal. For
7 retail investors, this is often seen as a great
8 strategy.

9 We're implementing part of that, the
10 covered call piece, in addition to the put spread,
11 which we think has similarly strong behavioral
12 anomaly effects, and using that to our advantage.

13 Turning to pages 4 and 5, what this
14 shows is just the distribution of equity returns.
15 On page 4, we took the S&P returns over the last
16 20 years and looked at how much they vary.
17 Typically, they'd be in a range of minus
18 10 percent to plus 10 percent on a monthly basis.

19 By implementing this put spread collar
20 on top of our equity program, you get a reshaped
21 distribution, which you see on page 5. Over this
22 time period, the put spread collar actually
23 returns a higher amount, 1.1 percent per month
24 versus 0.7 percent, but the range of likely
25 outcomes is much tighter. You're now at plus or

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 minus 7.5 percent instead of plus or minus
2 10 percent.

3 Page 6 shows the full distribution of
4 both returns. The peach and gray bars are the S&P
5 500 distribution, and the blue line is for the put
6 spread collar. You can see that the put spread
7 collar has both less weight in the tails of the
8 distribution and more in the center. It exhibits
9 less volatility, while over this time period had a
10 quite significantly higher return.

11 So you have an element of potentially
12 higher return but absolutely lower volatility,
13 which is what produces the higher Sharpe ratio.

14 I'm going to let Bill explain more about
15 the specific manager recommendation.

16 MR. LI: Once we decided on the concept of a
17 put spread collar, the devil was in the details.

18 Comparing this to buying a house, each
19 family may still need to work with a remodeler to
20 meet its own objectives and needs. Our remodeler
21 is Goldman Sachs Asset Management or GSAM.

22 GSAM is one of the world's largest
23 investment firms with \$1.15 trillion in assets
24 under advisory. Within GSAM, their quantitative
25 platform manages \$89 billion in systematic

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 strategies. GSAM is experienced in designing and
2 implementing various options strategies.

3 So our remodeler already has a generic
4 house in place, and its current put spread collar
5 fund product actually has an AUM over
6 \$1.2 billion. The existing GSAM product exhibited
7 some of the qualities we rarely saw with other
8 options practitioners. Those qualities include a
9 dynamic methodology to select option strikes and a
10 thoughtful trading mechanism effective at
11 minimizing market impact.

12 The manager is also flexible and
13 transparent. It's like finding a good remodeler
14 who's not only capable but also open-minded to new
15 ideas.

16 In this remodeling process, we
17 collaborated with GSAM to refine the details of
18 this strategy. The design enhancement not only
19 reflects very established academic research, but
20 also the recent evolution of the options markets.

21 Simulation or backtesting sheds light on
22 how a remodeled house stands through market
23 cycles. The final strategy showed sound
24 performance statistics such as high Sharpe ratio
25 and more resilience in a down market. The

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 strategy looked consistent in both in sample and
2 out of sample periods.

3 That said, we should also be mindful
4 about some of the unavoidable. The strategy
5 could underperform when the market reverses
6 sharply from a drawdown. And it may also
7 underperform the S&P 500 during extreme market
8 rallies.

9 We also talked to a couple of other
10 providers that know how to build the house of
11 options. Meanwhile, we compared the custom build
12 against similar programs adopted by other public
13 and corporate peers. We concluded that the GSAM
14 strategy excelled in both thoughtful design and
15 simulation results.

16 To make the implementation operationally
17 efficient, GSAM will manage both the options
18 package and long equity exposure in the same
19 dedicated managed account.

20 PRIM will fund \$750 million, enough for
21 any potential margin requirements. This
22 represents 1.1 percent of the PRIT Fund. The
23 whole strategy will have 1.3 times exposure, or
24 \$975 million notional, allowing for annual
25 volatility of roughly 12 percent over the long

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 run. This risk level is approximately 80 percent
2 of that of the S&P 500 index.

3 Now, going back to the objective, we
4 believe the GSAM put spread collar strategy could
5 really help mitigate unfavorable volatility in the
6 PRIT Fund, while at the same time participating in
7 equity-like returns over market cycles.

8 We thank you for your time and attention
9 and will welcome any questions.

10 Yes, please.

11 MS. FITCH: At what point does behavior begin
12 to notice the collars and the use of the collars
13 and begin to change? I know this is like big
14 picture, but at what point do you see that begin
15 to make change or get out or whatever?

16 MR. NIERENBERG: The good news is that it
17 hasn't happened in 60 years or more, so the
18 difference between what we call the realized
19 volatility and the implied volatility that's
20 priced into options has been consistently a
21 premium over time.

22 MS. FITCH: Okay. So --

23 MR. NIERENBERG: But I'll finish your
24 question.

25 The good thing about this is these
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 options are very short in terms of maturity.

2 MS. FITCH: Short being?

3 MR. NIERENBERG: No longer than three months.

4 So if the market were to change in ways
5 that we thought represented some sort of break
6 from the past, this whole program can be unwound,
7 although you don't really have to unwind anything.
8 You just kind of let it run off in a very short
9 period.

10 So there is that ability, if we do
11 see -- and like I said, we have not seen that over
12 decades of markets with this behavioral element of
13 overestimation because it's engrained in the human
14 psyche --

15 MS. FITCH: To be optimistic.

16 MR. NIERENBERG: To be overoptimistic.

17 So will everybody wake up tomorrow and
18 recognize what they've done? Maybe.

19 But the good news is that we're not
20 locked into anything such that if the pricing
21 becomes unfavorable, we're exposed for any
22 appreciable amount of time.

23 MS. FITCH: That's a comfort.

24 Is there something about this program
25 that's unusual or different or new from what has

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 been in the market before around collars and
2 spreads, et cetera?

3 MR. NIERENBERG: Yes. As Bill mentioned, you
4 could implement an almost index-like strategy on
5 the options exchange, implementing a put spread
6 collar.

7 But quite frankly, the returns profile
8 of that strategy is nothing particularly
9 interesting. And really the key is the
10 collaboration that we have done with GSAM to find
11 some interesting enhancements here about the tenor
12 of the options, "tenor" meaning maturity of the
13 options.

14 Additionally, how to apply particular
15 trend signals. For instance, you can look at
16 market directionality. We call this momentum.
17 And you can condition to some degree on that, just
18 so that if the market is raring up, you don't want
19 to necessarily stand in front of the freight
20 train. Those trends can continue for some time.
21 You can scale back the size of the program. And
22 those signals are in place, and they are additive
23 over time, we've found.

24 We have -- in some of the protected
25 materials, we went into greater detail about some

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 of the parameter choices. And those matter a lot.
2 While the concept of a put spread collar is very
3 common and is well-known in the markets, I think
4 the particular enhancements here represent a very
5 thoughtful and really an active approach.

6 This is not an index-based strategy.
7 You really need a manager who knows how to
8 research enhancements, knows how to implement them
9 appropriately in terms of constructing the
10 portfolio and also -- Bill touched on this a
11 little bit -- can trade this appropriately.

12 MS. FITCH: At the right time.

13 MR. NIERENBERG: Yes. Because you need to be
14 good at actually trading in the options market.
15 It's not a naive strategy. All three of those
16 pieces need to be hitting on all cylinders.

17 MS. FITCH: In one place and one person to a
18 degree. Okay.

19 We also should notice when we get
20 noticed and people or other investors -- and I
21 don't -- this is kind of big picture -- begin to
22 notice how we're doing what we're doing.

23 MR. NIERENBERG: That's a really important
24 question, and I'm glad you raised that.

25 One of the key considerations when we're
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 looking into this is the market impact. We wanted
2 to make sure that not just for the initial size of
3 this program now, but looking longer term, if it
4 were something we wanted to expand, we need to
5 make very sure that the impact in the markets by
6 our trading doesn't move the markets themselves,
7 that there has to be sufficient liquidity within
8 the options market to absorb our volume without
9 leaving our footprint behind.

10 This is the third pillar that I was
11 referring to before. You really need a talented
12 trading team.

13 MS. FITCH: Right.

14 MR. NIERENBERG: One of the benefits of this
15 strategy is that they've constructed the trading
16 profile in such a way that it should minimize our
17 footprint in the options market. Even with public
18 knowledge that we were pursuing such a put spread
19 collar, we feel reasonably confident, and we'll
20 see, if we get your approval and start trading
21 this live, we feel pretty confident that we
22 shouldn't be moving markets as a result of this.

23 But it's something that we're going to
24 monitor very closely in actual live trading
25 because, as Bill said, the devil's in the details

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 here. We've got to pay attention to that.

2 I'm glad you raised that.

3 MS. MCGOLDRICK: How many other funds have
4 implemented a similar strategy, and how many
5 others have hired GSAM or Goldman Sachs?

6 MR. NIERENBERG: Bill, do you want to take
7 that, please?

8 MR. LI: It's not uncommon to see other peers
9 having the similar strategy, which is known
10 already -- the structure is already known.

11 However, we collected the data and
12 compared our design versus the other providers.
13 And we concluded that so far, our strategy still
14 looked outstanding in terms of both the parameters
15 and our simulation results.

16 In terms of how many clients GSAM has in
17 this particular strategy, as we alluded to
18 earlier, there's one off-the-shelf type of product
19 available through GSAM. Even though we don't have
20 the specific numbers of clients, in total holds
21 about \$1.2 billion assets under management.

22 We don't have the names, but we have the
23 characteristics of the clients. They are all
24 public pensions and corporate plans.

25 TREASURER GOLDBERG: I know that Peter has a
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 question. Do you want to ask it?

2 MR. MONACO: It's quick. Brief.

3 Arguably, Eric, it makes sense to have
4 this in the strategy quiver at any time. But
5 presumably it's proposed that we add this now
6 because we're arguably late in an economic profit
7 and market cycle, and equity valuations reflect
8 that, et cetera, et cetera.

9 In the context of the size of the total
10 equity portfolio and the size of the passive S&P
11 exposure within the total portfolio, are we doing
12 enough to make it worth our while and enough to
13 get the benefit of all the hard work you and Bill
14 have put into this?

15 TREASURER GOLDBERG: That's a great question.

16 MR. NIERENBERG: I appreciate that.

17 As discussion came up with the
18 Investment Committee and also informally with
19 different members in the past, I think there's
20 some difference of opinion here.

21 "You go big or you go home" is one
22 approach. And then another approach is "Well, can
23 we start small and get our feet wet and make sure
24 that everything goes as we expect it to?"

25 There's attributes to both of those

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 approaches. What we've tried to do here is kind
2 of split the difference a little bit. The total
3 size of the program here would be about
4 \$1 billion. For our S&P exposure, it's about
5 10 percent to start. I think we really want to
6 see how it trades live.

7 We do think that there is substantially
8 more capacity available, in the sense that if we
9 did want to expand it, either with our S&P 500
10 exposure or extend it to developed international,
11 that there is room to do so.

12 And it probably makes sense to see how
13 it trades in a live period, make sure that the
14 manager is doing what we expect them to be doing
15 and that the strategy is behaving as we expect it
16 to.

17 It was Connie who had raised a question
18 before. When you have a lot of simulated results,
19 doesn't that give you pause? And of course it
20 does.

21 Now, we do have the benefit as we've
22 been working on this a while of having a building
23 out of sample period that Bill mentioned. And
24 results have been as expected out of sample. In
25 fact, a little bit better, given how well the

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 equity markets have done. We're encouraged by
2 that.

3 But I think to your point, in a billion
4 dollars in size, if you were to get a big equity
5 market correction, while this would help, it
6 wouldn't have a tremendous impact on the fund in
7 either direction at this size.

8 MR. TROTSKY: I might also add, Peter, that
9 when we think of this strategy, we also think
10 about it as sort of a pair trade combined with our
11 STRIPS portfolio, which we're selling down.

12 STRIPS really is still meant to be the
13 insurance against a very sharp falloff in equities
14 where you hope that the correlations hold and
15 those securities do well in a very sharp selloff.
16 This is sort of for the in-between phase.

17 And I'll remind you that we sold about
18 3 percent of our portfolio down in STRIPS. That's
19 about \$2 billion. And we are mindful that we're
20 trying to replace that insurance, if you will,
21 with something that works going forward. So that
22 helped us think about the 1.3 or 1.4 in notional
23 value that we're adding.

24 So think about them both together. We
25 still want insurance. One piece is catastrophe

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 insurance, and one piece is regular insurance.
2 And that's kind of what's in our mind for this
3 current size. And then as we learn more, we'll
4 elect to either do more or not.

5 But you're right. It does come at a
6 time where we think it makes sense.

7 TREASURER GOLDBERG: Any other questions?
8 This is a voting item.

9 So seeing none, I would seek a motion of
10 the approval of an initial cash allocation of up
11 to \$750 million in the GSAM put spread collar
12 strategy, that the PRIM Board approve the
13 Investment Committee's recommendation to allocate
14 up to \$750 million to the GSAM put spread collar
15 strategy, which represents a notional exposure of
16 \$975 million as described in the expanded agenda,
17 and further to authorize the executive director to
18 take all actions necessary to effectuate this
19 vote.

20 MR. NAUGHTON: Moved.

21 TREASURER GOLDBERG: Is there a second?

22 MR. BROUSSEAU: Second.

23 TREASURER GOLDBERG: All those in favor?

24 BOARD MEMBERS: Aye.

25 TREASURER GOLDBERG: Any opposed?

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Seeing none, the motion carries
2 unanimously. Thank you.

3 (VOTED: To approve the Investment
4 Committee's recommendation to allocate
5 up to \$750 million to the GSAM put
6 spread collar strategy, which represents
7 a notional exposure of \$975 million as
8 described in the expanded agenda, and
9 further to authorize the executive
10 director to take all actions necessary
11 to effectuate this vote.)

12 MR. NIERENBERG: Thank you very much. We
13 appreciate it.

14 TREASURER GOLDBERG: Okay.

15 MR. BAILEY: Good morning. Alyssa is joining
16 me.

17 TREASURER GOLDBERG: Hi, Alyssa.

18 MR. BAILEY: Treasurer Goldberg, I'm going to
19 give a few comments on performance, and then we're
20 going to turn to voting items.

21 But before I begin, I'd like to ask your
22 permission to postpone the second voting item on
23 the private equity agenda to give the team some
24 more time to complete its work.

25 TREASURER GOLDBERG: Okay. No problem.
26 Thank you.

27 MR. BAILEY: Thank you, Treasurer Goldberg.

28 Let me just give a few comments on
29 performance. I know you've heard a lot about
30 PRIM Board Meeting Minutes of 5/16/2017
31 For Approval at the August 2017 Meeting

1 performance today from Michael and Sarah and Eric.

2 I would say we have some good news to
3 report on the private equity portfolio. As you
4 saw earlier, the portfolio shifted into a higher
5 gear. Compared to the last time we spoke, the
6 portfolio added about 1.2 percent to get up to a
7 15 percent annualized number for that one-year
8 period. That stands it in good stead. Compared
9 to its long-term average, it's about 1.3 percent
10 above its very strong long-term performance. So a
11 great year for private equity.

12 As we talked about the last time we
13 reported, private equity reported performance
14 tends to lag behind. I know you have seen this
15 movie before. When equity markets like the U.S.
16 equity market have moved forward so quickly,
17 private equity prices tend to lag behind. Just
18 the way those assets are priced doesn't keep pace
19 with public markets.

20 So we're seeing a period of time now
21 when U.S. equities are up about 18 percent, that
22 broad index that we use to measure private equity.
23 So we're roughly behind about 3 percent on that
24 one-year measure of performance.

25 But again, we expect private equity to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 outperform over a long period of time, and it
2 continues to do that.

3 Turning to sort of what we're seeing in
4 the marketplace, consistent with a little bit of
5 Sarah and Michael's comments, we are in the
6 long -- kind of late innings here. Corporate
7 assets continue to trade at a very brisk pace.

8 The mergers and acquisitions market in
9 the United States had set new records in 2015.
10 Volumes backed off a little bit in 2016, but we
11 still saw an awful lot of buying and selling of
12 private companies and public companies.

13 That means that our owners of private
14 equity companies see a lot of options when they
15 want to go and sell a company. Kind of like a hot
16 real estate market. If you're a seller of an
17 asset, you own a building, it's a good time to be
18 an owner. And our private equity owners are
19 benefiting from those very liquid market
20 conditions.

21 The flip side of that coin, as we've
22 talked about before, is prices are also really
23 high. So we've seen the second year in a row of
24 high pricing. Using a commonly used market
25 measure in our market, price to cash flow, we've

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 seen the second year in a row where that price to
2 cash flow measure is above 10 times. You're
3 paying \$10 for every dollar of earnings.

4 We think that that's in part due to one
5 of the points Sarah made. The market for leverage
6 to borrow capital is very, very easy. It's easy
7 to borrow. So buyers of assets are able to go out
8 and acquire properties with leverage at very
9 favorable rates.

10 We saw the leveraged loan market in the
11 U.S., for example, set a new record. The last
12 time it had set a record was 2013. So a lot of
13 activity in the borrowing market.

14 And secondly, we're seeing a lot of
15 competition for assets that come to market,
16 including, as many of you read, large corporations
17 sitting on kind of war chests of cash are
18 beginning to use those large cash surpluses to go
19 out and acquire businesses to augment their
20 growth.

21 So we've seen that compete with private
22 owners of assets and other nontraditional sources
23 like sovereign wealth funds to compete for assets.

24 Thirdly, on our side of the business,
25 staying with the competition theme, there's a lot

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 of competition for investing in high quality
2 private equity funds. So our team is seeing a lot
3 of demand for fundraising, meaning it's easy for
4 fund managers to raise capital now, meaning it's
5 more competitive for us.

6 Given that we're late in the cycle,
7 we're using our process to be very choosy and
8 picky. We don't want to make mistakes at this
9 point in the cycle, especially with this much
10 competition.

11 Turning to the quarter just very
12 briefly. Very strong quarter, the best in six
13 quarters actually in private equity, led again by
14 what Michael mentioned. These smaller buyout
15 managers really drove the bus this quarter, so
16 we're pleased to see that.

17 I'd say the only sort of cautionary note
18 was the venture capital. The technology-facing
19 and healthcare-facing venture capital and growth
20 equity parts of the portfolio really didn't add
21 much over this one-year period.

22 But as you've all read, the IPO window
23 has reopened. So you're seeing IPOs of technology
24 companies and I think some healthcare companies
25 now.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 So we'll see if in the second half of
2 this year, some of those private venture-backed
3 businesses go public and create a pathway for more
4 performance in 2017, but we haven't seen it in the
5 past one-year period.

6 And then before we turn to the voting
7 items, I'd just say, echoing what Sarah and Mike
8 talked about, the private debt portfolio -- we
9 call it the distressed debt portfolio -- actually
10 had a pretty good year on the back of this rally
11 in lower rated credit.

12 But unfortunately for us, the benchmark
13 had an extraordinary year at above 50 percent. I
14 think it's tough to beat a benchmark that rises
15 50 percent. And I'd say that this sort of puts up
16 a little bit of a warning sign for -- we've talked
17 about this a bit before. But it's tough to go out
18 and buy credit that's trading cheaply when no
19 credit trades cheaply.

20 So these firms that -- that 1.5,
21 2 percent of the portfolio that's in distressed
22 debt isn't really set up for success right now
23 with credit market conditions as sort of white hot
24 as they are.

25 So a cautionary note on that
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 14.5 percent, which is a great one-year number,
2 but I wouldn't expect that to repeat itself
3 anytime soon.

4 And then I just note that with your
5 approvals today, we'll approve three buyout funds,
6 and that would bring our totals for committed
7 capital up to around \$350 million this year
8 against our target or sort of nominal target of
9 \$1.4 billion of budgeted commitments for this
10 year.

11 MR. TROTSKY: Calendar year.

12 MR. BAILEY: This calendar year. Yes.

13 And those are my comments.

14 TREASURER GOLDBERG: Okay. Any questions on
15 this before we turn to the recommendations?

16 Okay.

17 MR. BAILEY: So we're going to turn to the
18 first recommendation in the package, which is on
19 item number 3, and it's CVC Capital Partners. And
20 Alyssa is going to kick that off unless you want
21 to read the motion first.

22 TREASURER GOLDBERG: You know I mix this up a
23 little bit. Keep everybody on their toes.

24 Why don't you do the presentation first?

25 Then we'll do the motion, and then we can ask

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 questions and have discussion. Then we can vote.
2 How's that sound today?

3 MR. TROTSKY: I like that plan.

4 MR. BAILEY: Thank you.

5 TREASURER GOLDBERG: Very good. Why don't we
6 try that one?

7 MS. FIORE: So we're here to talk about CVC
8 Capital Partners. We're recommending up to
9 225 million euros in CVC Capital Partners
10 Fund VII.

11 CVC has had consistent performance
12 across investment cycles, and their funds are top
13 quartile against industry benchmarks. We believe
14 that CVC's approach to investing will generate
15 returns going forward driven by earnings growth
16 and multiple expansion.

17 CVC also has a disciplined approach to
18 investing, which increases performance and reduces
19 risk.

20 CVC has a large organization, and they
21 have 11 country teams and three sector specialist
22 teams. All these teams generate a wide funnel of
23 investment ideas. And CVC skillfully allocates
24 capital to the most attractive investment
25 opportunities.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Lastly, CVC is a very large and highly
2 qualified organization. They have more than
3 100 investment professionals and 32 senior leaders
4 with deep industry knowledge and local networks.

5 The risks that we've identified for this
6 investment included increased concentration in any
7 industry or country could reduce performance and
8 returns.

9 Lastly, investment success depends on
10 the ability to attract and retain talent. As with
11 all large firms, not having the ability to retain
12 staff is a potential risk.

13 With that, I'd open to any questions or
14 comment.

15 TREASURER GOLDBERG: So now I would seek a
16 motion that the PRIM Board approve the
17 recommendation of the Investment Committee members
18 present at the May 2, 2017 meeting to commit up to
19 225 million euro to CVC Capital Partners VII LP as
20 described in the expanded agenda, and further to
21 authorize the executive director to take all
22 actions necessary to effectuate this vote.

23 Is there a motion?

24 MR. BROUSSEAU: Moved.

25 TREASURER GOLDBERG: Is there a second?
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 MR. SHANLEY: Second.

2 TREASURER GOLDBERG: Okay. Questions,
3 comments?

4 MR. BROUSSEAU: How long have we had
5 investment with CVC? They've been one of our very
6 good --

7 MS. FIORE: Yes. We've been with them since
8 1993.

9 MR. BROUSSEAU: Since 1993.

10 MS. FIORE: This will be our sixth fund.

11 MR. BROUSSEAU: Six funds. Yes, I saw that
12 in the presentation. They've done very well.
13 It's been excellent.

14 TREASURER GOLDBERG: Let's hope they continue
15 the good work.

16 Any other questions or comments?

17 MR. NAUGHTON: We assume that Europe is going
18 to continue to do as well as it's done? Is that a
19 consideration?

20 MS. FIORE: Yes. A portion of their
21 investment portfolio is actually in North America
22 as well, so there is some diversification for
23 geography.

24 MR. NAUGHTON: What's the percentage between
25 Europe and North America?

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 MR. BAILEY: We think up to 20 percent on the
2 U.S. They've got a pretty large team in North
3 America now.

4 And they also have, as Alyssa mentioned,
5 several offices around the continent. They have
6 shown a lot of skill in that, as she talked about,
7 that kind of ability to think about which markets
8 are attractive and not attractive. And we've seen
9 great skill in that area, so --

10 TREASURER GOLDBERG: Any other questions?

11 We have a motion. We have a second.
12 All those in favor?

13 BOARD MEMBERS: Aye.

14 TREASURER GOLDBERG: Any opposed?

15 Seeing none, the motion carries.

16 (VOTED: To approve the recommendation
17 of the Investment Committee members
18 present at the May 2, 2017 meeting to
19 commit up to 225 million euro to
20 CVC Capital Partners VII LP as described
21 in the expanded agenda, and further to
22 authorize the executive director to take
23 all actions necessary to effectuate this
24 vote.)

21 MR. BAILEY: Thank you very much.

22 MS. FIORE: Thank you.

23 MR. BAILEY: Michael McGirr is going to join
24 us for the third on the list, Chequers Capital.

25 TREASURER GOLDBERG: Hello, Michael.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 MR. MCGIRR: Good morning.

2 The next voting item we have is Chequers
3 Capital Fund XVII. We're making a recommendation
4 of up to 50 million euros. We've been invested in
5 Chequers since 2001, and we've invested in two
6 prior Chequers funds.

7 We're making this recommendation because
8 Chequers has a highly talented and focused
9 organization with proven investment skill. The
10 firm's focused on making controlling investments
11 in small, well-established businesses operating in
12 market niches.

13 Chequers will target businesses located
14 in France, Germany and Italy with low fixed costs
15 and high free cash flow. The firm has a well-
16 established presence in all of these markets.

17 This firm has generated strong,
18 consistent performance across investment cycles,
19 and their prior funds have compared very favorably
20 to industry benchmarks.

21 Chequers is a small firm, and like all
22 small firms, they face risks that include
23 attracting and retaining talent. Investment in
24 Chequers Fund XVII will also include concentrated
25 investment risk in their target countries, which

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 include France, Germany and Italy.

2 With that, I'm happy to take any
3 questions, comments.

4 TREASURER GOLDBERG: Not yet. We're going to
5 seek a motion first.

6 So I would seek a motion for approval of
7 the commitment up to 15 million euros to Chequers
8 Capital XVII, that the PRIM Board approve the
9 recommendation of the Investment Committee members
10 present at the May 2, 2017 meeting to commit up to
11 50 million euro to Chequers Capital XVII as
12 described in the expanded agenda, and further to
13 authorize the executive director to take all
14 actions necessary to effectuate this vote.

15 Is there a motion?

16 MR. NAUGHTON: Moved.

17 MS. FITCH: So moved.

18 TREASURER GOLDBERG: Is there a second?

19 Okay. Questions or comments of Mike or
20 Mike or Mike?

21 Seeing none, we have a motion. We have
22 a second. All those in favor?

23 BOARD MEMBERS: Aye.

24 TREASURER GOLDBERG: Any opposed?

25 Seeing none, the motion carries.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 (VOTED: To approve the recommendation
2 of the Investment Committee members
3 present at the May 2, 2017 meeting to
4 commit up to 50 million euro to Chequers
5 Capital XVII as described in the
6 expanded agenda, and further to
7 authorize the executive director to take
8 all actions necessary to effectuate this
9 vote.)

10 (Mr. Monaco left the meeting.)

11 TREASURER GOLDBERG: Thank you. And then we
12 have --

13 MR. BAILEY: Just a related motion.

14 TREASURER GOLDBERG: I would seek a motion
15 for the approval of the addition of Chequers
16 Capital to the co-investment bench, that the PRIM
17 Board approve the recommendation of the Investment
18 Committee members present at the May 2, 2017
19 meeting to add Chequers Capital to the board-
20 approved bench of co-investment managers pursuant
21 to the co-investment program approved by the Board
22 in February of 2014, and further to authorize the
23 executive director to take all actions necessary
24 to effectuate this vote.

25 Is there a motion?

MR. SHANLEY: So moved.

TREASURER GOLDBERG: Is there a second?

MR. BROUSSEAU: Second.

TREASURER GOLDBERG: All those in favor?

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 BOARD MEMBERS: Aye.

2 TREASURER GOLDBERG: Any opposed?

3 The motion carries.

4 (VOTED: To approve the recommendation
5 of the Investment Committee members
6 present at the May 2, 2017 meeting to
7 add Chequers Capital to the board-
8 approved bench of co-investment managers
9 pursuant to the co-investment program
10 approved by the Board in February of
11 2014, and further to authorize the
12 executive director to take all actions
13 necessary to effectuate this vote.)

9

10 MR. BAILEY: Thank you very much.

11 TREASURER GOLDBERG: Thank you, Mike and Mike
12 and Mike.

13 MR. PAYNE: Good morning, everyone.

14 TREASURER GOLDBERG: Good morning.

15 MR. PAYNE: Let's turn to Exhibit H.

16 I'm not going to go through the slides
17 in detail. This was discussed in great detail at
18 both the Investment Committee and the Real Estate
19 Committee meeting, but I would like to walk you
20 quickly through the process and highlight some key
21 takeaways.

22 And this is the benchmark review
23 process. We started the process by identifying
24 the characteristics that make up a good benchmark,
25 which is laid out in the first slide.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 According to the CFA, the most important
2 benchmarks have certain basic properties. They're
3 unambiguous, investable, measurable, appropriate
4 in where they reflect the manager's typical risk.
5 They're specified in advance, and they're owned
6 and accepted by the managers.

7 These basic properties allow for proper
8 performance evaluation, which involves a
9 recognition of both return as well as the
10 riskiness of investment, which Eric Nierenberg
11 noted earlier.

12 In terms of timing, we are constantly
13 evaluating our benchmarks, but we do a more formal
14 benchmark review every three years.

15 Using this framework described above,
16 PRIM staff, along with the assistance of our
17 advisors, Callan, Hamilton Lane, Townsend and
18 Aberdeen, as well as our performance measurement
19 team at BNY Mellon, analyzed the benchmarks of the
20 PRIT Fund to determine that we were using the best
21 available benchmarks.

22 Let's turn to the second slide, where we
23 can discuss the key attributes of an investable
24 benchmark, such as the S&P 500, and some of the
25 weaknesses and challenges that come along with

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 non-investable benchmarks, which are often used
2 out of necessity in our private assets classes.

3 (Mr. Monaco rejoined the meeting.)

4 On the second slide --

5 MR. TROTSKY: It starts with page 3.

6 MR. PAYNE: On the third slide. Sorry.

7 Roughly two thirds of the PRIT Fund have
8 investable benchmarks, which are important for the
9 following reasons. Manager able to select
10 securities from a recognized market like the S&P
11 500 or the Russell 3000. They're able to take
12 active risks relative to that market. They're
13 able to maintain risks consistent with those
14 markets, and managers understand and agree to have
15 their performance measured versus these markets.

16 The remaining portion of our portfolio,
17 consisting of private debt, private equity, core
18 real estate, timberland, hedge funds and portfolio
19 completion strategies, do not have investable
20 benchmarks. Therefore, performance benchmarks are
21 less straightforward and are measured in a variety
22 of different ways across the industry.

23 These alternative measurements, which
24 can be market- or peer-based, come with some
25 notable challenges; those being lack of

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 transparency, an ambiguous universe, selection
2 bias, tracking error and manager accountability.

3 If you turn to the following slide, you
4 can see the summary of the PRIT Fund portfolio
5 broken down by asset class, each asset class
6 constituent and their benchmarks.

7 I'm happy to go into any of these
8 individually if there are questions, and our
9 advisors are here as well, but I wanted to focus
10 on the last slide, which includes the benchmark
11 enhancements we're recommending today.

12 We recognize three areas where we
13 identified improvements could be made so I'm going
14 to go quickly through the problems that were
15 identified, along with the advisors and that PRIM
16 staff agree have some solutions we can come to.

17 First I'll turn to alternative fixed
18 income or private debt, which both Michaels
19 discussed today. The current benchmark is the
20 Altman NYU Salomon Center Combined Default Public
21 Bond & Bank Loan Index, which we'll refer to as
22 the Altman index.

23 When reviewing the historical volatility
24 of the PRIM portfolio and the benchmark, as well
25 as the alternatives we found, the current

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 benchmark is far more volatile than the private
2 debt portfolio. This is mainly due to the longer
3 term investment period of these funds which on
4 average is about three years, often times illiquid
5 and requiring a lockup.

6 This is very consistent with the way we
7 view our private equity investments, which is
8 smoothed over a 7-year investment cycle. We don't
9 believe that reviewing these investments on a
10 short-term period is very relevant.

11 For this reason, we are recommending a
12 change in the private debt benchmark from the
13 Altman index to the Altman index annualized over a
14 three-year period.

15 Next, private equity. The longer term
16 private equity benchmark is the Russell 3000 plus
17 a hurdle of 3 percent. As you know, the Russell
18 3000 is a domestic equity benchmark, which is how
19 the PRIM private equity program was initially set
20 up.

21 Through the years, we've seen the
22 program mature and become a global program. To
23 help align the benchmark with the global nature of
24 our PE program, we hope to adjust the benchmark
25 annually to a blend of the Russell 3000 plus

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 3 percent with the MSCI Europe IMI plus 3 percent,
2 which the current blend is 84 percent domestic and
3 16 percent international.

4 MR. TROTSKY: We'll be adjusting this
5 annually based on the actual investment out of
6 country.

7 MR. PAYNE: Correct.

8 MR. TROTSKY: And currently, it stands
9 84 percent domestic and 16 percent international.

10 MR. PAYNE: Yes.

11 MR. TROTSKY: But you're actually voting to
12 adjust it annually.

13 MR. PAYNE: Yes. So at the beginning of
14 every fiscal year, we're going to take a look at
15 the makeup of the portfolio and adjust the
16 benchmark for the year to come.

17 Lastly, direct hedge funds. As
18 discussed with Eric earlier, the objectives of the
19 PRIT Fund direct hedge fund program is very
20 different from the global HFRI index that our
21 peers use.

22 The current underlying strategies in the
23 PRIT hedge fund portfolio is drastically different
24 from those in the HFRI index. In order to align
25 our hedge fund manager objectives and their

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 investment strategies to the appropriate
2 benchmark, we propose changing from the current
3 HFRI global to a blended index based on the hedge
4 fund strategy that is consistent with the
5 investment objectives.

6 The new benchmark will be broken down as
7 equity hedge, event-driven, macro and relative
8 value and include about 35 subasset level
9 strategies. Eric and his team have already begun
10 to analyze the portfolio along with Aberdeen to
11 determine the best benchmark for each individual
12 manager.

13 I just wanted to finish off by saying
14 thank you to everyone who participated. It was
15 truly a collaborative effort across the asset
16 classes, our advisors and our custodian.

17 These changes, if voted approved, will
18 be effective July 1 of this year.

19 MR. TROTSKY: Just to remind everyone, on the
20 hedge fund benchmarks, we reviewed this in great
21 detail during the annual plans at the Investment
22 Committee where Eric talked about this and that it
23 would be a better match to measure individual
24 hedge funds on their particular strategy.

25 So for example, long/short equity hedge

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 fund managers against the long/short index.
2 Credit managers against a credit index, et cetera.

3 And that was approved at the Investment
4 Committee through its annual plan, and we're just
5 including this for complete transparency in your
6 vote on the benchmarking study.

7 TREASURER GOLDBERG: This is a voting item.
8 So I am going to seek a motion and a second before
9 we entertain any questions.

10 I would -- Peter, you weren't able to be
11 at the Investment Committee meeting when we
12 discussed this, so I don't know if you have any
13 additional questions or comments to add to this.

14 MR. MONACO: Mike and I had an opportunity to
15 discuss it on a couple of occasions. And it all
16 makes great sense to me.

17 TREASURER GOLDBERG: All right. So I'm going
18 to seek a motion of the approval of the 2017 PRIT
19 Fund benchmarks, that the PRIM Board approve the
20 Investment Committee's recommendation to change
21 the alternative fixed income, private equity and
22 hedge funds benchmarks as described in Appendix H
23 of the expanded agenda, and further to authorize
24 the executive director to take all actions
25 necessary to effectuate this vote.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Is there a motion?

2 MR. BROUSSEAU: So moved.

3 TREASURER GOLDBERG: Is there a second?

4 MR. SHANLEY: Second.

5 TREASURER GOLDBERG: So no questions or
6 comments then?

7 MR. BROUSSEAU: It's pretty clear.

8 TREASURER GOLDBERG: Yes. Okay then. Great
9 presentation.

10 All those in favor.

11 BOARD MEMBERS: Aye.

12 TREASURER GOLDBERG: Any opposed?

13 Seeing none.

14 (VOTED: To approve the Investment
15 Committee's recommendation to change the
16 alternative fixed income, private equity
17 and hedge funds benchmarks as described
18 in Appendix H of the expanded agenda,
19 and further to authorize the executive
20 director to take all actions necessary
21 to effectuate this vote.)

18 (Mr. Trotsky left the meeting.)

20 TREASURER GOLDBERG: Thank you.

21 MR. SCHLITZER: So I'm aware of the time. We
22 have two voting items.

23 I'll leave it sort of at your option on
24 my performance. I'm fully prepared, but --

25 TREASURER GOLDBERG: Let's see.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 So Peter, you got up to speed on that.

2 Any non-Investment Committee members who
3 need a quick overview on the performance?

4 Everybody read through it?

5 Then let's move on to the voting items.

6 MR. SCHLITZER: Great. So let me just
7 quickly direct you.

8 So materials for real estate start on
9 page 14. Appendices are I through K. John's
10 going to present the recommendations. I want to
11 thank him in advance for his efforts on both of
12 these matters. And with that --

13 MR. LA CARA: Thank you, Tim.

14 You can find the first one is the
15 consulting RFP recommendation. You can find the
16 full evaluation committee report in Appendix J of
17 the package.

18 As many of you may remember, we issued
19 the RFP for general real estate, timberland and
20 project consulting services on December 12 of last
21 year. The response deadline was January 11.

22 (Mr. Trotsky rejoined the meeting.)

23 As a reminder, the fees for general real
24 estate and timberland consulting are typically
25 retainer-based, and the fees for the project

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 consulting services are negotiated in advance of
2 any assignments. However, we can negotiate a
3 retainer-based package, depending on the service
4 we're seeking. So we have that flexibility.

5 An evaluation committee was formed that
6 included Real Estate Committee members Jill
7 Hatton, Anthony Hubbard and Dr. Jack Lutz. It
8 also included staff members Christina Marcarelli,
9 Tim Schlitzer, Eric Nierenberg, Matt Liposky and
10 George Tsipakis.

11 And I'd like to thank each and every one
12 of them for their participation on the RFP. As
13 many people realize, doing an RFP is a time
14 crunch, so any time that they had to dedicate was
15 much appreciated.

16 We received 15 responses for these
17 services. Firms were allowed to bid on one or
18 more services, i.e., they could bid on general
19 real estate and timberland or all three or just
20 one.

21 Of that group, three firms were selected
22 as finalists for general real estate consulting.
23 Two firms were selected as finalists for
24 timberland consulting. And 10 firms were
25 identified as finalists for project real estate.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 After thoroughly reviewing all of the
2 proposals, interviewing the finalists and
3 soliciting revised fee proposals from everyone,
4 the evaluation committee and the Real Estate and
5 Timberland Committee unanimously recommend that
6 the Townsend Group be selected to provide general
7 real estate consulting services and that the
8 International Woodland Company be selected to
9 provide timberland consulting services to PRIM.

10 Throughout the process, both firms
11 demonstrated a superior level of expertise and
12 depth of resources in their respective fields and
13 are most qualified to provide services to PRIM.

14 Townsend, as many of you know, is a
15 long-time real estate consultant to PRIM, dating
16 back I want to say 20-plus years.

17 Dan is that right?

18 MR. STENGER: '93, I believe.

19 MR. LA CARA: Since '93. And we're happy to
20 engage them for another three-year period.

21 The International Woodland Company would
22 be a new relationship to PRIM.

23 Just to touch on that search a little
24 bit, this is the first time since I've been here
25 that we've actually had multiple timberland

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 experts respond to this RFP, and we were very
2 happy to see that.

3 TREASURER GOLDBERG: Oh, good.

4 MR. LA CARA: We look forward to working with
5 IWC.

6 The evaluation committee is also
7 recommending the selection of all 10 project
8 consultants. Three of them would be new
9 relationships. I know it's going to be in the
10 motions, but I'll run through the list as well.

11 Aberdeen Asset Management, Adélie, Bard
12 Consulting, Callan Associates, Chatham Financial
13 Group, Harvest Capital Partners, Legacy Appraisal
14 Services, Robert Charles Lesser & Co., Real Estate
15 Fiduciary Services and lastly, Whitegate Real
16 Estate Partners.

17 Collectively, we believe this group
18 really provides a diverse set of skills and
19 expertise that we'll benefit from, going forward.

20 I'd be happy to take any questions after
21 motions.

22 TREASURER GOLDBERG: Okay. Great.

23 So I would seek a motion for the
24 approval of the recommendation of real estate and
25 timberland consulting services, that the PRIM --

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 I'm glad, by the way, that there were multiple
2 people that came in.

3 That the PRIM Board approve the Real
4 Estate and Timberland Committee's recommendation
5 to engage, subject to successful contract
6 negotiations, the Townsend Group and International
7 Woodland Company for general real estate
8 consulting and general timberland consulting,
9 respectively, for a three-year term, and to
10 approve the following firms to be eligible to
11 provide project real estate consulting services on
12 an as-needed project-specific basis to PRIM as
13 described in Appendix J of the expanded agenda:
14 Aberdeen Asset Management, Adélie, LLC; Bard
15 Consulting, LLC; Callan Associates, Inc.; Chatham
16 Financial Group, Harvest Capital Partners, LLC;
17 Legacy Appraisal Services, Robert Charles Lesser &
18 Co., LLC; Real Estate Fiduciary Services, LLC; and
19 Whitegate Real Estate Advisors, and further to
20 authorize the executive director to take all
21 actions necessary to effectuate this vote.

22 Is there a motion?

23 MR. BROUSSEAU: So moved.

24 TREASURER GOLDBERG: Second?

25 MR. NAUGHTON: Second.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 TREASURER GOLDBERG: All those in favor?

2 BOARD MEMBERS: Aye.

3 (VOTED: To approve the Real Estate and
4 Timberland Committee's recommendation to
5 engage, subject to successful contract
6 negotiations, the Townsend Group and
7 International Woodland Company for
8 general real estate consulting and
9 general timberland consulting,
10 respectively, for a three-year term, and
11 to approve the following firms to be
12 eligible to provide project real estate
13 consulting services on an as-needed
14 project-specific basis to PRIM as
15 described in Appendix J of the expanded
16 agenda: Aberdeen Asset Management,
17 Adélie, LLC; Bard Consulting, LLC;
18 Callan Associates, Inc.; Chatham
19 Financial Group, Harvest Capital
20 Partners, LLC; Legacy Appraisal
21 Services, Robert Charles Lesser & Co.,
22 LLC; Real Estate Fiduciary Services,
23 LLC; and Whitegate Real Estate Advisors,
24 and further to authorize the executive
25 director to take all actions necessary
 to effectuate this vote.)

16 TREASURER GOLDBERG: Yes. We weren't going
17 to ask any questions. We got a very thorough
18 explanation. Okay.

19 We have an additional item.

20 MR. LA CARA: We do. Thank you.

21 And I'll move on to the recommendation
22 for REIT, public real estate.

23 You can see the write-up starting on
24 page 14 of the appendix. There's also a
25 presentation included at Appendix K. I will not
 PRIM Board Meeting Minutes of 5/16/2017
 For Approval at the August 2017 Meeting

1 be working off the presentation, but if you have
2 any questions regarding it, please let me know at
3 any time.

4 Staff conducted a REIT portfolio review
5 as part of our 2017 annual plans. The review
6 affirmed the benefits of investing in public real
7 estate, including the added liquidity they provide
8 relative to private markets. And they also
9 provide exposure to areas of real estate not
10 easily attained in private markets.

11 A good example of that is investing in
12 large office buildings in large cities. Take
13 84 State Street, for example. It's a Class B
14 building. We own it wholly.

15 But if we wanted to buy 60 State Street,
16 it's a different story. It would present
17 concentration issues within the portfolio.

18 So we get access to assets like it in
19 the REIT portfolio.

20 We also reviewed the status of our REIT
21 bench managers that we selected last year as part
22 of an RFP search, and although we're not
23 suggesting to allocate any new capital to them
24 this year, we will continue to monitor them, going
25 forward.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And we already received approval to
2 allocate \$200 million to either one of them at the
3 board meeting last year as part of the RFP search.

4 And the review also resulted in a
5 recommendation to terminate Invesco Real Estate
6 for generating performance that falls below our
7 expectations.

8 Since inception of the mandate, which is
9 nearly five years ago, Invesco has posted poor
10 performance relative to the benchmark and its
11 peers. The poor performance is largely the result
12 of poor stock selection. And we believe their
13 strategy and process will lead to similar returns
14 going forward.

15 We're also recommending to move the
16 account to Brookfield Investment Management. They
17 have had very good performance for us over the
18 past year since we engaged them, but they also
19 demonstrated strong returns over longer periods.

20 We believe this move will help us
21 increase the excess returns in the portfolio and
22 improve risk-adjusted returns as well.

23 We'd also like to highlight, even though
24 we're recommending to terminate Invesco on the
25 public real estate side, we do have a longstanding

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 and very good relationship with them on the
2 private real estate side, and that will continue
3 going forward.

4 TREASURER GOLDBERG: So this is also a voting
5 item.

6 I would seek a motion of the approval of
7 the termination of Invesco Realty Advisors, that
8 the PRIM Board approve the Real Estate and
9 Timberland Committee's recommendations to the PRIM
10 Board to termination the Invesco Realty Advisors'
11 REIT mandate and transfer approximately
12 287.5 million in cash or securities as of
13 March 31, 2017, from the Invesco Realty Advisors
14 to Brookfield Investment Management as described
15 at Appendix K of the expanded agenda, and further
16 to authorize the executive director to take all
17 actions necessary to effectuate this vote.

18 Is there a motion?

19 MR. BROUSSEAU: So moved.

20 TREASURER GOLDBERG: Second?

21 MS. FITCH: Second.

22 TREASURER GOLDBERG: Questions? Comments?

23 All righty. We have a motion. We have
24 a second.

25 All those in favor?

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 BOARD MEMBERS: Aye.

2 TREASURER GOLDBERG: Any opposed?

3 Seeing none, the motion carries.

4 (VOTED: To approve the Real Estate and
5 Timberland Committee's recommendations
6 to the PRIM Board to termination the
7 Invesco Realty Advisors' REIT mandate
8 and transfer approximately
9 \$287.5 million in cash or securities as
10 of March 31, 2017, from the Invesco
11 Realty Advisors to Brookfield Investment
12 Management as described at Appendix K of
13 the expanded agenda, and further to
14 authorize the executive director to take
15 all actions necessary to effectuate this
16 vote.)

17 MR. LA CARA: Thank you, everyone.

18 MR. SCHLITZER: Thank you.

19 MR. GURTZ: So we're going to start with the
20 operating budget, which is in Appendix M in your
21 packet.

22 The traditional budget estimates future
23 cash inflows as well as cash outflows. However,
24 in PRIM's case, cash outflows really are the
25 returns from our investments. And as we all know,
it is extremely difficult to predict one-year
investment returns, if not any investment returns,
in the future. So we don't try to do that.

However, we can predict and estimate our
cash outflows, which is our expenses, and they are
much more predictable. And therefore, our budget

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 is designed to provide an estimate of our expenses
2 in fiscal year 2018.

3 So I want to flip through just a couple
4 of pages, starting on page 4, which is the budget
5 summary.

6 Total fiscal 2018 budget is projected to
7 be \$359 million or 56 basis points of the
8 projected average PRIT Fund assets. This year's
9 budget is based on projected average PRIT Fund
10 assets of \$64 billion, which is 6.7 percent
11 increase of assets compared to last year's
12 projected average assets of \$60 billion.

13 As you know, most of PRIM's fees relate
14 directly to our assets, so higher average assets
15 will result in higher fees. As a result, the
16 fiscal 2018 budget is 3.9 percent or \$13.5 million
17 larger than the last year's budget. But in basis
18 points, the budget actually decreases from
19 58 basis points to 56 basis points, a 2.6 percent
20 decrease, meaning collectively, we are paying less
21 fees to manage more assets, a direct result of the
22 successes of Project SAVE, which is now firmly
23 engrained in our DNA.

24 Our budget is comprised of three
25 sections: investment management fees at the top,

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 third-party service providers in the middle and
2 lastly operations at the bottom.

3 First, investment management fees
4 comprise approximately 92.5 percent of the total
5 budget. These fees are paid to our investment
6 managers to manage the assets of the PRIT Fund.
7 These fees are grouped by asset classes, as you
8 can see at the top.

9 The PRIT Fund asset allocation drives
10 our fee structure. So if you flip to page 3, we
11 show this graphically. The top graph is our
12 board-approved target asset allocation, and the
13 bottom graph shows our fiscal 2018 projected
14 operating expenses needed to implement this asset
15 allocation.

16 For example, global equities has a
17 target allocation of 40 percent of the PRIT Fund.
18 It's our largest asset class, yet only requires
19 15 percent of our total expenses to implement.
20 This is due to the availability and use of
21 inexpensive passive investments for a portion of
22 our global equities, which significantly reduces
23 our fees in that asset class.

24 Contrast that with private equity. It's
25 historically our highest returning asset class.

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 It's now 11 percent of the target asset
2 allocation. It's an expensive asset class. There
3 is no passive replication available to invest in
4 that asset class and therefore requires 31 percent
5 of our budget to implement it successfully.

6 Again, through Project SAVE, PRIM staff
7 has worked very hard to drive down these costs.
8 And it certainly influences how we negotiate with
9 our managers and operate the fund in general.

10 It's important to remember investment
11 management fees are variable costs. These costs
12 typically are based on the value of our
13 investments. So therefore, as the investments
14 rise and fall, so will our fees. They'll go up
15 accordingly or down accordingly.

16 So a common phrase around here is if the
17 investment management fees are going up or above
18 budget, that's actually a really good thing. That
19 means our investments are doing better than we
20 expected.

21 TREASURER GOLDBERG: As long as it continues
22 to be that reason.

23 MR. GURTZ: That's right. Yes.

24 This budget is based on continued asset
25 growth using NEPC's five- to seven-year growth

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 assumptions. Again, however, future returns are
2 not predictable. So actual costs and fees will
3 vary, but I think this budget gives you a pretty
4 good estimate of what it's going to look like in
5 the next year.

6 Also no performance fees, incentive fees
7 or carried interests are projected in this budget
8 as they are again difficult, if not impossible, to
9 estimate those in a one-year time period.

10 Going back to page 4, the second section
11 of the expenses is third-party service providers.
12 These are the projected fees we pay to all of our
13 advisors, consultants, custodians, audit, tax,
14 legal and risk tools. Most of these vendors are
15 obtained through competitive RFPs. These fees sum
16 to \$13.5 million or they represent 3.8 percent of
17 the total budget or just over two basis points.

18 The increase to third-party service
19 providers is primarily due to increased costs
20 related to our PCS and hedge fund separately
21 managed account program. As we talked about
22 earlier, as more assets within our hedge fund and
23 PCS portfolio move to managed accounts, our
24 advisory fees increase. However, these fees are
25 more than offset by lower investment management

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 fees in the top section.

2 Similar story related to real estate
3 advisory fees. These fees are going up as we've
4 included fees related to direct real estate
5 investing. But again, direct real estate advisory
6 fees are going up, but subsequent investment fees
7 should be going down, more than offsetting those
8 increase in advisory fees.

9 The last section is operations. This
10 includes PRIM staff compensation and our benefits,
11 rent, insurance, computers and technology, and
12 other expenses to run the organization here at
13 PRIM.

14 The operations budget sums to just over
15 \$13 million or 3.7 percent of the total budget.
16 And again, just over two basis points.

17 This year's budget increased due to
18 compensation, rent, and computer and technology
19 needs. As Michael noted earlier, most investment
20 teams need to add depth to augment their strong
21 but lean teams, and as a result, the compensation
22 line is increasing this year to include those new
23 staff positions.

24 Occupancy is increasing as we now occupy
25 the entire third floor, so we have plenty of room

PRIM Board Meeting Minutes of 5/16/2017

For Approval at the August 2017 Meeting

1 as we continue to expand and grow personnel-wise.

2 And then last but not least computer and
3 technology stuff, that's increasing by 23 percent
4 this year due to planned hardware and software
5 updates.

6 The rest of the budget, pages 5 through
7 13, provide detail on each of the numbers on
8 page 4. We detail investment management fees out
9 by manager and for third-party service providers,
10 provide detail by service.

11 Pages 14 through 25 provide a brief
12 narrative on the numbers, explaining how fees are
13 determined and some insight into how and why the
14 numbers may have changed from prior year.

15 A lot of work goes into this budget. I
16 want to call out two folks individually, Dan
17 Eckman and Cathy Hodges, who spent a lot of time
18 working on this and putting this together.

19 So any questions, I'm happy to answer
20 them, or we can move to a motion.

21 TREASURER GOLDBERG: Absolutely.

22 Seek a motion of the approval of the
23 draft fiscal year 2018 PRIM operating budget; that
24 the PRIM Board approve the Admin and Audit
25 Committee's recommendation to approve the draft

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 2018 PRIM operating budget as attached at
2 Exhibit M of the expanded agenda, and further to
3 authorize the executive director to take all
4 actions necessary to effectuate this vote.

5 Is there a motion?

6 MR. BROUSSEAU: So moved.

7 TREASURER GOLDBERG: Is there a second?

8 MS. FITCH: Second.

9 TREASURER GOLDBERG: All those in favor?

10 BOARD MEMBERS: Aye.

11 TREASURER GOLDBERG: Any opposed?

12 Seeing none -- I didn't ask if there
13 were questions. I could.

14 (VOTED: To approve the Admin and Audit
15 Committee's recommendation to approve
16 the draft 2018 PRIM operating budget as
17 attached at Exhibit M of the expanded
18 agenda, and further to authorize the
19 executive director to take all actions
20 necessary to effectuate this vote.)

21 MR. BROUSSEAU: Just a comment. The Admin
22 and Audit Committee did compliment Dave and the
23 team. I mean it was a lot of work that went into
24 this.

25 I think it's the second year in a row
now a new twist that Dave has put is put the basis
points aside of all of this, and it makes it very
easy to see where the money has to go. Very good.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And the compensation, as we know, is
2 going to allow for increasing staff, as Michael
3 was mentioning earlier.

4 MR. TROTSKY: And those numbers actually
5 assume that everyone at full salary is hired on
6 July 1.

7 TREASURER GOLDBERG: That hasn't been the
8 case.

9 MR. TROTSKY: That won't happen.

10 TREASURER GOLDBERG: So we've gone through
11 all the voting items today, but we have a few
12 other things on the agenda.

13 MR. GURTZ: Yes. So the first one is the
14 results of the equal pay audit. This is a
15 nonvoting item, as the Treasurer mentioned.

16 And on the phone is a representative
17 from McLagan, who conducted this equal pay audit.
18 The presentation is at Appendix L. Mike Oak is
19 the representative from McLagan, and he'll briefly
20 go through it, but let me give you quick opening
21 remarks so bear with me. It won't take too long.

22 As part of PRIM's diversity initiatives,
23 PRIM's staff is following the strategies detailed
24 in EqualPayMA's employer toolkit created by
25 Treasurer Goldberg's office.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 EqualPayMA is a website -- it's the
2 first in the country, I believe -- dedicated to
3 promoting wage equality and offering innovative
4 tools and strategies for employers and employees
5 who want to close the gender wage gap.

6 The website includes resources such as
7 employer toolkit, which is this red document right
8 here. You can grab it off the website. It's a
9 best practice guide designed to explain how to
10 identify, understand and promote equal pay within
11 the workforce.

12 The employer toolkit's first strategy to
13 promote equal pay within a firm's current
14 workforce is to, quote, "perform an internal equal
15 pay audit and correct discrepancies."

16 So PRIM staff commissioned McLagan,
17 who's PRIM's compensation consultant, to conduct a
18 gender pay audit to determine if PRIM has a gender
19 wage gap.

20 And so with that, I'll turn it over to
21 Mike Oak, who's on the phone, to walk through the
22 presentation at Appendix L.

23 MR. OAK: On the report, what we were asked
24 to help assess or to help ensure that there is
25 equal pay for equal work.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 So we looked at this a number of ways.
2 The first way is we said, well, for people within
3 the same job classifications, are the male to
4 females paid relatively the same, or is one paid
5 more than the other?

6 And then we wanted to take a deeper dive
7 into that and to say, well, that's a superficial
8 way of looking at it. That's one answer. But
9 we'd also like to, to the extent possible, adjust
10 for years in position. We'd expect someone who's
11 in their position and continues to contribute over
12 time, they would be rewarded for that, and also
13 performance. So for example, we would expect, and
14 we'll go into in more detail in a minute, that
15 someone who's long tenured and a strong performer
16 would be paid more, for example, than someone who
17 is a recent hire and a poor performer at the
18 extreme.

19 So on the executive summary, which is
20 page 3 of the McLagan report, the couple bullet
21 points there is that generally, the female
22 population is better aligned to the midpoint of
23 the salary range.

24 What we mean by that is that PRIM, for
25 each job classification, has a minimum and maximum

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 salary range. And obviously the midpoint of that
2 would be the midpoint, so that's what we're
3 referring to when we talk about midpoints.

4 So we looked at, for example, for each
5 job, what's the percent of the female population
6 below the midpoint or above the midpoint, what's
7 the percent of the male population above or below
8 the midpoint.

9 So in aggregate, of the female
10 population, 60 percent, so the majority of the
11 females, are paid at or above the predicted salary
12 range. And again, I'll get into what that
13 predicted means in a minute in more detail, versus
14 the male population, which is only 35 percent.

15 So going off the next page and kind of
16 just skimming to the bottom, what we found is that
17 if we look at the job only, so not adjusting for
18 performance, not adjusting for tenure, if we just
19 said for everyone in the same job classification,
20 what percent of -- what's the average variance to
21 the midpoint in the salary range.

22 So we looked at for each job, and we
23 said what's the average difference of the
24 midpoints.

25 You see here in the bottom number
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 circled that the male population on average was
2 6 percent below the range of midpoint; female were
3 3 percent below. 3 percentage points, we find
4 significantly insignificant.

5 So the high-level conclusion is that on
6 a job-by-job basis, again not accounting for
7 performance or tenure, but just looking at people
8 in the same job, our conclusion is that there's no
9 difference in pay between the male and the female
10 population.

11 Make sense so far?

12 TREASURER GOLDBERG: Yes.

13 MR. OAK: So if we go to the next page, and
14 this is where it becomes a little bit more
15 complicated, but hopefully clear. If you look at
16 the bottom of page 5, you see this kind of grid,
17 and you see these numbers in the left that say
18 Time in Current Position, Less Than One Year,
19 yadda, yadda, yadda, Greater Than Five Years.

20 So again, the expectation that we had is
21 that if someone's new to the position, they'd be
22 hired in at the lower end of the range. If
23 someone's been in the position for a while,
24 they'll progress towards the upper end of the
25 range.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 And then similarly, going across the
2 top, left to right, Current Year Performance
3 Rating, if someone is both a five, exceeds
4 expectation and been in their position a long
5 time, we'd expect them to have higher compensation
6 versus someone who is not meeting expectations and
7 new to the position.

8 So in the middle, I believe it's a gray
9 box, if you have a color printed, it says 1.0, our
10 starting point was that someone would be exactly
11 at the midpoint of PRIM's salary range if they are
12 rated a three, which is meet expectations and
13 they've been in the position for two or three
14 years.

15 So again, if they've been in position
16 two or three years and they're, quote/unquote,
17 "average" or performing at expected levels of
18 performance, they'd be at the midpoint.

19 We have a colored box around the
20 number 1.13, and I don't know if that's green or
21 orange or yellow -- as I mentioned when I was
22 there a couple weeks ago, I'm colorblind -- but
23 it's got lighter color around the 1.13.

24 And how we got to that are the -- I
25 believe again they're yellow boxes -- which is

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 Assumptions for John Smith.

2 So let's say, for example, that we're
3 doing this analysis for a fellow named John Smith.
4 And the position that he's in, the job
5 classification he's in, the PRIM midpoint was
6 \$100,000. Mr. Smith has four years in the
7 position, and he has a performance ranking of
8 five.

9 So four years in the position falls in
10 the category of three to five in the first column.
11 And performance rating of five is the rightmost
12 chart. So we would expect -- as an example, we'd
13 take the salary midpoint of \$100,000. The
14 multiplier we'd get, which is the adjustment we've
15 now made for time and position and performance, is
16 1.13, and then the predictive salary for Mr. Smith
17 is \$113,000.

18 So we would expect that based on
19 Mr. Smith's job, time in position and performance
20 rating, he'd be paid around 113,000. And then
21 what we did is we prepared his actual compensation
22 to that predicted amount.

23 Is that clear so far?

24 MR. BROUSSEAU: Yes.

25 MR. OAK: So if you go to the next page, what
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 we find in summary is that the top right box
2 summarizes pretty well. So of the male
3 population, there were 15 males that were more
4 than 5 percent below the expected pay.

5 5 percent -- I'm sorry -- 5 males were plus or
6 minus 5 percent of the expected range and 6 males
7 were 5 percent or more of the expected range.

8 And you see the numbers for females. To
9 me, they're absolute head count numbers. So one
10 thing I didn't mention earlier is that the sample
11 size is relatively small. So where you do see,
12 for example, differences between males and
13 females, they're relatively insignificant
14 differences so please don't draw conclusions from
15 that.

16 But in all cases, the females for these
17 analyses were actually better than their male
18 counterparts to some extent. But again, we didn't
19 find that to be a significant difference.

20 So just as an example, when we adjust
21 for performance and time in position, females on
22 average were 2 percent below the predicted salary,
23 so more or less aligned with what we'd expect.
24 Males, on the other hand, were 6 percent below.

25 So again, a little bit of a difference,

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 two versus six, but not significant, given the
2 sample sizes there.

3 Of the female population, again more
4 than 60 percent are paid at or above the predicted
5 range versus 35 percent to the males.

6 And then at the bottom of the report, we
7 just wanted to highlight that when you're trying
8 to hire investment talent that requires a very
9 special skill set, oftentimes require advanced
10 degrees, certifications, education, et cetera,
11 it's very difficult. So just recognize that
12 almost half of PRIM's total staff have those
13 advanced degrees.

14 Also not in this report but wanted to
15 highlight is that when we look at, for example,
16 the ratio of males to females, I think it was
17 about 20 percent at PRIM in the investment
18 positions that are females, as you know, when
19 we're talking about gender bias, one of the things
20 that often drives the differences in gender bias
21 when looking at numbers you see in the papers are
22 the percentage of males and females in various
23 jobs.

24 So anyway, my long-winded point is that
25 we wanted to see if we had any industry data to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 support, well, is that -- 20 percent female, did
2 that represent the labor pool we would expect? Is
3 that high or low, et cetera? Or are there any
4 other conclusions we can make from that?

5 So we found two sources of information
6 to help explain that. One is from McLagan's own
7 research. We actually have a diversity study that
8 we do for the investment management industry. One
9 of those things is percent of staff that are male
10 versus female.

11 What we've found is that in general
12 across all investment positions and within the
13 investment industry, 80 percent are male,
14 20 percent are female. So the labor pool you'd be
15 hiring from, as an example, is skewed.

16 And we found even further looking at
17 senior investment positions like senior portfolio
18 managers or head of asset classes, that number is
19 closer to 12 to 15 percent female for the senior
20 positions.

21 So the labor market, the broad labor
22 market, has little -- sorry. For lack of better
23 words, little to choose from or less to choose
24 from, I should say, when trying to attract
25 qualified talented females in the investment

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 profession. And of course, many firms like to
2 hire those few folks that are in those roles.

3 We also found that the percent of CFA
4 candidates is also around 20 percent; it may have
5 been a percentage point above or a percentage
6 point below, right around 20 percent. For the
7 most recent year CFA candidates, it was
8 approximately an 80/20 mix male versus female.

9 So again, the last comments weren't in
10 this report. It was just additional research that
11 we did to kind of back up the focus of what we
12 were looking at.

13 TREASURER GOLDBERG: Thank you very much,
14 Michael.

15 And I really compliment PRIM on
16 downloading that excellent toolkit that we view
17 our work around wage equity and diversifying
18 workforces as not a stick but a support system to
19 businesses.

20 And I think one of the telling things
21 that I know we're focused on is when you look at
22 those 20/80 percentages or, in senior positions,
23 12 to 15, this causes us to have to compete harder
24 to get qualified women.

25 But one of the goals of the work that
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 we're doing in our office is mentoring women
2 because if you go to New York and you talk to
3 women in alternative finance, if you talk to women
4 in private equity or working for hedge funds or
5 starting their own funds, they're finding more
6 than a glass ceiling. It's a brick ceiling. And
7 it's one of the reasons some of them veer off to
8 start their own funds or to do other kind of work.

9 And so we are doing a lot of mentoring
10 things in order to make that pool of highly
11 qualified people be able to move along and then be
12 available for those senior positions.

13 We did an amazing presentation for a
14 national group last week, for the college savings
15 plan professionals and the state treasurers
16 nationally, which is a completely non-partisan
17 group but actually leans more towards being very
18 much more conservative.

19 Highly attended, graded five stars on
20 the presentation because we were able to draw the
21 connections between college debt, college savings,
22 in other words, having savings ahead of time might
23 reduce college debt, and women in the workforce
24 and the impact on retirement and savings, all the
25 way connected back to the economy and the pool

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 that will help businesses be more profitable.

2 It was a phenomenal event. We had
3 people from State Street and a few other of the
4 investment banking groups talking about this too.
5 And the world is starting to see this as a
6 challenge, that the United States is not accessing
7 talent and knowing how to move it along and keep
8 it in the pipelines.

9 So it's great that PRIM is where it's
10 at. It's not surprising to see.

11 We also have to look at raw numbers as
12 opposed to percentages. So when you're looking at
13 comparison data, when you have like three women
14 versus 25 men or something like that, that also
15 can skew comparisons.

16 But I think the fact that we have raised
17 the consciousness here and are looking to work
18 more and more on this and getting highly qualified
19 people who also represent diversity in our
20 workforce will make us continue to be a more
21 savvy, creative, innovative and successful fund.

22 So thank you for doing this. I know the
23 Admin and Audit Committee was delighted to hear
24 the presentation in full.

25 And Michael on the phone, as opposed to
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 the other four Michaels in the room, if there are
2 not more, thank you for your work on this.

3 Are there any other comments?

4 MR. BROUSSEAU: Just a comment. Michael has
5 been using this tool or the concepts within this
6 tool here at PRIM because remember five years ago,
7 we went through the compensation law. That's what
8 I like to call it. We brought the compensation
9 levels in this organization where they belonged.
10 It was a long process, but it was successful.

11 And I think this is just a continuation
12 of this. And Admin Committee was very glad to see
13 this, and it was very positive, and we hope it
14 continues to be that way.

15 MS. FITCH: I think this really has great
16 value in many different ways and should be
17 highlighted as a part of the literature that we
18 have about ourselves or at least included in it
19 because it needs --

20 I think that PRIM is in a position to
21 really set precedent around the country. And so
22 this is an important piece of the precedent that
23 we're working with.

24 MR. NAUGHTON: I agree with that. And just
25 to follow up on it, when we are reaching out to

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 bring in new people to work here, having that out
2 there is a very important part of recruitment,
3 there's no question about it, along with the
4 outcome of the awards referred to.

5 TREASURER GOLDBERG: It's actually a good
6 recruiting tool.

7 Yes, Paul. Paul's had his hand up from
8 the beginning.

9 MR. SHANLEY: Our position, our public
10 position, is exactly what we should have. And I'm
11 just wondering from Michael's perspective, we've
12 had some recent openings where we've received 1200
13 résumés and a lot of people looking to work here.

14 I'm wondering if there's any trend there
15 of any kind of increase in the type of people
16 we're looking for.

17 MR. TROTSKY: Yes. You want to take that?

18 Because we use an outside consultant to
19 make sure we have a full slate of highly qualified
20 candidates before we even begin the selection
21 process. That's high level.

22 MR. GURTZ: Paul, I think the trend is we are
23 getting more and more applicants for each job
24 opening that we have. And the quality of
25 applicants is, quite candidly, superior to when I

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 was joining 10 years ago.

2 We do use a third-party firm to allow
3 candidates to document their gender as well as
4 their ethnicity. And we ensure that we have a
5 full slate of candidates before we make any formal
6 hirings to anybody.

7 But the number of diverse candidates
8 that we're getting is more and more. We are
9 tracking that.

10 And we're also reaching out to more and
11 more folks to draw in diverse candidates than we
12 have in the past. So we're reaching out to
13 affinity groups to say, "Hey, we have a job
14 opening. Would your membership be interested?"

15 So we are making proactive attempts to
16 draw in a broader, more diverse group of
17 applicants than we've ever had before. And I
18 think it's showing and it's working.

19 MR. TROTSKY: One correction, though. We are
20 not getting candidates superior to you. Don't
21 sell yourself short. That's the only correction.

22 MR. GURTZ: Thank you.

23 TREASURER GOLDBERG: Any other comments or
24 questions?

25 Thank you very much.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 We have a couple quick things.

2 MR. GURTZ: Not so quick or maybe it is
3 quick.

4 The next one, results of the PRIM Board
5 self-evaluation. I'll literally turn this over to
6 Bob as this was discussed at the Admin and Audit
7 Committee, and per the charters, the chair of the
8 Admin and Audit Committee presents the results of
9 that report.

10 It should be sent by email to you, but
11 also in front of you, it's the Cortex report that
12 should be in front of you to walk through.

13 MR. BROUSSEAU: First of all, I would like to
14 say that all nine members of the board
15 participated in the evaluation this year and last
16 year.

17 TREASURER GOLDBERG: For the second year in a
18 row.

19 MR. BROUSSEAU: For the second year in a row.

20 TREASURER GOLDBERG: What was the different
21 factor that caused that to happen?

22 MR. NAUGHTON: We're attracting a higher
23 quality of board member.

24 TREASURER GOLDBERG: It was why? Because I
25 threatened people last year.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 There are nine people on the board. If
2 you have one or two people who don't participate,
3 it completely screws up our results. So it's not
4 acceptable.

5 MR. BROUSSEAU: There are no broken kneecaps
6 so we're all set.

7 MS. FITCH: It was also easy to participate
8 in. I mean they set it up so that it was clear.

9 TREASURER GOLDBERG: Right.

10 MR. BROUSSEAU: And also you had the
11 opportunity to speak with Tom Iannucci and to go
12 in depth into some of the comments that you made.

13 Very briefly, I'm going to try and
14 say -- I know the time.

15 The first three pages of the report
16 really is the executive summary that Tom prepared.
17 And I don't know if you want to look at it in
18 detail, but the overall results, very, very
19 positive. The board is very pleased with the --
20 very positive view of the board and their
21 performance for the last year. As you can see,
22 over 90 percent of the responses were either a
23 four or a five.

24 And I had to check off some of the
25 things, but probably it would be better if some of

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 you had questions later.

2 (Ms. Rose left the meeting.)

3 After that, on page 4, you are asked to
4 judge significant achievements in areas of
5 investments, governance, human resources. That's
6 on page 4.

7 Part 2 on page 5 are the improvement
8 opportunities. They're listed at the top. Board
9 committee meeting packages, board committee
10 meeting administration, committee size and
11 composition, addressing the Open Meeting Laws and
12 the board focus.

13 I think we have quite a bit here for the
14 retreat in September, some of the things
15 recommended.

16 Then after that, we went into the
17 appendices. There were three. Appendix A on
18 page 7 shows the fiduciary, the education. You
19 can see the bold numbers are the areas that
20 received the highest grades.

21 Appendix B, other comments. These were
22 the personal comments that you wrote or spoke to
23 Tom about.

24 But the thrust of the report is really
25 in Appendix C, which is the last one, which is on

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 page 11. Appendix C, this is the summary of the
2 recommendations.

3 The board committee meeting packages,
4 and there were some comments here, but I think one
5 of the comments found was going to a quarterly
6 meeting, we're evaluating this, the board meetings
7 have increased by at least an hour. I think we've
8 noticed that, and we have to monitor that.

9 But if you look at C, this is where the
10 results are. Committee size. We tried to tackle
11 this a few years ago, and the committee size -- we
12 don't have any firm terms, how long is somebody on
13 a committee. Well, usually they stay forever and
14 ever. New treasurers come in or new people. They
15 appoint other people to committees, and it grows.

16 And what we should be doing is have some
17 kind of policy that we're working on with
18 committee composition.

19 We'll be working this year on the
20 governance manual, which is the -- that's the
21 board's focus.

22 (Ms. Rose rejoined the meeting.)

23 And the board committee and meeting
24 administration, one of the other terms mentioned
25 was the idea of having the committee meetings all

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 in one week. And we've tried to deal with that
2 over the last two or three cycles and two or three
3 years.

4 It's very difficult when you have an
5 ending, let's say, of March 31. Results aren't in
6 until the middle to the end of April. And then
7 you have to prepare for the board meeting.

8 And I know the time is late, but you've
9 had time to read this. It came to you by
10 electronically and today. So if there are any
11 comments that the board would like to make, the
12 committee would be happy to entertain them.

13 MR. HEARTY: I've really got to go, but I
14 only have two comments. I'll direct them directly
15 to you.

16 MR. BROUSSEAU: Okay. Thank you.

17 Any other comments for the board
18 self-evaluation?

19 I think Tom did a very good job in
20 evaluating and also succinctly presenting,
21 especially in Appendix C.

22 (Mr. Hearty left the meeting.)

23 And the Admin will look at this at a
24 future meeting, I think when we work towards the
25 retreat in September.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 MS. FITCH: I guess I see this really as a
2 document to pay attention to for the retreat.

3 How is the retreat being planned?

4 MR. BROUSSEAU: David? The beginning
5 stages --

6 MR. GURTZ: Absolutely. You're spot on.
7 We're going to use this document and then reach
8 out to board members as well to hone in on the
9 agenda that we think is the most appropriate.

10 And obviously we want to make sure you
11 have an agenda that is appropriate and which
12 you're interested in. And so we're going to use
13 this document for sure to generate the agenda.

14 MS. FITCH: As a starting point. Right.
15 Okay.

16 MR. BROUSSEAU: On the last page, it
17 mentioned the board retreat should engage in the
18 discussion of the board's promoting social and
19 environmental goals and objectives.

20 We heard a presentation earlier this
21 morning which is social and environmental. And
22 this can be an issue the board probably tackles in
23 some form.

24 TREASURER GOLDBERG: Well, it's something
25 that we talked about in Admin and Audit. I didn't
PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

1 want to get into a lengthy discussion this
2 morning, but I believe that strategically, we as a
3 fund --

4 Number 1, it's up to the legislature in
5 terms of divesting. That's first and foremost, as
6 far as I'm concerned. It's not an issue for us.

7 But number 2, active engagement is a far
8 better strategy because treasurers and not just
9 treasurers but those who -- I mean New York state,
10 DiNapoli is a state treasurer. He has a huge
11 presence. He invests their pension fund.

12 All across the country, active
13 engagement is the way to work because it's really
14 a lot of these companies that have the resources
15 that are going to be able to do the development of
16 alternative fuels, and they are doing it. And
17 that's something that Seth Magaziner and Beth talk
18 about a lot.

19 So I think there are things that we can
20 do. Those are things that we will come back to
21 the board with.

22 And charter, we're looking at the
23 charter, and there are things that we can look at
24 within the charter that address some of these
25 things too.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

MS. FITCH: So I do have a question. On the very last page, E, the board's focus. Was this surmised by the consultant? Were these points surmised by the consultant as a focus for the board?

MR. BROUSSEAU: In the self-evaluation that the board did at Appendix C, this is a list of recommended actions that came out of not only their evaluation, but also their conversations with Tom, all of the things on pages 11 --

MS. FITCH: I see 11 to 12. I guess it just --

MR. TROTSKY: I think your question is whether Tom gave us some recommendations.

I think yes, he did.

MS. FITCH: Okay. I think in working up to the retreat, those questions can be answered, but it just sounds like a stated fact, and that's not it.

TREASURER GOLDBERG: Right.

MR. BROUSSEAU: And probably we've got to decide whether we want -- I think we want a retreat that is off-site. We've got the date.

TREASURER GOLDBERG: I assumed it was off-site.

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

MR. SHANLEY: Yes.

MR. BROUSSEAU: Yes.

TREASURER GOLDBERG: Okay. Motion to adjourn?

MR. NAUGHTON: Moved.

MR. BROUSSEAU: Second.

TREASURER GOLDBERG: Thank you.

(VOTED: To approve the adjournment of the May 16, 2017 board meeting at 12:36 p.m.)

PRIM Board Meeting Minutes of 5/16/2017
For Approval at the August 2017 Meeting

(This page was intentionally left blank.)