



**STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS**

**MEETING OF THE COMMITTEE ON
RESOURCE MANAGEMENT**

DATE: Wednesday, February 13, 2019
TIME: 10:00 am
PLACE: OHA Board Room, Nā Lama Kukui
 560 N. Nimitz Hwy., Suite 200
 Honolulu, HI 96817

AGENDA

- I. Call to Order
- II. Public Testimony*
- III. Approval of Minutes[†]
 - A. January 9, 2019
- IV. Unfinished Business
 - A. Discussion of OHA baseline spending vs. investment - SPIRE Hawaii (Certified Public Accountants for Fiscal Sustainability)[‡]
- V. New Business
 - A. NHTF 3rd Quarter Portfolio Review with Investment Consultant Segal Marco and Investment Staff
 - B. State Street Global Advisors Discussion of Funds and Market Environment
 - C. Action Item RM 19-01: Member approval of procedures to change the management structure of Hi'ilei Aloha LLC and Ho'okele Pono LLC[†]
- VI. Executive Session[‡]
 - A. Approval of Minutes - January 9, 2019[†]
 - B. Consultation with attorneys William Yuen, Esq., Judy Tanaka, Esq. and Robert Klein, Esq. on OHA's powers, privileges and liabilities regarding OHA's role as member of Hi'ilei Aloha LLC and Ho'okele Pono LLC and management options for those LLC's. Pursuant to HRS section 92-5(a)(4).
- VII. Announcements
- VIII. Adjournment

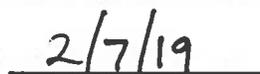
If you require an auxiliary aid or accommodation due to a disability, please contact Albert Tiberi at telephone number 594-1754 or by email at albertt@oha.org no later than three (3) business days prior to the date of the meeting.

*Notice: Persons wishing to provide testimony are requested to submit 13 copies of their testimony to the Chief Executive Officer at 560 N. Nimitz, Suite 200, Honolulu, HI, 96817 or fax to 594-1868, or email BOTmeetings@oha.org 48 hours prior to the scheduled meeting. Persons wishing to testify orally may do so at the meeting, provided that oral testimony shall be limited to five minutes.

[†]Notice: The 72 Hour rule, pursuant to OHA BOT Operations Manual, Section 49, shall be waived for distribution of new committee materials.

[‡]Notice: This portion of the meeting will be closed pursuant to HRS § 92-5.


 Trustee Robert K. Lindsey, Jr.
 Interim Chairperson, Committee on Resource
 Management


 Date

**STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
560 N. Nimitz Hwy, Suite 200
HONOLULU, HI 96817**

**Minutes of the Office of Hawaiian Affairs Committee on Resource Management
February 13, 2019
10:00 am**

ATTENDANCE:

Trustee Dan Ahuna, Chairperson
Trustee Robert Lindsey, Vice-Chair
Trustee Leina'ala Ahu Isa
Trustee Kalei Akaka
Trustee Keli'i Akina
Trustee Brendon Kalei'aina Lee

Trustee Carmen Hulu Lindsey
Trustee Colette Machado
Trustee John Waihe'e

STAFF PRESENT:

Albert Tiberi
Davis Price
Dylan Zheng
Kamana'opono Crabbe, CEO
Lisa Victor
Miles Nishijima
Raymond Matsuura
Scott Hayashi
Sterling Wong
Sylvia Hussey, COO
Lehua Itokazu
Carol Ho'omanawanui
Lopaka Baptiste
Claudine Calpito
Ron Porter

Maria Calderon
Paul Harleman
Melissa Wennihan
Kauikeaolani Wailehua
Zuri Aki
Lei Ann Durant

Guest and Community:

Rodney Lee – SPIRE Hawaii
Lucas Sayin – SPIRE Hawaii

I. CALL TO ORDER

Chair Ahuna – Calls the Committee on Resource Management to order at 10:00 am, noting for the record the following Trustees present:

	Present	Excused	Comments
TRUSTEE LEI AHU ISA	X		
TRUSTEE KALEI AKAKA	X		
TRUSTEE KELI 'I AKINA	X		
TRUSTEE BRENDON KALEI 'AINA LEE	X		
TRUSTEE HULU LINDSEY	X		
TRUSTEE ROBERT LINDSEY	X		
TRUSTEE JOHN WAIHE'E			10:06 arrived
CHAIRPERSON DAN AHUNA	X		
TOTAL	8		
At the Call to Order, there are eight (8) Trustees present.			

Chair Ahuna announced a 72-hour waiver for materials under agenda item IV. A. Discussion of OHA baseline spending vs. investment – SPIRE Hawaii (Certified Public Accountants for Fiscal Sustainability) and item V.C. Action Item RM 19-01: Member approval of procedures to change the management structure of Hi'ilei Aloha LLC and Ho'okele Pono LLC.

II. PUBLIC TESTIMONY

None.

III. APPROVAL OF MINUTES

A. January 9, 2019

Chair Ahuna deferred the January 9, 2019 minutes and executive session minutes for January 9, 2019 to the next RM meeting.

IV. UNFINISHED BUSINESS

A. Discussion of OHA baseline spending vs. investment – SPIRE Hawaii (Certified Public Accountants for Fiscal Sustainability)

Chair Ahuna calls Rodney Lee and Lucas Sayin of SPIRE Hawaii to present.

Rodney Lee greets and thanks Trustees to be able to provide a presentation to the Board. They will clarify and answer questions or otherwise if needed. He said he will not go through every slide, but all Trustees has them in front of them.

Chair Ahuna calls Rodney Lee and Lucas Sayin of SPIRE Hawaii to present.

Chair Ahuna asks if someone is on the phone. He finds out Segal Marco Investment staff and State Street advisors are on the phone.

Ray Matsuura says I have someone on the phone. Inaudible

Trustee Lee says it doesn't mute us, they need to mute. They can't hear us. Then, they cannot, *inaudible*.

Rodney Lee were on mute. They can't hear us.

Kamana'opono Crabbe asks Ray to contact them, to tell them we are in meeting and if they can call in at the appropriate time.

Trustee Lee says or tell them to mute their phone.

Rodney Lee greets Trustees, provides presentation to the Board on OHA Fiscal Efforts. Discussed FSP and how it relates to spending investments in the fact that it discussed many of the terms of spending or investment concerns. At the point of liability of the pension benefits. We are also looking at protecting the parts of the trust and looking at legal and taxable structures to protect it against risk, mainly in land. We're looking at the obligation that OHA had with DHHL and to the extent that OHA's obligation to DHHL is something that it's proving valuable to the trust itself. As well as the obligations and total financially. With respect to real estate investment how to activate the commercial assets as well as understanding the nature of real estate, the types of real estate from programmatic lands, legacy lands and commercial real estate. Looking at how spending over all impacts OHA. Where are we now? Critical fiscal matters that need to be discussed. To the left are not necessarily policies but they refer to polices. Topics within spending itself. How those are related to a policy and you notice that each one has its own you know the relationship to multiple policies that have impacted overall. Currently all of OHA's finances especially with related to expenditures are all within one

bucket. Basically look through entirety of the budget it's every year, each one of those whether it's investment-related, debt-related, operating related are all combined itself and some of that is where the uncertainty of how to manage it comes from. The second is understanding that spending right also looks at, how do you integrate that with other types of state agencies. As part of their chapter 10 mandate 10B, OHA supposed to coordinate and collaborate within the agency's itself, is how does it look at and how does that affect overall net spending. OHA's obligation to pay debt effects of increased fringe rate and DHHL commitment and how it affects overall spending, currently right now all of those come from your operating your core operating expenses. On the investment side things to look at in the real estate and financial assets have been a long discussion around these two and how they should not be managed in the same way. They are not the same type however, it should be some collective goals. In other trusts and endowments, it's a blended rate and a blended goal. Those things help to support one another whether the market is up or down. Or real estate is actually returning even more so to look at that. As was mentioned previously by Trustee Akina the market volatility right we looking or looking at it we see the volatility it's there we know that the reports are not necessarily that favorable, so we got to consider what the overall net effect on what that means on investment. How to adjust to that is going to be of great concern. That means OHA needs to set some benchmarks and find solutions for greater returns on those commercials assets, those need to be considered overall. While that's not a policy of real estate asset strategy itself. OHA should consider whether programs are expenditure related or investment related, and some of yours are what you choose to do and what is mandated for what you do. Those mandates are given to you by proviso's those that are established with in the bill and the others are what you choose to do and those should be treated differently and considered differently as you go along. Obviously the big topic that has been on the table for several years is how to raise capital for the development of Kakaako Makai (KM). Are you in the position to do that in the right condition? Is it the right structure to be able to entertain that? Does OHA have a plan for the repayment of all its debts? Do you have right now the ability to draw on some type of resource or dedicate from resources to get it done? Does the policy from the board explain how and when it can be used. Right now much of the OHA's debt is tied to mostly real estate assets that can be converted to something, some solution. You can see that it involves a discussion around the investment policy. How debt is being used. The real estate asset strategy as well as a legal structure in the way of protecting it, because the one thing you have, which I'll go back to real estate itself is, right now you are at 100% exposure. I know we said this before; your one hundred percent spoilers are all real estate assets because it is under the trust. Something to think about this other topic you know it's the state auditor brought up within the calculation of overall spending in the fiscal reserve. When I say

the (*inaudible*) use of the fiscal reserve is, what's the objective around it, what are you trying to achieve. Is it people have an operating reserve but you don't necessarily fall in that bracket. Operating resources are where there is risk to revenue and because you don't really have necessary revenue where's the risk. What is it going to be you know there's some proposals around that. It's a time and a place to place risk at the very top, if not the very top of it, as one of the most important aspects to be covering. OHA's land assets as I said is 100% at risk for the entirety of the trust. We think OHA needs to adopt an enterprise risk management framework. To help inform most decisions, so you understand how to make those decisions going forward. OHA needs to resolve and respond to all audit findings. That is also a risk factor when you look at overall ability to finance, overall ability to be partners and overall perception of fiscal matters. I wanted to take this into a more practical discussion of how all this stuff folds together and use one example, related to debt and land, that can kind of take you through how this whole thing kind folds to. We take into consideration this building, Na Lama Kukui (NLK) and the debt that's attached to this building. It's a commercial loan, 24 million, appraised value 48 million, that's great, wonderful things. Currently the commercial loan is liened against the property and collateralized by the trust fund, again you know it's exposed overall. There is no explicit way to establish payment of the balloon payment. All the interest payments have been through the core operating budget and there are balloon payments that are going to be looming as a result of that. An asset of the trust, it is vulnerable over the plane of the against the assets as well as the trust fund. I keep repeating that sentence because the risk is in this case more than the actual debt. Think about it. The value of the trust fund. OHA needs to determine how much debt can be used as leverage against the assets and what assets it will take it against. What are the options? It can refinance the existing commercial loan using the appraisal value, however banks will still place lien on property as well as some amount of trust fund to meet financing terms. Which still puts the Native Hawaiian Trust Fund (NHTF) at risk against the direct assets of the fund. Any claims against building would be placed against its entirety of the assets. OHA will have to dedicate some revenue to allocate to be used for repayment of the financing. Right now, not sure exactly how that it structured. We discussed at length with work groups of placing it an LLC. The reason for that is to minimize the risk, that's why an LLC is important. It's to shelter the asset, so that the limitation of the liability cannot exceed beyond the actual entity itself. You need to seek legal opinion and placing it in an LLC and how to do that and we strongly recommend that you seek that. Then once you establish the need to establish it, based on the legal opinion itself. OHA itself would maintain the controlling interest and that is how the linkage is to the trust, in the controlling interest, within the equity of it. The LLC wouldn't have to maintain its own financials; the LLC wouldn't have to shop for the refinancing of NLK, which require additional seed funds to satisfy the financier. And

would have to use the profits from the lease revenues used to pay for the note. I'm taking you down a course, please forgive me if it's a long and it's a little bit arduous, by just how this all applies and how this all intersects. So what needs to get done, that is the topic, everyone wants to get something done. As I mentioned before in the investment policy and it's determining that the segmentation between financial assets and real assets. Real assets being in this case land. Setting allocation, setting benchmarks are our targets as well, if money's would be transferred in some way or form. Right now you have a spending policy that dictates what the financial (*inaudible*) how would it be in a real asset. Developing a real asset strategy, you need a strategy to understand what is the plan for these real assets has going forward. Discussed financing, seeking financing deals, review, how to negotiate and close. Any financier will ask these questions as you seek them. This is the type of work the board needs to be able to get done. The board has a lot to contribute, is to resolve the financial consideration and finance value versus risk. What's the benefit risk kind of assessment and then overall management of assets. How do you overall balance this out and understand how each one works, especially in the consideration of the market market volatility. Having a blended goal between financial and real estate will actually help as another buffer against earnings itself, so you can actually use highest and best use to make sure the decisions are made in that way. You are probably going to hear from your money manager is that the next two years are going to be something to watch. The overall net earnings are going to be still positive but how are you going to do that, to manage overall. Real assets becomes a part of the conversation I know Trustee Hulu was trying to get that going for a long time. I mentioned before in the other slide, how to pay for the other obligations and this is just a graph of estimates, based on information that we had available, against core operating budget. Percentiles from DHHL Grant, Fringe benefit, debt payment, Grants, all other OPEX. We have to figure out solutions, quickly. This dichotomy exists and why that's so difficult. OHA must find a way to reconcile its own identity. Revise fiscal reserve guidelines, to clarify allowable and unallowable uses. To maximize the return of assets you also have that charge right it's also an investment you believe are important are going to drive value-added improvement. How do you do that? One-way or think about this idea of (*inaudible*) says social return on investment that means that it does not sacrifice financial, economic, or social. To make the best decisions on what programs to be put forth and how to find those programs as a trust fund. It also talks about the relationship of money and how what should be under scrutiny as public money and what issues should be under your private money. That's important because of the even though the viewpoint within many of the community of OHA's money is public and that's not entirely true and you guys know it. Its how do you present that. One way to present that is to look at what is at the core of what you need to do, legally required versus the non-core of what

you want to do, that's mission-related. This is important on several factors not just the way of how you make decisions that is what you are making decision for. Are you legally required under the state obligations? Are you meeting the state obligations itself, are you within the compliance measures that the state requires and does it cover the aspects of services that are supposed to be delivered by the state through OHA. So we have examples of those general admitted services are generally operating it overall advocacy which is covered by the state and the state mandate. Research which is mandated again in the chapter 10. Grants and programs administered and included in within the bill that you put through the stat for the general funding as well as others that you also administer yourself. General investment management and community outreach. These are all components within that. Outside of that, how do you think about mission-related things, which is capacity-building? How do you improve the net the net gain of the native Hawaiian condition? Is it mission related Investments or programmatic investments, is it asset growth and development, are there new ventures or innovation that you're going to be looking at to be able to further the cause and to be able to improve the conditions of native Hawaiians. What can OHA do? Reference the state audit report and the recommendations that are there. Ensure compliance with HRS Chapter 10-17. Consider implementing the solicitation process again. You want the metrics and that's something I know, Trustee Akina had championed, is what do we want, what do you want from this thing and have that discussion now, so that there's real value to it. I think it's the right time, to see all of the minds meet. Adopt information system from improving administration of grants that isn't deliverable, to understand how OHA can be even more transparent. Number two, I review the spending policy in light of the spending challenges as we discussed in the previous slides. Does the policy allow the challenges to be met. Where does it exist? Is it a debt against and asset or the debt on overall general operations and how does that fit on either side of the spectrum. Revise fiscal reserve guidelines to clarify allowable and unallowable uses, that's probably the easiest way to update it, but you know what I said before, to understand the use of it. What is the use and stay within the use, so that it doesn't get reported. Revise definitions within trustee allowances and sponsorships. That's an exercise in minimizing risk. So the risk of perception of the trust and prove it all over all and then create guidelines that is not going to be a significant factor going forward. On the opposite end what can I do to address investment challenges. It's already adopted best practices for asset allocation within financial securities but it needs to do so for land. It needs to accept that business plan for land management which is recommended last year and recommended by the state auditor recommended by us. So that you can make good judgement on land itself. Revise, adopt and assess all his investment policies and strategies and make the changes as necessary, as you start to develop this understanding around your asset allocation. How is it related to spending

and investment. I know for the those trustees that have been here in the last several years, you've heard this before, so forgive me if I repeat this again. It's really managing the balance sheet, in this case referencing a government agency, the statement of net position. Boards dive into the overall operating expenses and income statement management, statement of activities. In the statement here, when the pressure builds to improve performance most (inaudible) business leaders adopt measures that affect the income statement. They cut discretionary spending, centralize support functions, lop off unnecessary layers of management, eliminate low value projects and so on. All with an eye to right sizing the cost structure and of course they do what they can to increase profitable sales. While all these efforts can boost results, they overlook one of the largest sources of value: the balance sheet. Companies often hold far more working capital than they need to. They make ill-timed or ill-advised capital investments. They own unnecessary or unproductive fixed assets. When management teams focus disproportionately on the P&L, they often miss those issues. In fact, some measures designed to manage costs can actually inflate the balance sheet, consuming cash and destroying value. Right-sizing the balance sheet offers most companies an enormous opportunity to create shareholder value, in both good times and bad. Granular measures show where capital is currently being deployed. Aggressive management of both working and fixed capital frees up large amounts of cash. New ownership models enable once capital-intensive businesses to prosper with fewer assets. And processes and incentives that encourage careful balance sheet management help ensure sustainable gains. Over time, right-sizing the balance sheet becomes part of a company's culture—a culture where managers at every level of the company see the importance of carefully managing assets and liabilities and act accordingly. What is a balance sheet? For those who haven't heard it it's the simple process of planning and coordinating and directing business activities that directly determine assets liabilities and equity of a company or organization. In this case your statement of net position I just referred to in the audit. When you do that looking at assets liabilities equity, what are you concerned with. Obviously the treasury function a drawdown of your current assets, your liquidity base related to maximizing your investment returns. With an investment what you're doing today monitoring earnings related to financial, you need to that with real estate assets. You need to understand what they are performing and how they are contributing more importantly to the overall goal of building OHA's endowment or trust assets. Asset protection which is part of the enterprise risk management, protection of the native Hawaiian trust assets against various types of claims and in other senses other types of conditions. Understanding that there are risks and are going to be measured and each time you go through a decision process how do you measure them overall. As we said OHA needs to look for new sources of revenue, it cannot be at the whim of the state at all times. It can do a lot more, had it had its own

money and managed its own way. Within liabilities, debt management, monitoring debt and leveraging activity, so understanding what those are. One thing to consider when you're balancing two different types of assets between financial real estate is real estate is not liquid. The profits from it can contribute, but the actual asset is not liquid. The overall goal, is this intergenerational wealth. How do you pass on from generation to generation and create the sustained effort to become an organization that can deliver and help and support the native Hawaiian condition. It says mission-related funding that maximizes the overall benefits and I know in the past other trustees have talked about that, it's not just about the money, it's about the effect, the outcome over all. That equity although it's not necessary as recorded on a financial balance sheet, that equity is what other companies call brand equity, the goodwill that you build, that gives you the reputation of what you are and obviously the sustainability into intergenerational equity. This sustainable effort over time and that's the charge of the board. That's your responsibility to lead the organization forward, to be that for not just yourself and not just for the state as it's mandated in chapter 10, but to all those beneficiaries that are there. You know it's part of a process, when you do this and you do this as an approach, it considers the process itself but also considers all of the outcomes. We hope that this effort will then turn OHA into what it should be. That's what we have today. Any questions?

Chair Ahuna says I do. We have been talking about investments and it's all about planning. For me I think it's very important that we accomplish and get this done now. Does three months sound too quick or too long, because I just want to put a timeline on how we accomplish.

Rodney Lee says I don't believe so. I think every trustee that i've spoken to so far has wanted to move forward and showing results. It's about a will and what we're going to require, if that's the case of the three months. It's the will to decide and make a decision and its decisions are not necessary hurtful if made in an educated way, what will promise to do is to provide as much educated information, to make that decision and will work alongside Administration, obviously to come up with recommendations to do so. But to get it in place we have the structures of it, you guys did a lot of work in 2017 through the work groups. We just got to finish it. Just got to take it over the line and just finish it.

Chair Ahuna says with that Rodney, I just like to acknowledge the past leaders who have taking the responsibility. I just want to finish what they began. They have done great work and I want to make sure that we can accomplish what we set out to accomplish. Three months is our goal.

Trustee Akina says let me address the same point you're making and reinforce that and Rodney good presentation. I do have some comments and questions for later on, but in terms of getting process completed and actually implementing new policies. I think not only do we need the will, as Rodney points out, we need to clarify specifically who is responsible for the completion of the policies and implementation. Much of what was presented today resonates because we've agreed with what Rodney has said and since 2016 from the audits, as well as our own discussions, our own fiscal sustainability process, we've come up with a general consensus around the points that Rodney has made. On the other side, that means that most of what is presented today wasn't new. In fact we were getting ready to have a completed fiscal sustainability implementation plan when I came on board in 2016. If you'll recall RM 1608 assigned to our CEO, the completion of the FSP, by July 1st 2017. Now this is not to place any blame because of the plate has been very full and there's been many conversations, but we came to the point at which we realized we needed to implement many of these recommendations prior to 2017 July. Yet we have not implemented and so your call for a three-month implementation and it resonates and yet I'm trying to understand why we didn't? Part of it maybe because it's not clear who's going to do this. At the same time that we had that assignment to KP we have a contract with Spire in which we've engaged in for \$1,000,000 for 2 years to go through this process with us, but yet we haven't delivered. We haven't delivered completely the actual final product. So I'm going to recommend that we make it clear who's going to deliver the actual policy package whether it would be Spire or Administration or perhaps the PIG group that has actually been started with Trustee Lee that would help us.

Chair Ahuna says thank you. I think all of our value on this table is very very important and it's not about one person telling us how to proceed. How we affect the outcome overall is even more important, so this is about how we do this and we all have ideas and opinions, but again this has to be solved with on this board table. It's not about who for me, it's not about who did what. It's about what we do going forward.

Trustee Bob Lindsey says I just want to see when it comes to policy formulation and development that kuleana rests at this table.

Chair Ahuna thanks Trustee Lindsey. Asks if there any more questions.

Trustee Machado asks for clarification. On the policies from page 3. I outlined here there is six policies you looking at spending investment. I'm surprised at the land, debt, real estate assets strategy and legal structure. The question I think I'm trying to get framework on how you begin to look at setting up these priorities and how will this get rolled out into the decision making to the BOT. Because we come to the RM then the BOT that needs a little bit more sequencing I've used those words.

Rodney Lee says I have been in discussion with Trustee Ahuna's staff as well as him and we intend to put together a workshop, to go over it. We've actually been working on a framework to consider it. How they are considered and mesh together. The land policy relates the fact you have different types of land and they have different types of purposes.

Trustee Machado says ok, I got it now.

Rodney Lee says you have a bunch of 25,000 acres in Big Island and they are handled differently, funded differently, managed differently, insured differently. One has a significant issue happening with it so it's to understand the purpose of it. When will you accept and receive purchase or acquire different types of land How does that make sense? What does legacy mean to this organization? Why do you have programmatic and commercial real estate? I think for me I don't know and you guys know better. What's the significance culturally? What is the significance overall and as an organization as an identity? Those kinds of things need to be put in so its clarity. You do from time to time, we witnessed over the last five years, people that want to offer OHA, to please take the land. You need to have clear understanding because some of them come with risk. One of the properties was at risk, some have more risk than others, and some don't have. What is the reward taking on? The big rain in Maui that affected the Maui land and you know the runoff itself and who's responsible. Who's going to clean it up, that kind of thing. Those kinds of things have to be considered. Where does the money come from to do that? Do you have a maintenance budget? The land policy clears that up. Thank you.

Trustee Hulu Lindsey asks where do we start.

Chair Ahuna says he wanted SPIRE to draft policies, so we start working with that.

Rodney Lee says we are proposing a workshop for the next RM. Workshop will be on all policies. So we are going to propose a lot. We got to do it because you can see on the chart.

Trustee Ahu Isa says in page 6, mitigate risk, held as part of a trust, NLK presents a risk to the entirety of all assets. Yet we have it appraised by City & County at \$48 million. One suggestion I was reading was to put it in an LLC or is that the only way we can leverage this building, to create more revenue for OHA. Seems like this is the biggest asset.

Rodney Lee says those are two questions. So how do you mitigate risk? You put it in a structure like an LLC, to reduce the risk for OHA, because it's a limited liability corporation. It does not pass into OHA and its overall asset. How do you increase the

overall revenue, is the overall business plan of how you think this building is going to be optimized. What is its highest best use? If that's considered a commercial real estate asset. Or is it part of programmatic? Programmatic mean this is your operational base and you accept the return the way it is and part of that, you take the cost of the financing of this building as part of that programmatic cost of doing business. It's the discussion.

Chair Ahuna says on Feb. 27th there will be RM workshop.

Trustee Lee asks for point of clarification. Is the workshop on the 27th or you are proposing a workshop on the 27th?

Rodney Lee says we are proposing a workshop on the 27th.

Trustee Bob Lindsey says we have a lot of work to do. In the policy development, area and then when we take it beyond that, I know Rodney you use NLK as your example this morning. When we look at assets like KM, will the policies we develop now be generic enough to cover everything that needs to be covered with KM?

Rodney Lee says yes, but the discussion within that, I would have to clarify is the intent of overall KM, because there were certain trustees at the time of that discussion that had other ideas of education and there is a kind of a mixture of all into one property and whether that is realistically achievable or takes advantage of the opportunities presented to itself. There are many, from what we are aware of, many opportunities with KM, Trustee Hulu who I know was trying to work through them all. Which is really difficult but it was because people have different ideas of what was going on. And what we need to do is come together as a board and understand, here's what we think, as a vision and then be clear and take advantage and get moving and you know, act quickly. Because some of those involved, other state and local government agencies that are interested in the properties themselves of activating it and that has an impact. Could be positive? If they get aggressive, like they sometimes do. I mean I'm aware of one that didn't realize that it was OHA land. Their making making plans.

Trustee Akina says he appreciates the focus on balance sheet management as the practice of the board. I would like to point out that, in order for us as a board to do good balance sheet management we need two things. Number one, we need accurate information on financials going into the balance sheet and number two, we need to look at the balance sheet overtime. Balance sheet can't simply be something that we receive as a static document, we have to look at 6 years, 10 years and so forth. What's going to happen. That's the concern I had about the presentation we made to the legislature recently and I shared this in my communication with KP. He's copied all of

you on that and I gave you the most recent January 25th memo with regard to that. Couple of things were missing, one was mention of our 19 million-dollar balloon payment with respect to the native Hawaiian and NLK.

Chair Ahuna says to Trustee Akina, you have so much value that you bring to this table and I appreciate it but right now I just want to move this conversation with Rodney forward. I understand your concerns, but I just want to move on.

Trustee Akina says well in that case Mr. Chair I will simply refer my colleagues to the Jan. 25th memo that I produced today.

Chair Ahuna thanks Trustee Akina. States on the 27th he will have a lot of opportunity to ask all the questions he wants at the RM workshop.

V. NEW BUSINESS

A. NHTF 3rd Quarter Portfolio Review with Investment Consultant Segal Marco and Investment Staff

Chair Dan Ahuna calls up Raymond Matsuura.

Ray Matsuura greets Trustees and gives brief review of the portfolio and the quarterly update. He points out to the OHA 2Q16 Flow Chart Asset Allocation as a review and provides insight on the Total Trust Fund Fees. On phone is from State Street is Sonya Park and Segal Marco Advisor Craig Chaikin.

Trustee Lee says Ray, you say you had a mandate for the way that they were hedging and then you said that mandate was given to the other managers. So is that mandate from JP Morgan or did we come up with that mandate and have JP follow that mandate and insure it down the line. Or are we sharing JP's mandate down the line.

Ray Matsuura answered no, we mandate to JP Morgan.

Trustee Lee thanks Ray.

Trustee Lee says my concern is Q4 on the market had a draw down, do did our hedges.

Ray Matsuura says I'm not sure what you're considering our hedge is, are you talking about fixed income,

Trustee Lee says you tell me. What was our hedge, I'm just looking (inaudible). Fixed income is up for 4%.

Ray Matsuura says no it was almost flat.

Trustee Lee states so our hedge was flat, our portfolios down. So our hedge didn't lose money.

Ray Matsuura says you can offset the hedge funds, PIMCO was up about.

Trustee Lee says I think it was like 4%.

Ray Matsuura says 4.8% for the year, but probably they may *inaudible*. Let's say that our hedges were flat versus a market that was down, we're talking maybe 30-40 percentage hedge, offsetting it down equity market.

Trustee Lee says our flat hedge, I won't get into the semantics, but a flat hedge isn't recovering anything, it's just not losing anything.

Ray Matsuura says exactly.

Trustee Lee says this trustee is not saying, that if we were a little more risk adverse than those Hedges would have made money, versus being flat. I won't go into it. Thank you.

Kamanao 'pono Crabbe says in terms of Trustee Lee's comment about, part of our diverse portfolio is passive is because in 2015-16 based on the investment consultant in terms of recommendations to the board, we actually came up with new benchmarks for the board and the board chose to diversify the portfolio from active management, not all, but some were from active management into passive. So the SSG real estate is the passive strategy line and then JP Morgan is active as well as Commonfund, real estate is active management. So that that was more for what we understand that even with the passive strategy long-term, then we would have incremental increases, then what the current strategy was prior to 2015. When we look at the totality of developing a real estate policy, spending policy, what is the implications to possibly the NHTF and how we allocate revenue.

Chair Ahuna thanks Ray and moves to item V. C.

Trustee Hulu Lindsey asks that we defer the action item until we're done with discussing the subject matter with our attorneys in executive session.

Trustee Machado says we are going into executive session first. Yes, we would like to that we take out of order V. C. and go into executive session to consult with the attorneys that are here.

Chair Ahuna asks the reason why, is that you want to consult about the decisions that we made in the past or because.

Trustee Hulu Lindsey says our decision to be made today.

Chair Ahuna says yes, but I believe we accomplished the first part of that discussion which is yes or no to the management.

Trustee Lee states point of order Mr. Chair. I believe that there's a motion to defer this matter and it's been seconded.

Chair Ahuna asked she did.

Trustee Lee states yes she did, she said she wants to do the same thing, so we need to take a vote.

Chair Ahuna states we have to move into executive session.

Trustee Lee says Chair that is just a motion and a second. We need to vote on that.

Chair Ahuna says so we are going to vote on it.

Trustee Machado says the only reason why I would support this going into consultation the attorneys is the memo that they distributed to us, in confidential. They offer couple of options for our consideration. They outlined five possible considerations for us to amend the LLC documents to describe positions and the list goes on. We have not had that opportunity to dialogue.

Trustee Lee says point of clarification Mr. Chair, I am not disagreeing, I am just stating where we're at right now, there's a motion on the table so we need to vote on it.

Trustee Akina says in discussion.

Trustee Lee says we are.

Trustee Machado says I want to speak in support based on the memo we received this morning at the table and outlying the kind of recommendations that is coming out of the actual action item prepared by admin. Therefore, there is five areas I think they are looking for our review and our input.

Trustee Akina says I'm not clear as to what memo is being referred to, I have the action item I received but I did not receive any memo.

Trustee Hulu Lindsey says he was left out.

Trustee Machado says oh yeah, that's right, I'm sorry.

Trustee Hulu Lindsey says because it involves something that you recused yourself on, you did not get the memo.

Trustee Machado says everybody else got the confidential packet.

Trustee Akina says oh I see.

Chair Ahuna says just so we can move ahead, I'm going to defer to Albert to chime in and talk to us about the matter.

Trustee Ahu Isa says I want to say something.

Chair Ahuna says wait hang on. Ok, right now on the table we are going to be discussing the motion, that's it, just the motion. Trustee Akina you were first.

Trustee Akina says thank you, Board Chair Machado has referred to a memo that I did not receive this morning and I understand from comments made by trustees at the table here, that it's because there's content that pertains to Walden vs. Hi'ilei is that correct.

Chair Ahuna says yes.

Trustee Akina says in that case as you all know I have recused myself from discussing with you Walden vs. Hi'ilei. And I'll continue to recuse myself, but my only concern is I have not recused myself from discussing the action item that is before us today and if we move into executive session to discuss that action item I have a duty to participate in the discussion, to the extent that I can. Can we structure this so that I can participate in anything relevant to the action item concerning the LLC's and let you have your privacy with respect to Walden vs. Hi'ilei, would that be possible.

Chair Ahuna asks Albert to comment on this.

Trustee Lee says point of order Mr. Chair, I don't believe that's *inaudible* to the motion on the table.

Trustee Akina says the motion on the table is to whether to rearrange the agenda and go into executive session and its very relevant to me because if you come out of executive session having discussed the action item, I won't have been privy to

information that I need to make a good decision on the action item, so it affects my vote on this amendment.

Trustee Hulu Lindsey says I think that you can go into executive session with us and raise this question.

Chair Ahuna says the discussion on the table is about the motion.

Trustee Ahu Isa says I want to read the motion, point of clarification, action item member approval of procedures to change the management. So it's only approval to change the procedures, we didn't say which procedure and it was signed by Sylvia, Dan Ahuna. I just want to finish to say it's only to approve whatever of the five procedures that we got in the memo, that's all. Mahalo Chair.

Trustee Hulu Lindsey calls for the question.

Chair Ahuna calls questions, hearing none, calls for the vote.

Trustee Hulu Lindsey, MOVED, SECOND by Trustee Machado to defer to executive session and take agenda out of order.						
	1	2	'AE (YES)	'A'OLE (NO)	KANALUA (ABSTAIN)	EXCUSED
TRUSTEE LEI AHU ISA				X		
TRUSTEE KALEI AKAKA			X			
TRUSTEE KELI'I AKINA					X	
TRUSTEE BRENDON KALEI 'AINA LEE			X			
TRUSTEE HULU LINDSEY	X		X			
TRUSTEE ROBERT LINDSEY			X			
TRUSTEE COLETTE MACHADO		X	X			
TRUSTEE JOHN WAIHE'E			X			
CHAIRPERSON DAN AHUNA					X	
TOTAL VOTE COUNT			6	1	2	
MOTION: <input type="checkbox"/> UNANIMOUS <input checked="" type="checkbox"/> PASSED <input type="checkbox"/> DEFERRED <input type="checkbox"/> FAILED						
Motion passes with seven (6) YES votes, one (1) NO vote, two (2) ABSTAINED votes.						

Chair Ahuna states motion passes.

Trustee Machado says we have to take a motion to recuse into Executive Session.

Trustee Bob Lindsey moved.

Trustee Waihee second.

Chair Ahuna call for vote.

Trustee Hulu Lindsey, MOVED, SECOND by Trustee Waihee Motion approved to move into Executive Session.							
		1	2	'AE (YES)	'A'OLE (NO)	KANALUA (ABSTAIN)	EXCUSED
TRUSTEE LEI	AHU ISA				X		
TRUSTEE KALEI	AKAKA			X			
TRUSTEE KELI'I	AKINA					X	
TRUSTEE BRENDON KALEI 'AINA	LEE			X			
TRUSTEE HULU	LINDSEY	X		X			
TRUSTEE ROBERT	LINDSEY			X			
TRUSTEE COLETTE	MACHADO			X			
TRUSTEE JOHN	WAIHE'E		X	X			
CHAIRPERSON DAN	AHUNA					X	
TOTAL VOTE COUNT				6	1	2	
MOTION: <input type="checkbox"/> UNANIMOUS <input checked="" type="checkbox"/> PASSED <input type="checkbox"/> DEFERRED <input type="checkbox"/> FAILED							
Motion passes with seven (6) YES votes, one (1) NO vote, two (2) ABSTAINED votes.							

Meeting resolved into executive session at 11:30 am for discussion.

VI. EXECUTIVE SESSION

A. Approval of Minutes – January 9, 2019

Chair Ahuna deferred the January 9, 2019 Executive Session minutes to the next RM meeting.

- B. Consultation with attorneys William Yuen, Esq., Judy Tanaka, Esq., and Robert Klein, Esq., on OHA's powers, privileges and liabilities regarding OHA's role as member of Hi'ilei Aloha LLC and Ho'okele Pono LLC and management options for those LLC's. Pursuant to HRS section 92-5(a)(4)**

Meeting reconvenes into open session at 12:10 pm.

V. NEW BUSINESS

- B. Action Item RM 19-01: Member approval of procedures to change the management structure of Hi 'ilei Aloha LLC and Ho 'okele Pono LLC.**

Chair Ahuna says we are now back in open session.

Trustee Machado states welcome back Trustee Akina. There is no decision made, we waited for you.

Trustee Lee states I move that we lay on the table action item RM 19-01.

Chair Ahuna states moved by Trustee Kalei'aina, second by Trustee Bob Lindsey.

Trustee Lee states to lay on the table. So point of information Mr. Chair, by laying this action item on the table it allows us to freely discuss such action item without taking any action because no motion has been made for action.

Chair Ahuna states its open for discussion.

Trustee Lee states I would like to speak in favor of the first proposal, on the action item for 3 managers and my reasonings are for the longevity of perpetuity and what I mean by that is, by having three managers although it could possibly be more costly, it significantly minimize the risk of malfeasance. With one manager, we run a very heavy risk of embezzlement and all kinds of other things. With a board of three, to keep things light as we all know it's hard to get three native hawaiians to agree on anything, so them agreeing on how to do something is going to be even harder. I'd like to speak in favor of going with three managers versus the one.

Trustee Bob Lindsey states with Trustee Lee's permission I would like to have Trustee Lee's words entered into the record as my own. "I would like to speak in favor of the first proposal, on the action item for 3 managers and my reasonings are for the longevity of perpetuity and what I mean by that is, by having three managers although it could possibly be more costly, it significantly minimize the risk of malfeasance. With one

manager, we run a very heavy risk of embezzlement and all kinds of other things. With a board of three, to keep things light as we all know it's hard to get three native hawaiians to agree on anything, so them agreeing on how to do something is going to be even harder. I'd like to speak in favor of going with three managers versus the one.”

Chair Ahuna asks for any other discussion.

Trustee Hulu Lindsey states I just want to say that I agree with you however I would like to see those those managers as part-timers, because I don't see the necessity of full-timers and that would be a consideration on the monies that we pay them.

Trustee Waihee states I want to see the volunteers.

Trustee Lee states this is germane to this discussion, outside of this board I sit on the board for the Moanalua Gardens foundation and as a board member of that foundation, I do not get compensated, we are all volunteers, we do have an executive director who is a full-time employee, who is paid, who manages everything. But all, I believe there are seven of us on that board and none of us are compensated.

Trustee Akina states will the proposed action require the administration to come back to the board to approve the new manager positions and the actual selection process.

Chair Ahuna states yes.

Trustee Akina states I see short term value and positive short term value in this proposal but I think that we really have a lot of work to do on the overall structure of subsidiary organizations that we launch as OHA and would hope that we'll follow up with some work in that area.

Trustee Lee states I move that we adopt RM action item number 19-01 moving forward with as written for the initial proposal of three managers.

Trustee Lee retracts statement and then moves to authorize an approve OHA Administration to develop position descriptions and selection process for new manager positions and to recruit three new managers to replace current Hi'ilei Aloha LLC and Ho'okele Pono LLC managers.

Chair Ahuna states moved by Trustee Lee, and second by Trustee Bob Lindsey.

Trustee Akina states he will vote kanalua, since he was not privy to the discussion related to this in executive session recently thank you.

Trustee Lee states point of clarification, any discussions that we had in regards to 1 or 3 managers all took place right here, right now in open session, there was no other discussion in executive session.

Trustee Akina states in that case my references to any legal matters that may be relevant to this decision making for that reason I will be voting kanalua, thank you.

Chair Ahuna calls for vote.

Trustee Lee moves to authorize an approve OHA Administration to develop position descriptions and selection process for new manager positions and to recruit three new managers to replace current Hi 'ilei Aloha LLC and Ho'okele Pono LLC managers.						
Trustee Bob Lindsey, SECOND.						
	1	2	'AE (YES)	'A'OLE (NO)	KANALUA (ABSTAIN)	EXCUSED
TRUSTEE LEI AHU ISA			X			
TRUSTEE KALEI AKAKA			X			
TRUSTEE KELI'I AKINA					X	
TRUSTEE BRENDON KALEI 'AINA LEE	X		X			
TRUSTEE HULU LINDSEY			X			
TRUSTEE ROBERT LINDSEY		X	X			
TRUSTEE COLETTE MACHADO			X			
TRUSTEE JOHN WAIHE'E			X			
CHAIRPERSON DAN AHUNA			X			
TOTAL VOTE COUNT			8			
MOTION: <input type="checkbox"/> UNANIMOUS <input checked="" type="checkbox"/> PASSED <input type="checkbox"/> DEFERRED <input type="checkbox"/> FAILED						
Motion passes with eight (8) YES votes, one (1) ABSTAINED vote.						

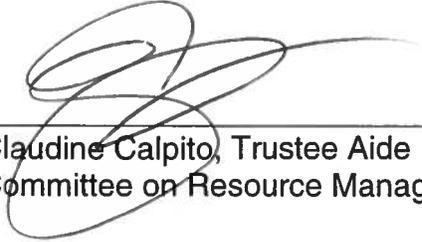
VII. ANNOUNCEMENTS

None.

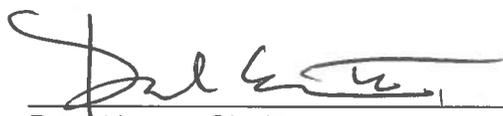
VIII. ADJOURNMENT

Moved by Trustee Hulu Lindsey, second by Trustee Colette Machado to adjourn the meeting. Hearing no objections, the meeting adjourned at 12:19 pm.

Respectfully Submitted,



Claudine Calpito, Trustee Aide
Committee on Resource Management



Dan Ahuna, Chairperson
Committee on Resource Management

Approved: RM Committee meeting

3-13-19

ATTACHMENTS:

- SPIRE Hawaii – OHA Fiscal Efforts
- OHA 2Q16 Flow Chart Asset Allocation
- NHTF 3rd Quarter Portfolio Review with Investment Consultant Segal Marco and Investment Staff.
- State Street Global Advisors Discussion of Funds and Market Environment.
- Action Item RM #19-01 Member approval of procedures to change the management structure of Hi'ilei Aloha LLC and Ho'okele Pono LLC.

Office of Hawaiian Affairs

OHA Fiscal Efforts



February 13, 2019

FSP- Where we left off

<p>Pension Benefits</p>	<ul style="list-style-type: none"> • Determining the legal ability to go after the perceived legislative changes/policy changes needed in 2 years • Determine political feasibility of achieving changes • Better understand financial benefits and any potential downsides, and other relevant issues related to fringe expenses
<p>Legal & Taxable Structure (LLC)</p>	<p>Short-Term</p> <ul style="list-style-type: none"> • Submit recommendation to corporation counsel for legal review • Refine Decision Matrix and Decision Tree, present to board • If approved, use these tools in an analysis of programmatic activities and management of assets <p>Long-Term</p> <ul style="list-style-type: none"> • Develop guidance regarding OHA's role (Funder v. Intermediary v. Direct Services) in strategic planning of OHA operations
<p>Department of Hawaiian Homelands</p>	<ul style="list-style-type: none"> • Board level discussion and decision-making with regard to how to classify OHA's commitment to pay for DHHL's debt service • Board level discussion and decision-making with regard to broader Debt Policy • Review annual DHHL reporting and timing of OHA payments; engage in discussions with DHHL
<p>Real Estate Investment</p>	<ul style="list-style-type: none"> • Workshop by administration for the RM Committee LLC or RFP? • Clarify the status of OHA's relationship to LLC's • Develop policies that support REI • Business plan for land management
<p>Spending Policy</p>	<ul style="list-style-type: none"> • Final approved versions of the IPS, Spending Policy and HDAP should be reviewed and approved by the Advisory Group and recommended to the full BOT for discussion and final approval. • Upon review of all FSP working Groups recommendations, the spending rate is to be evaluated in conjunction with other revenue generating or cost reduction options

Critical Fiscal Matters - Where are we now

Topic	Issues	Related Policy
Spending	<ul style="list-style-type: none"> OHA currently mixes all of its activities (operations, investments, debts, etc.) under one category which has multiple priorities OHA is not adequately incorporating, coordinating and leveraging State resources to reduce programmatic expenditures OHA's obligations to pay debt, increase fringe rate, and DHHL commitment 	Spending policy Investment policy Land policy Debt policy
Investment	<ul style="list-style-type: none"> Real estate assets and financial assets should not be managed the same way, but should have collective goals Market volatility will affect financial asset returns OHA needs to set benchmarks for its commercial properties and find solutions for greater returns OHA should consider whether programs are expenditure related or investment related (PRI vs. MRI) How to raise capital for the development of Kaka'ako Makai 	Investment policy Real estate assets strategy Debt policy Legal structures
Debt	<ul style="list-style-type: none"> OHA does not have a plan to account for the repayment of its debts OHA does not have a policy that explains how and when it uses debt Much of OHA's debt is tied to real assets 	Investment policy Debt policy Real estate assets strategy Legal structures
Fiscal Reserve	<ul style="list-style-type: none"> OHA needs to resolve its use of the fiscal reserve 	Spending policy Investment policy
Risk	<ul style="list-style-type: none"> OHA's land assets held in trust put OHA at 100% risk of claims OHA needs to adopt an enterprise risk management framework to help inform its decisions and actions OHA should resolve and respond to all Audit findings 	Spending policy Investment policy

What should OHA do? – Debt and land

Case Study – Nā Lama Kukui Debt

■ Situation overview

- Commercial loan of +\$24 million
- City & County appraised value of approximately \$48 million

■ Issues

- Commercial loan lien against the property and collateralized by the trust fund
- No explicit way to establish payment of the balloon payments
- As an asset in the trust fund, it is vulnerable to claims against the asset as well as the trust fund
- OHA must determine how much debt can be used as leverage against the asset

■ What are the options?

- a. It can refinance the existing commercial loan using the new appraisal value
 - i. Banks would place lien against the property as well as against some amount of the trust fund to meet financing terms
 - ii. Still puts the NHTF at risk as a direct asset of the fund
 - iii. OHA would have to dedicate revenues from NLK to be used for repayment of the financing
- b. Separate NLK by placing it in LLC and then refinancing the debt
 - i. OHA would need to seek legal opinion on placing NLK into an LLC
 - ii. OHA would agree to establish an LLC to hold the asset and OHA would maintain controlling interest in the LLC
 - iii. The LLC would maintain its own financials
 - iv. The LLC would need to shop the refinancing of the NLK, which may require additional seed funds to satisfy the financier
 - v. The LLC would use the profits from its lease revenues to pay for the note

What should OHA do? - Debt/land case study continued

What has to get done

- Policies
 - Investment policy - segmentation of assets between financial assets and real assets, setting allocation, setting benchmarks and ROI targets as well as describe if monies would be transferred to OHA trust fund
 - Debt policy – determination of debt use, type and terms
- Development of a Real Assets strategy – what is the business plan for real assets
- If option B is taken, establishment of an LLC and seed funding infusion
 - Form LLC and establish equity ownership
 - Infuse seed funding
 - Establish separate accounting
 - Establish property management function
- Financing - seek financing deals, review, negotiate and close
 - Develop deal packet and send to financiers
 - Review and negotiate offers
 - Close finance deal

Resolving financial considerations

Finance – value vs. risk

Value Building

- Driving value into the organization is of the utmost performance for OHA
- How does the current use of NLK add to value to the organization? What is its prime purpose

Mitigate Risk

- Held as part of a Trust, NLK presents a risk to the entirety of all assets.

Assets – financial vs. real

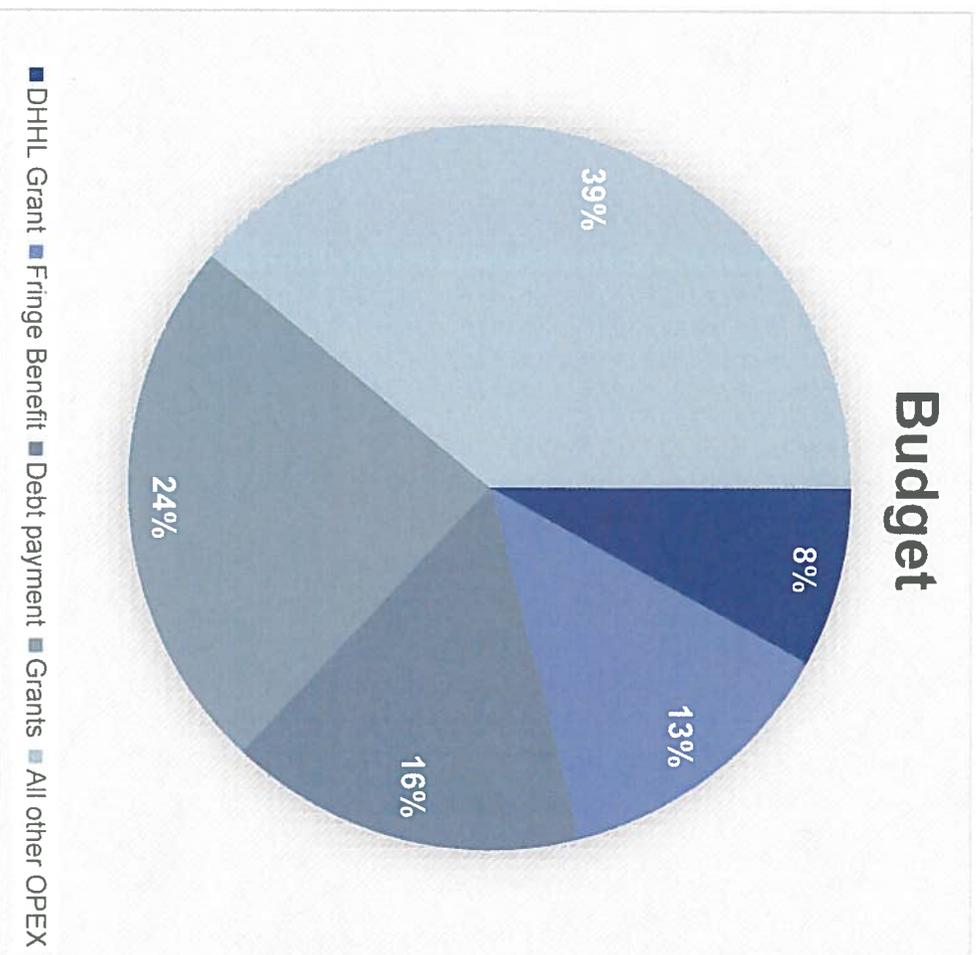
Financial

- Mainly based on OHA's financial securities held in Trust
- Market based earnings
- Forecasted headwinds and volatility may hurt earnings

Real Assets

- Commercial properties need to increase returns to offset and fund costs and potential financing

How is OHA going to pay for these obligations?



Based on a core budget, the estimated annual payment of the NLK debt is approximately 16% of the core operating budget.

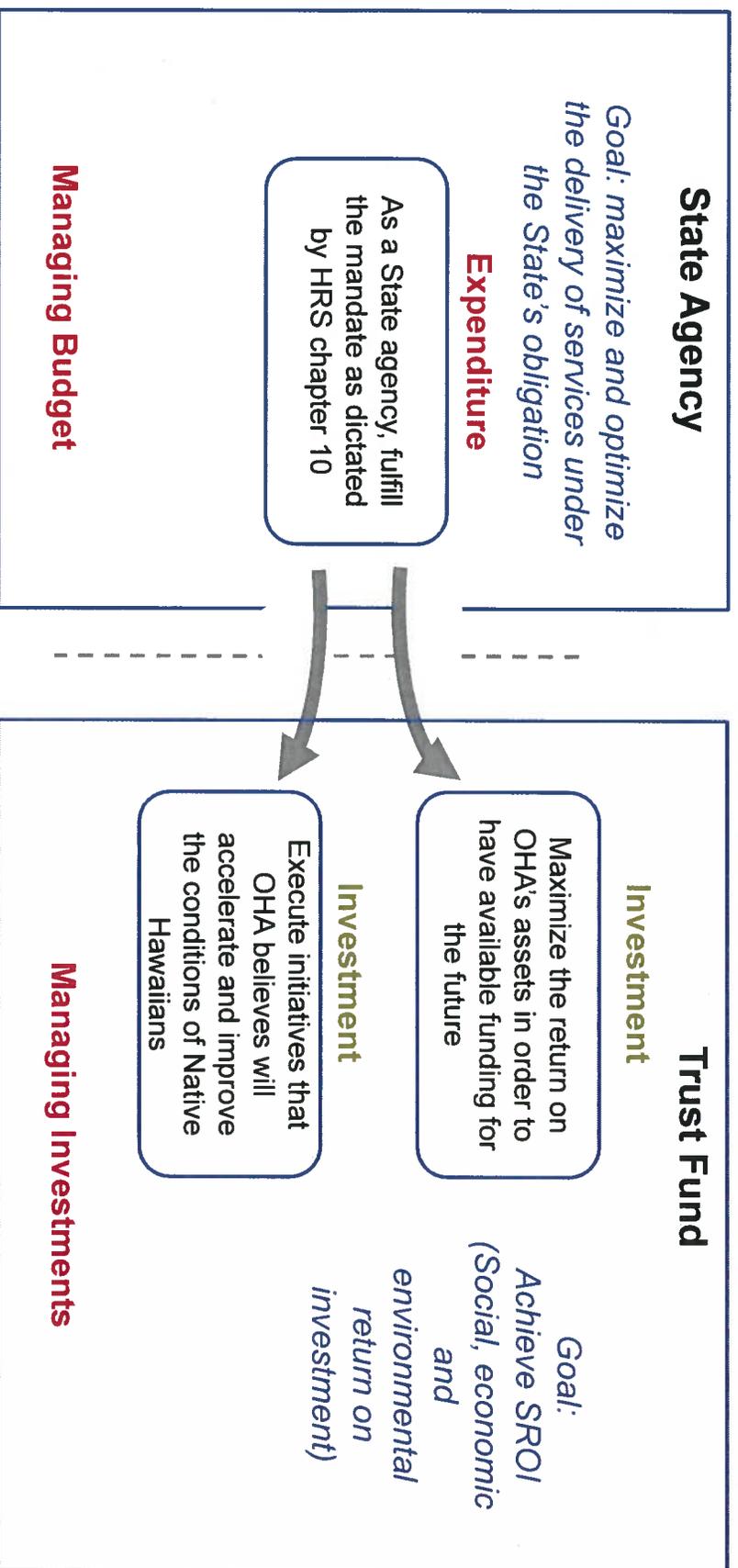
In addition to the NLK debt payment, OHA has other obligations that could have a significant impact on core operating budget. They are as follows:

- Fringe benefit
- DHHL grant
- Community grants

OHA must act quickly and effectively to mitigate the potential effect on its current system.

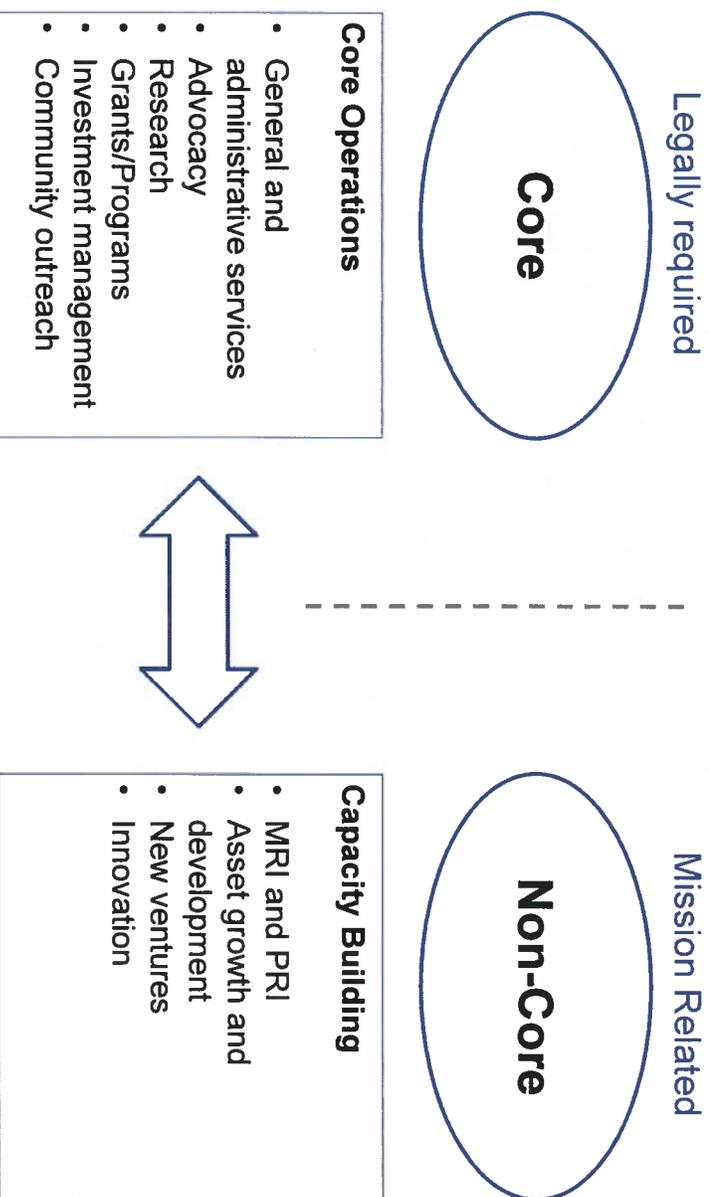
Reconciling the dichotomy

OHA must find a way to reconcile its own identity. Typically, governmental agencies are expenditure based organizations. Yet, OHA also manages a trust for the improvement of Native Hawaiian conditions.



Core versus Non-Core

OHA must establish segmentation and prioritization of how it manages its activities. Some of those are dictated by statute, others are established based on OHA's views of how to improve the conditions of Native Hawaiians.



What can OHA do to address spending challenges?

1. **Decrease grants where funding does not correlate with deliverables**
 - Grants: making certain that all grants, including DHHL, 'Ahahui and Community grants are properly awarded (State Auditor Report 18-08, Recommendation 1, page18), and that applicable performance measures are achieved (Report 18-08, Recommendation 2.a. and 3.b., pages 18-19)
 - Non-competitive grants (which represent 65% of grant spending: ensure compliance with HRS chapter 10-17, consider implementing solicitation process and require and enforce metrics consistent with grant amount
 - DHHL grant: ensure compliance with HRS chapter 10-17, require and enforce metrics consistent with grant amount
 - Grant management in general: adopting information system for improving administration of grant status and deliverables (State Auditor Report 18-08, Recommendation 19, page 30)
2. **Review Spending Policy in light of spending challenges – does policy allow challenges to be met?**
3. **Revise definitions in Fiscal Reserve Guidelines to clarify allowable/unallowable uses**
4. **Revise definitions in Executive Policy Manual and other OHA policies and reporting forms regarding Trustee Annual Allowance and Trustee Sponsorship and Allowance Fund to be consistent with the Ethics Commission's Findings of Fact, Conclusions of Law, and Decision and Order, COMPL-C-15-00236**

What can OHA do the address investment challenges?

- **Adopt best practices for asset allocation (recommended by the State Auditor in Report 18-08, Recommendation 2, page 22)**
- **Assess proposed Business Plan for Land Management (scheduled for completion Q4 2018, recommended by the State Auditor in Report 18-08, recommendation 1, page 21)**
- **Revise, and adopt, assess OHA's investment policies and strategies, make changes if necessary**

Managing the balance sheet

“When the pressure builds to improve performance, most business leaders adopt measures that affect the income statement.

They cut discretionary spending. They centralize support functions. They lop off unnecessary layers of management, eliminate low-value projects and so on, all with an eye to “rightsizing” the cost structure. And of course they do what they can to increase profitable sales.

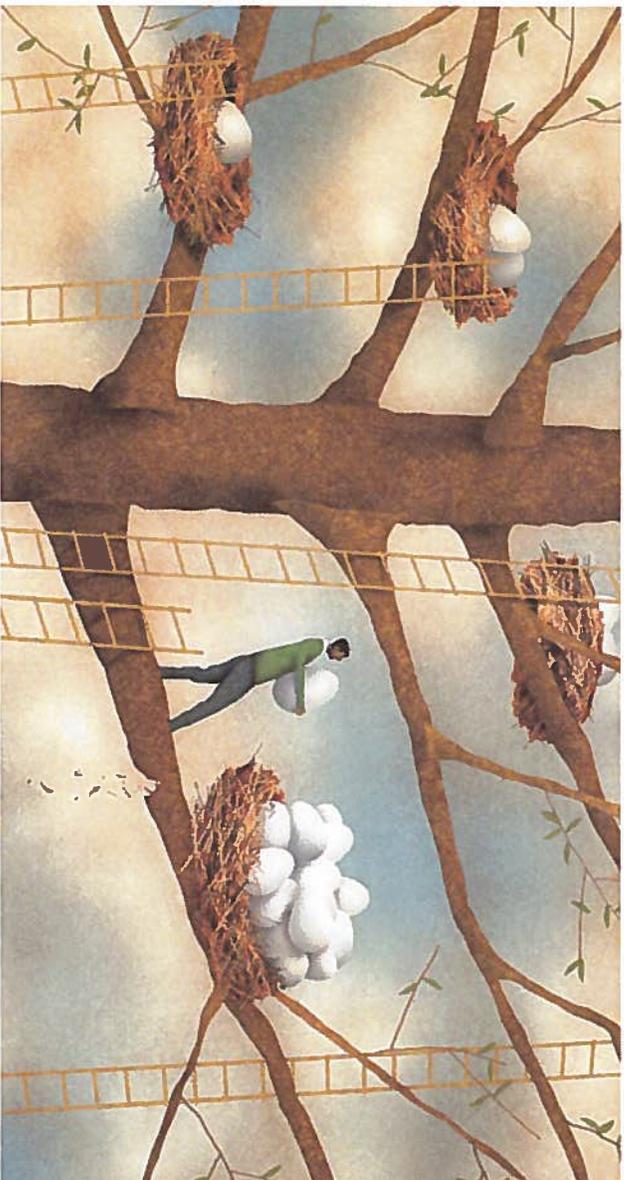
While all these efforts can boost results, they overlook one of the largest sources of value: the balance sheet. Companies often hold far more working capital than they need to. They make ill-timed or ill-advised capital investments. They own unnecessary or unproductive fixed assets. When management teams focus disproportionately on the P&L, they often miss those issues. In fact, some measures designed to manage costs can actually inflate the balance sheet, consuming cash and destroying value.”

Bain & Company article – Right-Sizing the Balance Sheet

Benefits of Balance Sheet Management

“Right-sizing the balance sheet offers most companies an enormous opportunity to create shareholder value, in both good times and bad. Granular measures show where capital is currently being deployed. Aggressive management of both working and fixed capital frees up large amounts of cash. New ownership models enable once capital-intensive businesses to prosper with fewer assets. And processes and incentives that encourage careful balance sheet management help ensure sustainable gains. Over time, right-sizing the balance sheet becomes part of a company’s culture—a culture where managers at every level of the company see the importance of carefully managing assets and liabilities and act accordingly”

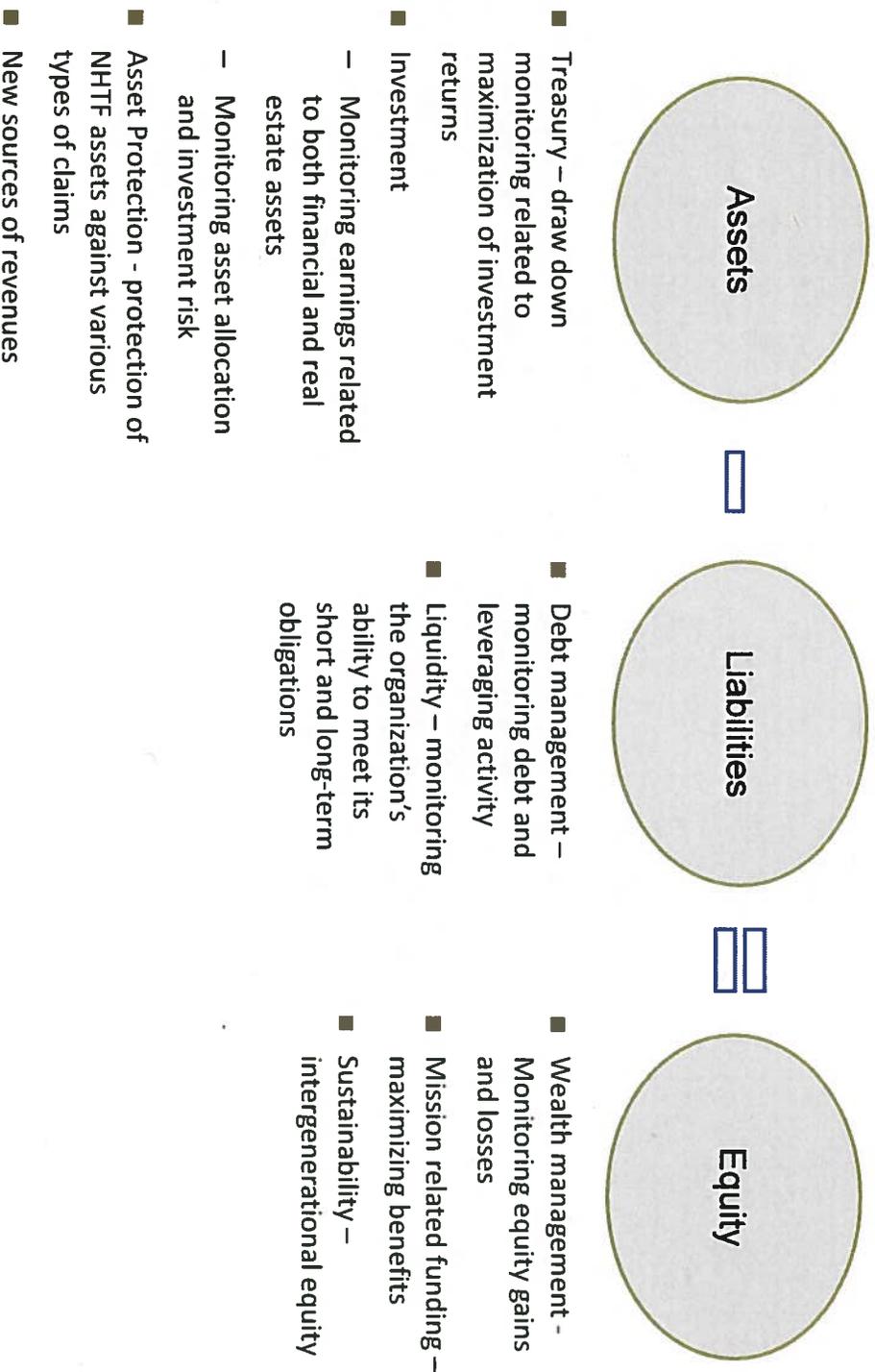
What is balance sheet management



Simply put, **Balance Sheet Management** is the process of planning, coordinating, and directing business activities that directly determine the Assets, Liabilities, and Equity of a company or organization.

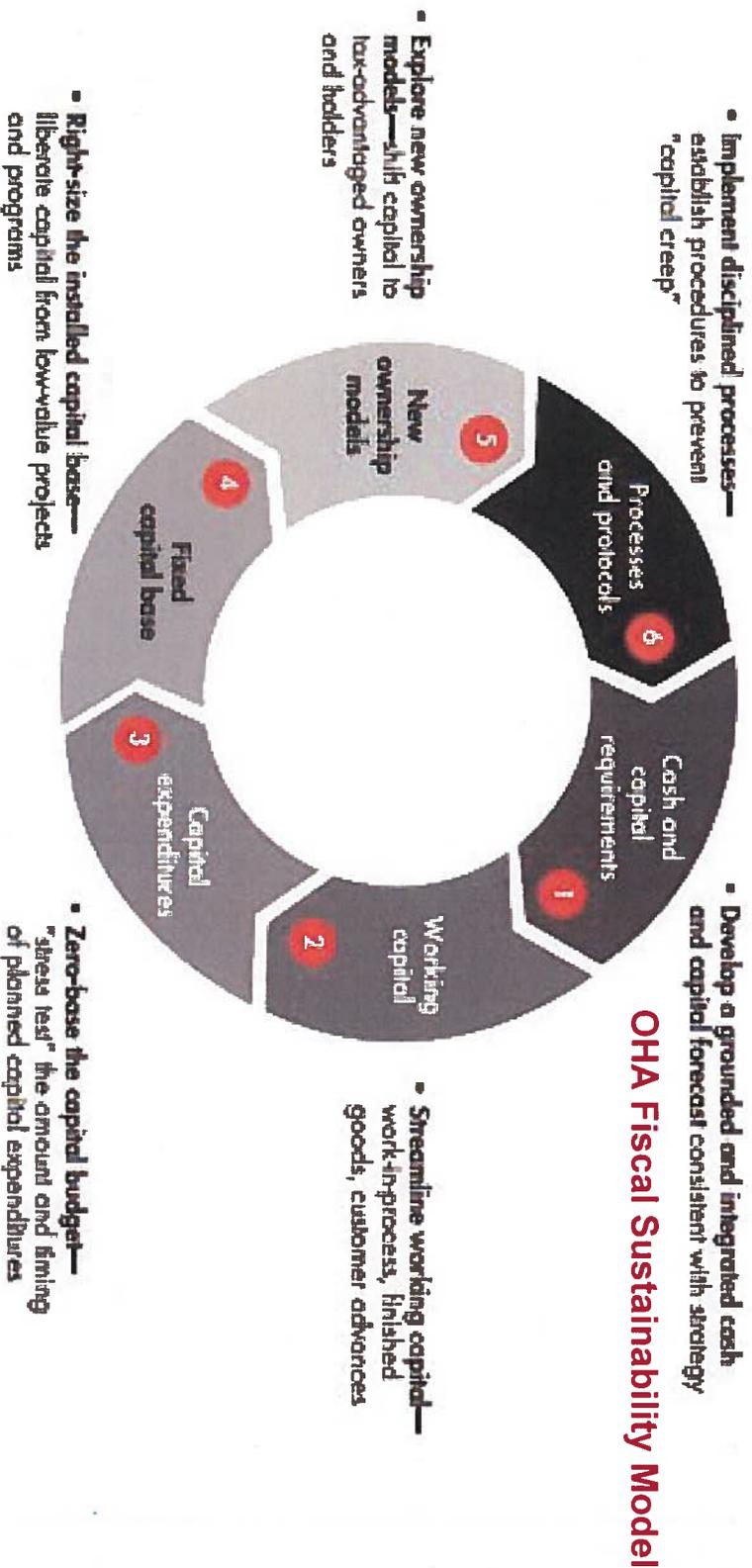
For the OHA's Board, refer to OHA's **Statement of Net Position**

What Topics Should the Board Look For?



Bain & Company – Balance Sheet Approach

Figure 1. The most effective companies use a six-step approach to cash and capital management



Bain & Company article – “Right sizing the Balance Sheet”

OHA 2Q16 Flow Chart Asset Allocation

Traditional Assets Portfolio 65.7%

JPM Equities 20.9%	JPM Fixed Income 8.4%	JPM Real Assets 1.2%
SSGA Equities 15.5%	SSGA Fixed Income 8.5%	SSGA Real Assets 0.6%
Commonfund Equities 2.7%	Commonfund Fixed Income 1.5%	Commonfund Real Assets 1.3%
Hawaii Direct Investments (SSGA Real Assets) 5.2%		

NHTE
State Street Bank (Custodian)

Enhanced Liquidity Account
(SSGA Corp 1-3Y)
0.9%

Manager Allocation

JP Morgan	32.3%
State Street	30.7%
Commonfund	22.2%
Goldman Sachs	3.4%
Pantheon	6.0%
PIMCO	5.5%

Private Markets Portfolio 21.3%

Highbridge (JPM) Private Credit 1.7%	TRG (JPM) Private Real Assets 0.2%
Goldman Sachs Private Equity 3.1%	Goldman Sachs Private Credit 0.3%
Commonfund Private Equity 6.2%	Commonfund Private Real Assets 3.9%
Pantheon Private Equity 5.5%	Pantheon Real Assets 0.5%

Hedge Fund Portfolio 12.1%

Commonfund Hedge Fund 6.5%	PIMCO Tac Opps Hedge Fund 5.5%
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Total Trust Fund Fees

	Quarter to Date (9/30/2018)	Year to Date (9/30/2018)	Inception to Date (3/1/2003)
Commonfund	328,770	1,121,272	10,517,399
JP Morgan	189,408	588,818	6,414,995
Pantheon ₂	72,903	215,626	2,162,114
Highbridge ₄	32,265	153,322	1,017,327
Goldman Sachs ₁	40,857	134,627	17,882,708
PIMCO ₅	78,496	123,870	123,870
SSGA	35,557	102,173	354,718
HDI	11,662	34,562	382,610
ELA	2,500	7,500	304,541
Total Advisor Fees₆	792,418	2,481,770	48,187,051
Custody Fees₃	57,662	172,040	1,624,513
Total Fees:	850,080	2,653,810	49,811,564

¹ Goldman Sachs are lagged by a quarter.

² Prior to July 2011, Pantheon fees were included with Russell. Fees for Euro denominated funds were converted using the EURO/USD exchange rate.

³ Inception Date for Custody Fees is 1/1/2011. Fees include performance reporting and certain Advisor trading costs.

⁴ Highbridge fees were embed with PM and separately reported in Q1 2018.

⁵ PIMCO Inception Date is Q4 2017.

⁶ Total Advisor Fees includes \$9m paid to former advisor Russell Investment in Inception to date.

Office of Hawaiian Affairs

ANALYSIS OF INVESTMENT PERFORMANCE

Native Hawaiian Trust Fund

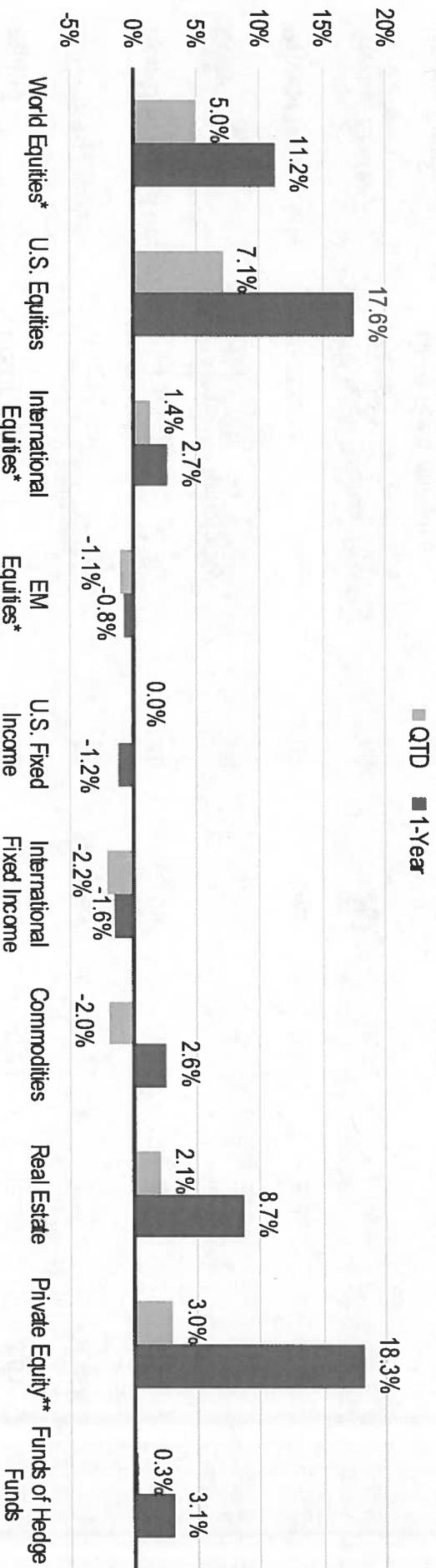
September 2018

John Marco
Senior Vice President

Craig Chaikin, CFA
Vice President

Q3 2018 In Review

Summary of Investment Returns



Quarterly Synopsis

- World equity markets rose in Q3. Solid economic and earnings data outweighed global policy uncertainty among investors.
- U.S. equity gained during the quarter. A healthy economy and robust earnings led stocks to rise despite global trade concerns.
- International equity was boosted by stronger economic news and the European Central Bank's statement that it would not hike interest rates until at least the summer of 2019.
- Emerging market equity declined again in Q3 amid U.S. dollar strength, slowing growth in China and nervousness about the collapse of the Turkish lira.
- U.S. fixed income was flat for the quarter. Short-term interest rates rose again in Q3, though longer-term yields increased as well.
- Non-U.S. fixed income declined in Q3 as Italian bonds slid.
- Hedge funds were slightly positive in the quarter. Multi-strategy and macro funds were among the best YTD performers.

* Net of Dividends

** Performance as of Q1 2018 because Q2 2018 and Q3 2018 performance data is not yet available.

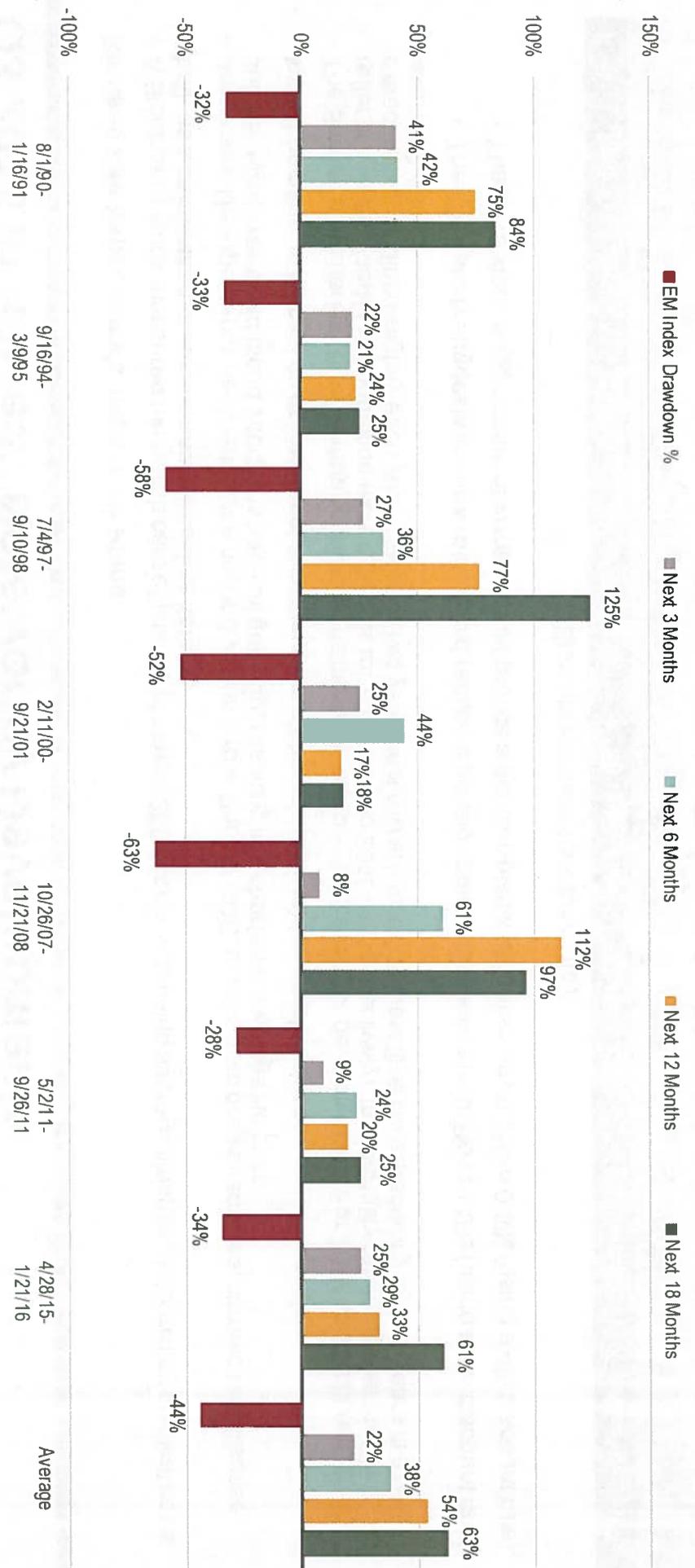
Sources: Investment Metrics, Thomson One, FactSet

Q3 2018 In Review: Noteworthy Developments

Emerging Market Equity - Rebounds After Drawdowns

- Emerging market equity returns have been extremely volatile over the last 30 years, but most major declines have been followed by recoveries that have often been nearly as robust as the declines were precipitous.
- The message with EME, therefore, is clear – patience seems to be rewarded over time, but investors with sensitivity to extremes should be aware of that requirement.

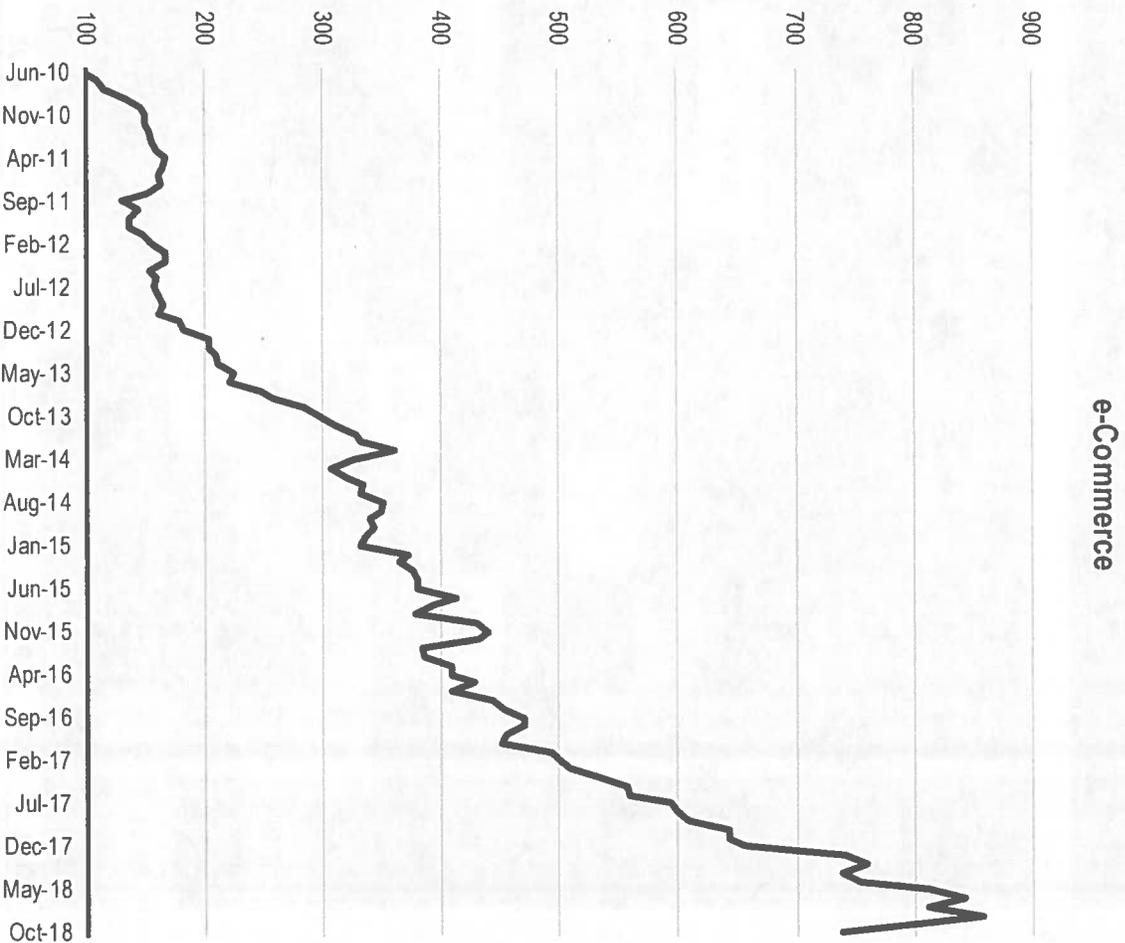
Emerging Market Equity Bear Markets and Subsequent Performance



Q3 2018 In Review: Noteworthy Developments

Is e-Commerce in Bubble Territory?

- The Dow Jones Internet Commerce Index, which measures the 15 biggest and most actively traded e-commerce stocks (chart at right), is up more than 8x since June 2010 and may now be in bubble territory.
- Increased central bank liquidity, *i.e.* easier access to credit, could be creating an environment for an asset price bubble. Also, the free cash flow yield of the Internet Commerce Index is lower than that of the tech sector in the late 90s (dot-com bubble), making e-Commerce valuations appear frothy in comparison.
- On the other hand, the digital era has fostered business models that lower marginal costs. Many digital technologies are scalable, in that they can be replicated at low or no cost, which is beneficial for the company and, ultimately, the consumer. Improved and less expensive AI capabilities could translate into more product sales, higher subscription premiums or better-focused advertising for internet companies.
- As outlined above, there are points and counterpoints to the question of whether e-Commerce is in a valuation bubble. But it seems likely that investors will see changes to the top players in e-Commerce as technology continues to evolve and digital disruptions keep occurring.

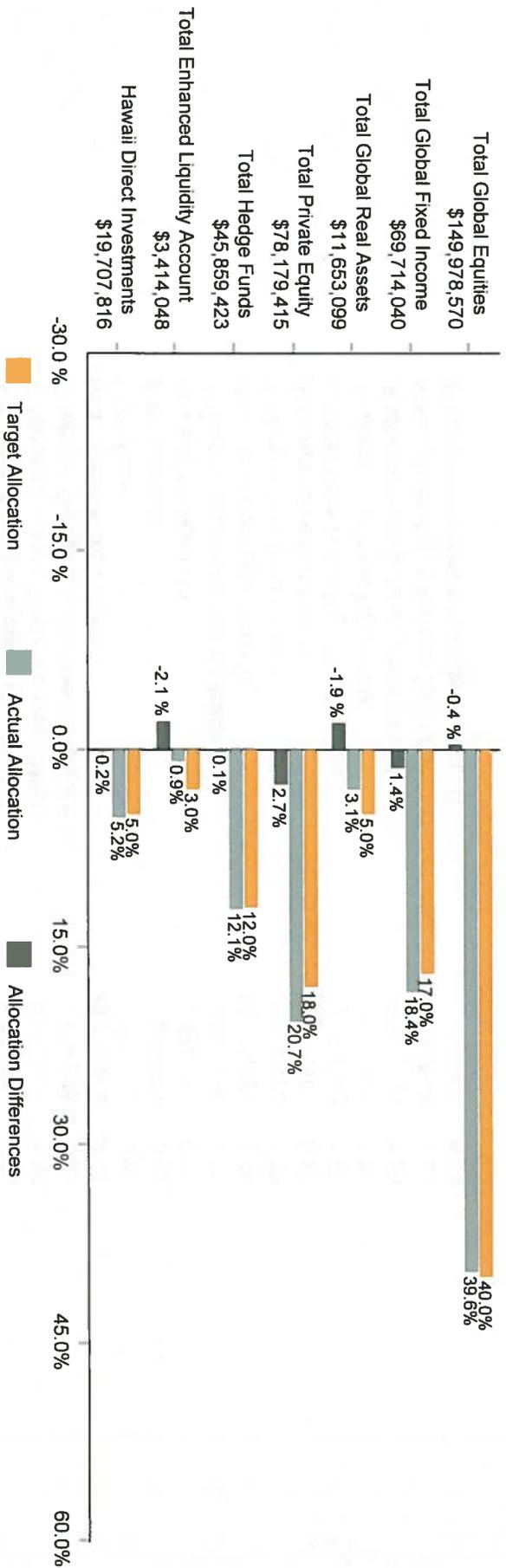


Total Traditional Assets

Native Hawaiian Trust Fund

Total OHA Plan

As of September 30, 2018



Asset Class	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)	Minimum Allocation (%)	Maximum Allocation (%)
Total OHA Plan	378,506,411	100.00	100.00	0.00	N/A	N/A
Total Global Equities	149,978,570	39.62	40.00	-0.38	22.00	55.00
Total Global Fixed Income	69,714,040	18.42	17.00	1.42	11.00	22.00
Total Global Real Assets	11,653,099	3.08	5.00	-1.92	0.00	11.00
Total Private Equity	78,179,415	20.65	18.00	2.65	0.00	25.60
Total Hedge Funds	45,859,423	12.12	12.00	0.12	6.40	19.20
Total Enhanced Liquidity Account	3,414,048	0.90	3.00	-2.10	0.00	10.00
Hawaii Direct Investments	19,707,816	5.21	5.00	0.21	0.00	10.00

Native Hawaiian Trust Fund

Asset Allocation
As of September 30, 2018

	Total Fund	
	(\$)	%
Total Global Real Assets	11,653,099	3.08
JPM Realty Income Inst (JPINX)	4,508,713	1.19
State Street Real Asset NL CTF (HWA5)	2,295,161	0.61
SSGA S&P Global Natural Resources Index	1,502,855	0.40
SSGA Tuckerman U.S. REIT Index	2,378,171	0.63
Harvest MLP Income	968,199	0.26
Total Private Equity	78,179,415	20.65
Total Diversified Private Equity	52,863,029	13.97
Total Private Equity Fund of Funds	40,046,244	10.58
Pantheon Europe Fund IV LP	547,293	0.14
Pantheon USA Fund VI LP	1,501,658	0.40
Pantheon Europe Fund VI LP	2,889,548	0.76
Pantheon USA Fund VIII LP	5,350,854	1.41
GS PEP 2004 Offshore	819,580	0.22
GS PEP 2005 Offshore	440,451	0.12
GS PEP Asia Offshore	327,085	0.09
GS PEP IX Offshore	295,887	0.08
GS PEP X Offshore	1,302,402	0.34
Commonfund International Partners VII	2,393,373	0.63
Commonfund Venture Partners X	7,022,361	1.86
Pantheon Emerging Asia Fund VI LP	2,247,166	0.59
Commonfund Private Equity Partners VIII	1,595,965	0.42
GS GEM PEM Off	2,210,641	0.58
Commonfund Emerging Markets Partners 2013	4,643,342	1.23
Commonfund Private Equity Partners IX	1,385,625	0.37
Commonfund International Partners VIII	1,304,257	0.34
Commonfund Venture Partners XI	3,768,756	1.00
Total Private Equity Multi-Strategy	12,816,785	3.39
Pantheon Global Co-Investment Opps II	1,042,813	0.28
Pantheon Global Secondary Fund II LP	117,211	0.03
GS Vintage V Offshore	781,419	0.21
Pantheon Global Secondary Fund IV LP	1,118,100	0.30
GS Vintage VI Offshore	2,090,961	0.55
GS Vintage VII Offshore	2,489,138	0.66

Native Hawaiian Trust Fund

Comparative Performance

As of September 30, 2018

	Allocation		Performance (%)							Expense Ratio			
	Market Value (\$000)	%	1 Month	1 Quarter	Year To Date	Jul-2018 To Sep-2018	1 Year	3 Years	5 Years		7 Years	Since Inception	Inception Date
Total OHA Plan	378,506	100.00	0.11	1.88	3.04	1.88	6.77	8.72	6.42	8.01	6.89	03/01/2003	
IPS Total OHA Benchmark			0.17	2.81	3.17	2.61	7.17	9.19	6.78	8.48	7.61		
All Endowments- Total Fund Median			0.03	2.32	3.20	2.32	7.04	9.24	6.81	8.72	7.89		
Total OHA Plan Rank			38	75	55	75	56	69	62	75	83		
Population			332	332	328	332	326	307	284	258	167		
Total Global Equities	149,979	39.62	0.30	4.29	3.80	4.29	9.66	13.13	8.78	12.23	8.78	03/01/2003	
IPS Global Equities Benchmark			0.44	4.28	3.83	4.28	9.72	13.50	8.71	11.79	9.33		
SS Money Market (SALXX)	1	0.00	0.13	0.40	0.88	0.40	1.09	N/A	N/A	N/A	0.79	12/01/2016	0.37
90 Day U.S. Treasury Bill			0.15	0.49	1.30	0.49	1.59	0.80	0.50	0.37	1.20		
IM U.S. Taxable Money Market (MF) Median			0.14	0.41	1.04	0.41	1.23	0.53	0.33	0.23	0.87		0.49
SS Money Market (SALXX) Rank			58	54	71	54	66	N/A	N/A	N/A	58		
Population			857	853	846	853	832	719	680	662	817		
Commonfund Open Cash	1,519	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	0.00	07/01/2012	
90 Day U.S. Treasury Bill			0.15	0.49	1.30	0.49	1.59	0.80	0.50	0.37	1.20		
IM U.S. Cash Fixed Income (SA+C/F) Median			0.17	0.59	1.51	0.59	1.82	1.31	1.01	1.01	0.99		
Commonfund Open Cash Rank			97	100	100	100	100	100	100	N/A	100		
Population			55	55	53	55	53	53	48	43	45		
State Street S&P 500 Index Strategy (SSSYX)	35,823	9.46	0.55	7.66	10.55	7.66	17.80	N/A	N/A	N/A	21.34	11/01/2016	0.02
S&P 500			0.57	7.71	10.56	7.71	17.91	17.31	13.95	16.91	20.27		
IM U.S. Large Cap Core Equity (MF) Median			0.53	7.24	8.84	7.24	15.93	15.46	12.29	15.63	18.68		0.93
State Street S&P 500 Index Strategy (SSSYX) Rank			49	32	25	32	29	N/A	N/A	N/A	13		
Population			779	768	749	768	722	628	570	513	668		
JP Morgan US Large Cap Core Plus (JLPSX)	12,000	3.17	1.31	8.62	10.68	8.62	18.22	16.45	N/A	N/A	12.27	05/01/2014	0.85
S&P 500			0.57	7.71	10.56	7.71	17.91	17.31	13.95	16.91	12.69		
IM U.S. Large Cap Core Equity (MF) Median			0.53	7.24	8.84	7.24	15.93	15.46	12.29	15.63	11.11		0.93
JP Morgan US Large Cap Core Plus (JLPSX) Rank			7	10	23	10	24	31	N/A	N/A	24		
Population			779	768	749	768	722	628	570	513	581		
JP Morgan Intrepid America Fund (JIAPX)	6,740	1.78	0.04	7.57	N/A	7.57	N/A	N/A	N/A	N/A	10.29	04/01/2018	0.34
S&P 500			0.57	7.71	10.56	7.71	17.91	17.31	13.95	16.91	11.41		
IM U.S. Large Cap Core Equity (MF) Median			0.53	7.24	8.84	7.24	15.93	15.46	12.29	15.63	10.15		0.93
JP Morgan Intrepid America Fund (JIAPX) Rank			89	37	N/A	37	N/A	N/A	N/A	N/A	47		
Population			779	768	749	768	722	628	570	513	757		
JP Morgan Disciplined Equity RE (JDEUX)	6,664	1.76	0.79	7.95	9.80	7.95	17.00	15.73	13.03	N/A	14.10	06/01/2012	0.25
S&P 500			0.57	7.71	10.56	7.71	17.91	17.31	13.95	16.91	14.51		
IM U.S. Large Cap Core Equity (MF) Median			0.53	7.24	8.84	7.24	15.93	15.46	12.29	15.63	13.25		0.93
JP Morgan Disciplined Equity RE (JDEUX) Rank			26	22	38	22	38	44	31	N/A	25		
Population			779	768	749	768	722	628	570	513	539		

Native Hawaiian Trust Fund

Comparative Performance

As of September 30, 2018

	Allocation				Performance (%)										Expense Ratio
	Market Value (\$000)	%	1 Month	1 Quarter	Year To Date	Jul-2018 To Sep-2018	1 Year	3 Years	5 Years	7 Years	Since Inception	Inception Date			
JP Morgan Intrepid International (JIIFX)	6,848	1.81	0.88	1.02	-3.11	1.02	-0.09	7.85	4.30	N/A	6.82	05/01/2012	0.55		
MSCI EAFE (Net)			0.87	1.35	-1.43	1.35	2.74	9.23	4.42	8.30	7.13				
IM International Equity (MF) Median			-0.16	-0.27	-3.92	-0.27	0.07	9.15	3.98	7.71	6.03		1.18		
JP Morgan Intrepid International (JIIFX) Rank			19	25	41	25	52	70	45	N/A	36				
Population			3,307	3,284	3,185	3,284	3,124	2,637	2,090	1,723	1,828				
JP Morgan International Equity R6 (JINEMX)	6,995	1.85	0.23	-0.80	-5.70	-0.80	-0.46	9.04	3.59	N/A	5.90	05/01/2012	0.50		
MSCI EAFE (Net)			0.87	1.35	-1.43	1.35	2.74	9.23	4.42	8.30	7.13				
IM International Large Cap Core Equity (MF) Median			0.62	0.49	-2.62	0.49	1.35	8.17	3.65	8.07	6.46		1.03		
JP Morgan International Equity R6 (JINEMX) Rank			67	96	89	96	83	20	52	N/A	66				
Population			85	84	82	84	75	63	55	52	52				
JP Morgan Emerging Markets Equity (JMIEY)	4,041	1.07	-1.57	-3.13	-10.16	-3.13	-3.50	13.42	4.40	5.66	1.99	07/01/2011	0.95		
MSCI EM (net)			-0.53	-1.09	-7.68	-1.09	-0.81	12.36	3.61	5.03	1.22				
IM Emerging Markets Equity (MF) Median			-0.97	-2.44	-9.73	-2.44	-3.97	10.24	2.92	4.70	0.84		1.34		
JP Morgan Emerging Markets Equity (JMIEY) Rank			67	58	55	58	45	10	18	31	25				
Population			895	890	858	890	845	723	515	375	356				
JP Morgan Emerging Economies Select (JEESX)	3,434	0.91	0.08	-2.60	-12.40	-2.60	-8.07	9.13	1.37	3.60	-0.47	07/01/2011	0.89		
MSCI EM (net)			-0.53	-1.09	-7.68	-1.09	-0.81	12.36	3.61	5.03	1.22				
IM Emerging Markets Equity (MF) Median			-0.97	-2.44	-9.73	-2.44	-3.97	10.24	2.92	4.70	0.84		1.34		
JP Morgan Emerging Economies Select (JEESX) Rank			22	51	75	51	85	63	77	74	81				
Population			895	890	858	890	845	723	515	375	356				
Total Global Fixed Income	69,714	18.42	-0.24	0.66	-0.60	0.66	-0.18	3.78	2.41	2.93	4.46	03/01/2003			
IPS Global Fixed Income Benchmark			-0.64	0.02	-1.60	0.02	-1.40	4.30	3.09	3.00	4.12				
SSGA Funds	71	0.02	0.14	0.39	1.00	0.39	1.19	0.52	N/A	N/A	0.32	11/01/2013			
90 Day U.S. Treasury Bill			0.15	0.49	1.30	0.49	1.59	0.80	0.50	0.37	0.50				
IM U.S. Cash Fixed Income (SA+CFI) Median			0.17	0.59	1.51	0.59	1.82	1.31	1.01	1.01	1.02				
SSGA Funds Rank			82	97	99	97	97	100	N/A	N/A	100				
Population			55	55	53	55	53	53	48	43	48				
JPM Open Cash	320	0.08	0.00	0.00	0.03	0.00	0.03	0.01	0.01	0.00	0.00	07/01/2011			
90 Day U.S. Treasury Bill			0.15	0.49	1.30	0.49	1.59	0.80	0.50	0.37	0.36				
IM U.S. Cash Fixed Income (SA+CFI) Median			0.17	0.59	1.51	0.59	1.82	1.31	1.01	1.01	0.96				
JPM Open Cash Rank			97	100	100	100	100	100	100	100	100				
Population			55	55	53	55	53	53	48	43	43				
ISHares TIPS Bond (TIP)	2,870	0.76	-0.97	-0.88	-0.93	-0.88	N/A	N/A	N/A	N/A	0.08	11/01/2017	0.20		
Bimby, Barc. U.S. TIPS			-1.05	-0.82	-0.84	-0.82	0.41	2.04	1.37	1.33	0.19				
IM U.S. TIPS (MF) Median			-0.85	-0.72	-0.89	-0.72	0.29	1.82	0.72	0.88	0.07		0.73		
IShares TIPS Bond (TIP) Rank			64	72	56	72	N/A	N/A	N/A	N/A	50				
Population			252	252	243	252	243	211	167	143	243				

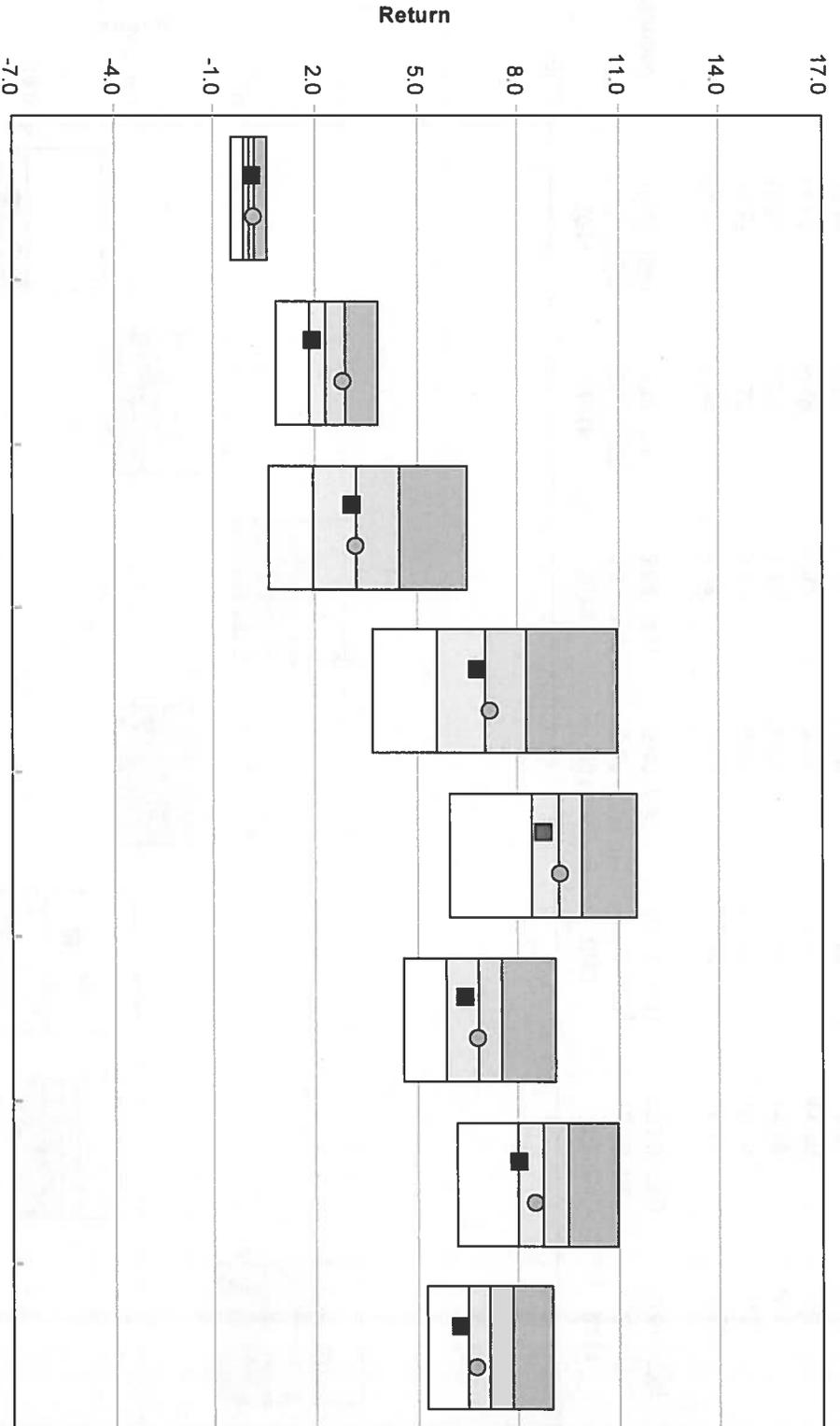
Native Hawaiian Trust Fund

Comparative Performance

As of September 30, 2018

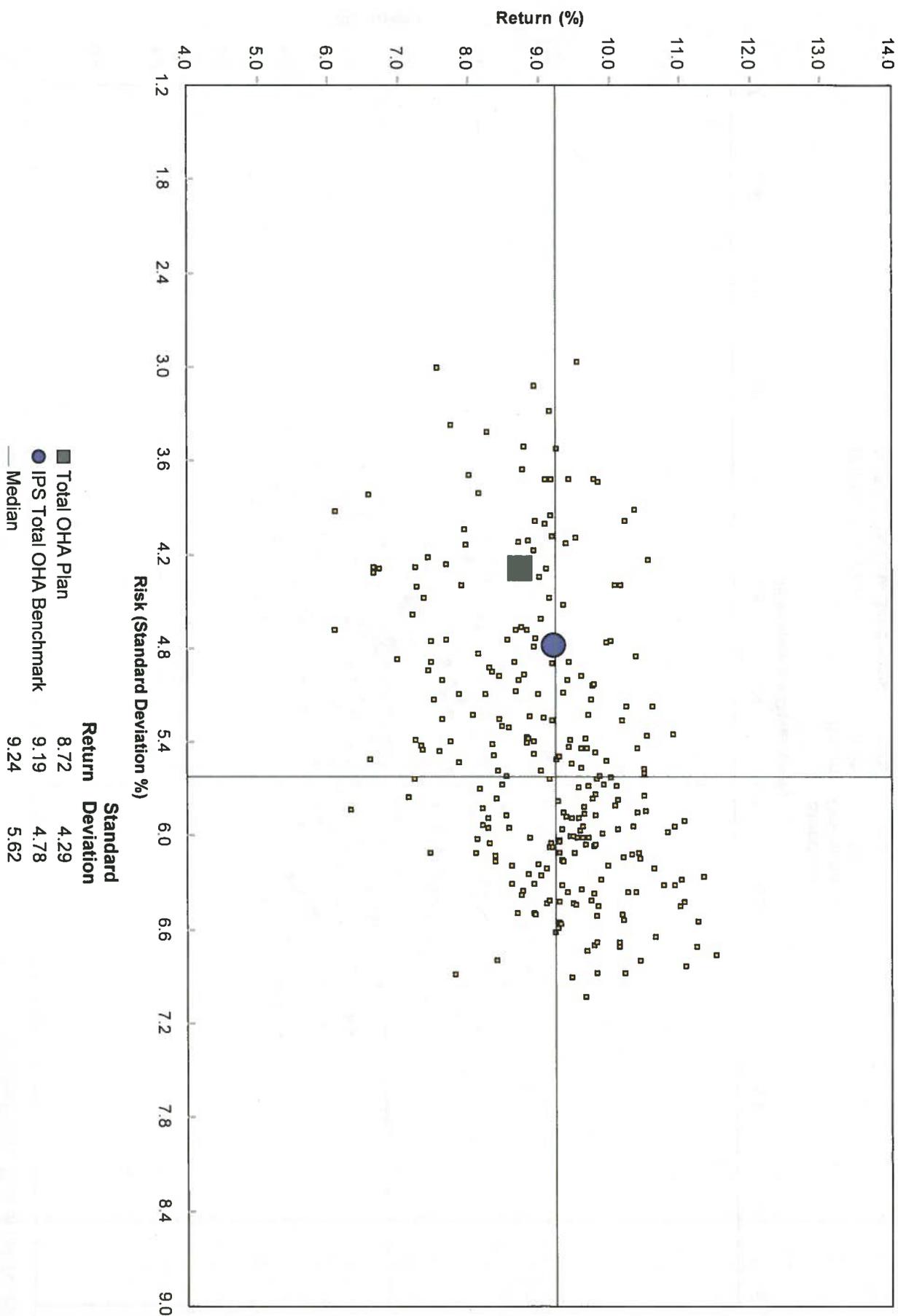
	Allocation			Performance (%)										Expense Ratio
	Market Value (\$000)	%	1 Month	1 Quarter	Year To Date	Jul-2018 To Sep-2018	1 Year	3 Years	5 Years	7 Years	Since Inception	Inception Date		
JP Morgan Emerging Markets Debt (JEMIDX)	118	0.03	1.56	1.99	-3.82	1.99	-2.78	5.28	3.71	4.87	4.26	07/01/2011	0.95	
JP Morgan Global Diversified			1.51	2.30	-3.04	2.30	-1.92	6.04	5.38	5.87	5.35			
IM Emerging Markets Debt (MF) Median			1.75	1.26	-4.77	1.26	-4.05	5.34	3.24	4.63	3.81		1.08	
JP Morgan Emerging Markets Debt (JEMIDX) Rank			57	12	27	12	27	53	38	43	28			
Population			291	289	285	289	278	227	169	96	92			
JP Morgan Emerging Mkt Strategic Debt (JECSX)	124	0.03	1.25	1.79	-3.68	1.79	-2.74	5.02	-2.24	N/A	-3.44	01/01/2013	0.95	
JP Morgan Global Diversified			2.59	-1.83	-8.15	-1.83	-7.40	5.17	-1.68	-0.05	-2.80			
IM Emerging Markets Debt (MF) Median			1.75	1.26	-4.77	1.26	-4.05	5.34	3.24	4.63	1.57		1.08	
JP Morgan Emerging Mkt Strategic Debt (JECSX) Rank			82	19	25	19	26	62	95	N/A	94			
Population			291	289	285	289	278	227	169	96	139			
Total Global Real Assets	11,653	3.08	-1.32	-0.07	1.61	-0.07	4.68	6.20	5.72	9.38	8.09	11/01/2003		
IPS Real Asset Benchmark			-2.06	-0.30	0.06	-0.30	3.66	6.19	5.43	9.28	7.72			
JP Morgan Real Estate Sector (JEPINX)	4,509	1.19	-2.73	0.23	0.34	0.23	2.43	3.67	7.45	8.63	7.74	07/01/2011	0.88	
Wishare US REIT Index			-2.75	0.72	2.25	0.72	3.99	7.08	9.25	11.70	8.87			
IM Real Estate Sector (MF) Median			-2.46	0.64	1.04	0.64	3.29	6.68	8.44	10.84	7.98		1.14	
JP Morgan Real Estate Inst (JEPINX) Rank			78	79	69	79	69	100	82	98	60			
Population			269	265	256	265	250	219	192	171	165			
State Street Real Asset NL CTF	2,295	0.61	0.46	-0.63	0.07	-0.63	3.84	N/A	N/A	N/A	5.83	12/01/2016		
FTSE EPRA/NAREIT Developed Index (Net)			-2.06	-0.30	0.06	-0.30	3.66	6.19	5.43	9.28	7.22			
Global Real Assets (MF) Median			0.18	0.21	-0.15	0.21	2.77	5.64	-2.75	0.83	2.43			
State Street Real Asset NL CTF Rank			48	60	49	60	45	N/A	N/A	N/A	36			
Population			730	720	680	720	669	584	485	379	629			
SSGA S&P Global Natural Resources Index	1,503	0.40	3.75	1.12	3.89	1.12	11.82	16.54	1.69	N/A	4.12	01/01/2013		
S&P Global Natural Resources Sector Index			3.61	1.32	5.07	1.32	14.09	19.69	4.12	4.63	3.05			
IM Global Natural Resources (MF) Median			1.87	0.07	0.55	0.07	8.03	9.19	-2.24	1.24	-0.23			
SSGA S&P Global Natural Resources Index Rank			7	34	20	34	20	6	22	N/A	21			
Population			115	115	113	115	113	106	99	90	98			
SSGA Tuckerman U.S. REIT Index	2,378	0.63	-2.72	0.73	2.52	0.73	4.54	6.49	8.69	N/A	7.89	01/01/2013		
FTSE NAREIT All REITs Index			-2.36	0.69	1.80	0.69	4.22	9.21	9.66	12.22	8.89			
IM U.S. REIT (SA+CF) Median			-2.34	0.81	2.41	0.81	4.64	8.00	9.70	12.25	8.92			
SSGA Tuckerman U.S. REIT Index Rank			85	62	41	62	60	92	92	N/A	93			
Population			53	53	53	53	52	52	50	47	49			
Harvest MLP Income	968	0.26	-2.10	3.85	N/A	N/A	N/A	N/A	N/A	N/A	11.56	03/01/2018		
Alerian MLP Index			-1.57	6.57	5.90	6.57	4.89	4.43	-2.72	3.67	10.98			

As of September 30, 2018



	Month	1 Qtr	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
■ Total OHA Plan	0.11 (38)	1.88 (75)	3.04 (55)	6.77 (56)	8.72 (69)	6.42 (62)	8.01 (75)	6.26 (82)
● IPS Total OHA Benchmark	0.17 (30)	2.81 (28)	3.17 (51)	7.17 (46)	9.19 (51)	6.78 (51)	8.48 (61)	6.72 (67)
5th Percentile	0.60	3.88	6.49	10.98	11.56	9.09	10.94	9.00
1st Quartile	0.21	2.91	4.51	8.25	9.88	7.52	9.48	7.83
Median	0.03	2.32	3.20	7.04	9.24	6.81	8.72	7.17
3rd Quartile	-0.12	1.87	1.96	5.58	8.40	5.85	7.99	6.50
95th Percentile	-0.47	0.85	0.64	3.68	6.01	4.60	6.19	5.28

Parenteses contain percentile rankings.
Calculation based on monthly periodicity.



Calculation based on monthly periodicity.

Private Equity Composite

Cash Flow Summary

Capital Committed:	\$159,153,673
Total Contributions:	\$126,548,031
Remaining Capital Commitment:	\$37,534,976
Total Distributions:	\$98,826,388
Market Value:	\$78,179,415
Inception Date:	07/20/2004
Inception IRR:	9.38
TVPI:	1.40

Appendix

Office of Hawaiian Affairs
Historical IPS Benchmark Summary

7/1/11 to 12/31/12:		1/1/13 to 6/30/14:	
37.5%	Traditional Global Equities 100.0% MSCI All Country World IMI (Net)	38.5%	Traditional Global Equities 100.0% MSCI All Country World IMI (Net)
20.5%	Traditional Global Fixed Income 80.0% Barclays U.S. Aggregate 10.0% Merrill Lynch HY Master II 10.0% JPM GBI-EM Global Diversified	11.0%	Traditional Global Credit 65.0% Barclays U.S. Credit Bond 15.0% JPM GBI-EM Global Diversified 15.0% Barclays U.S. High Yield - 2% Issuer Cap 5.0% JPM EMBI Global
5.0%	Global Public Real Estate 100.0% FTSE EPRA/NAREIT Developed (Net)	5.5%	Traditional Global Real Assets 100.0% FTSE EPRA/NAREIT Developed (Net)
15.0%	Absolute Return 50.0% T-Bills +4% 33.3% MSCI All Country World IMI (Net) 16.7% Merrill Lynch HY Master II	8.0%	Enhanced Liquidity n/a DJ UBS Commodity TR (Actual Weight) n/a Barclays U.S. Gov't (Actual Weight)
12.5%	Equity Alternatives 100.0% MSCI All Country World IMI (Net) +3%	5.0%	Hawaii Direct Investments 25.0% Barclays U.S. TIPS 20.0% DJ U.S. Select REIT TR 35.0% S&P Global Lrg MidCap Common Resources (Net)
2.5%	Fixed Income Alternatives 100.0% Merrill Lynch HY Master II + 1%	12.8%	Low Volatility Marketable Alternatives 80.0% T-Bills +4% 20.0% DJ UBS Commodity TR
2.0%	Commodities 100.0% Bloomberg Commodity Index Total Return	12.8%	N.M. Equity 100.0% MSCI All Country World IMI +3% (Qtr Lag)
5.0%	Hawaii Direct Investments 25.0% Barclays U.S. TIPS 20.0% DJ U.S. Select REIT TR 35.0% S&P Global Lrg MidCap Common Resources (Net) 20.0% DJ UBS Commodity TR	2.4%	N.M. Credit 100.0% Merrill Lynch HY Master II + 1.5% (Qtr Lag)
		4.0%	N.M. Opportunistic & Real Assets 25.0% Barclays U.S. TIPS 20.0% DJ U.S. Select REIT TR 35.0% S&P Global Lrg MidCap Common Resources (Net) 20.0% DJ UBS Commodity TR (Qtr Lag +3% per annum)

Office of Hawaiian Affairs
Historical IPS Benchmark Summary

11/1/17 to Present:

40.0%	Traditional Global Equities
100.0%	MSCI All Country World
17.0%	Traditional Global Credit
100.0%	Bloomberg Barclays U.S. Aggregate
5.0%	Traditional Global Real Assets
100.0%	Bloomberg Barclays U.S. TIPS +3%
12.0%	Hedge Funds
100.0%	Citigroup 3 Month T-Bill +4%
18.0%	Private Equity
100.0%	MSCI All Country World +3%
3.0%	Enhanced Liquidity
100.0%	Bloomberg Barclays 1-3 Year Treasury
5.0%	Hawaii Direct Investments
100.0%	Bloomberg Barclays U.S. TIPS +3%

Total IPS Traditional Assets Benchmark

1/1/11 to 6/30/11:

59.5%	Traditional Global Equities
100.0%	MSCI All Country World IMI (Net)
32.5%	Traditional Global Fixed Income
100.0%	Bloomberg Barclays U.S. Aggregate
8.0%	Traditional Global Real Assets
100.0%	FTSE EPRA/NAREIT Developed

7/1/11 to 12/31/2012:

59.5%	Traditional Global Equities
100.0%	MSCI All Country World IMI (Net)
32.5%	Traditional Global Fixed Income
80.0%	Barclays U.S. Aggregate
10.0%	Merrill Lynch HY Master II
10.0%	JPM GBI-EM Global Diversified
8.0%	Global Public Real Estate
100.0%	FTSE EPRA/NAREIT Developed (Net)

1/1/13 to 10/31/17:

70.0%	Traditional Global Equities
100.0%	MSCI All Country World IMI (Net)
20.0%	Traditional Global Fixed Income
65.0%	Barclays U.S. Credit Bond
15.0%	JPM GBI-EM Global Diversified
15.0%	Barclays U.S. High Yield – 2% Issuer Cap
5.0%	JPM EMBI Global
10.0%	Global Public Real Estate
100.0%	FTSE EPRA/NAREIT Developed (Net)

11/1/17 to Present:

64.5%	Traditional Global Equities
100.0%	MSCI All Country World
27.4%	Traditional Global Credit
100.0%	Bloomberg Barclays U.S. Aggregate
8.1%	Traditional Global Real Assets
100.0%	Bloomberg Barclays U.S. TIPS +3%

Office of Hawaiian Affairs

Sonya K. Park

January 23, 2019

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3. Fixed Income Index Investing

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Appendix B: Biography

All the information contained in this presentation is as of date Indicated unless otherwise noted.

Account Summary

Office of Hawaiian Affairs — Account Summary

Investment Summary

As of September 30, 2018

	Market Value (\$)
State Street Real Asset NL Strategy	19,707,816
State Street Real Asset NL CTF	2,295,161
State Street 1–3 Year US Treasury Index NL Strategy	7,031,733
State Street 1–3 Year US Credit Index NL Strategy	3,414,048
Total	32,448,757

Statement of Asset Changes

The following changes took place in the Office of Hawaiian Affairs account for the period of: July 01, 2018 to September 30, 2018

	Starting Balance 07/01/2018 (\$)	Contributions (\$)	Withdrawals (\$)	Appreciation/ (Depreciation)* (\$)	Ending Balance 09/30/2018 (\$)
State Street Real Asset NL Strategy	19,832,002	—	—	(124,186)	19,707,816
State Street Real Asset NL CTF	2,309,623	—	—	(14,462)	2,295,161
State Street 1–3 Year US Treasury Index NL Strategy	7,018,054	—	—	13,679	7,031,733
State Street 1–3 Year US Credit Index NL Strategy	10,362,693	—	(7,000,000)	51,355	3,414,048
Total	39,522,372	—	(7,000,000)	(73,615)	32,448,757

Source: SSGA

* Includes dividends, interest, and realized/unrealized gains and losses.

Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are the gross and net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of September 30, 2018:

	1 Month (%)	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	Since Inception (%)	Inception Date
State Street Real Asset NL Strategy								May/2013
Total Returns [Gross]	0.46	-0.63	0.07	3.83	6.87	1.25	0.20	
Real Assets Custom Blended Index	0.50	-0.60	0.12	3.90	6.92	1.23	0.19	
Difference	-0.05	-0.02	-0.05	-0.07	-0.05	0.02	0.01	
Total Returns [Net]	0.44	-0.68	-0.10	3.59	6.62	1.02	-0.03	
Real Assets Custom Blended Index	0.50	-0.60	0.12	3.90	6.92	1.23	0.19	
Difference	-0.06	-0.07	-0.23	-0.31	-0.30	-0.22	-0.22	
State Street Real Asset NL CTF								Nov/2016
Total Returns [Gross]	0.46	-0.63	0.07	3.83	N/A	N/A	6.32	
Real Assets Custom Blended Index	0.50	-0.60	0.12	3.90	N/A	N/A	6.30	
Difference	-0.05	-0.02	-0.05	-0.07	N/A	N/A	0.02	
Total Returns [Net]	0.42	-0.74	-0.21	3.42	N/A	N/A	5.94	
Real Assets Custom Blended Index	0.50	-0.60	0.12	3.90	N/A	N/A	6.30	
Difference	-0.09	-0.13	-0.33	-0.48	N/A	N/A	-0.36	

Past performance is not a guarantee of future results. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross and net of fees basis. Gross of fees do not reflect and net of fees do reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are the gross and net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of September 30, 2018

	1 Month (%)	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	Since Inception (%)	Inception Date
State Street 1–3 Year US Treasury Index								Jan/2018
NL Strategy								
Total Returns [Net]	-0.13	0.19	N/A	N/A	N/A	N/A	0.46	
Bloomberg Barclays U.S. 1–3 Year Treasury Bond Index	-0.12	0.19	N/A	N/A	N/A	N/A	0.46	
Difference	-0.01	0.00	N/A	N/A	N/A	N/A	0.00	
State Street 1–3 Year US Credit Index								Feb/2017
NL Strategy								
Total Returns [Gross]	0.04	0.63	0.75	0.65	N/A	N/A	1.22	
Bloomberg Barclays U.S. 1–3 Year Credit Bond Index	0.03	0.62	0.73	0.66	N/A	N/A	1.23	
Difference	0.01	0.00	0.02	-0.01	N/A	N/A	-0.01	
Total Returns [Net]	0.02	0.58	0.65	0.53	N/A	N/A	1.11	
Bloomberg Barclays U.S. 1–3 Year Credit Bond Index	0.03	0.62	0.73	0.66	N/A	N/A	1.23	
Difference	-0.01	-0.04	-0.09	-0.13	N/A	N/A	-0.12	

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Office of Hawaiian Affairs — Account Summary

Investment Summary

As of September 30, 2018

	Market Value (\$)
State Street Aggregate Bond Index K	32,115,334
State Street Global Equity EX US K	22,931,137
State Street Equity 500 Index Fund K	35,822,524
Total	90,868,995

Statement of Asset Changes

The following changes took place in the Office of Hawaiian Affairs account for the period of July 01, 2018 to September 30, 2018:

	Starting Balance 07/01/2018 (\$)	Contributions (\$)	Withdrawals (\$)	Appreciation/ (Depreciation)* (\$)	Ending Balance 09/30/2018 (\$)
State Street Aggregate Bond Index K	32,128,364	222,994	—	(236,024)	32,115,334
State Street Global Equity EX US K	22,754,234	—	—	176,904	22,931,137
State Street Equity 500 Index Fund K	33,274,478	—	—	2,548,046	35,822,524
Total	88,157,076	222,994	—	2,488,925	90,868,995

Source: SSGA

* Includes dividends, interest, and realized/unrealized gains and losses.

Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of September 30, 2018:

	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)	Inception Date
State Street Aggregate Bond Index K								Sep/2014
Total Returns [Net]	-0.04	-1.71	-1.43	1.09	N/A	N/A	1.56	
Bloomberg Barclays Aggregate Bond	0.02	-1.60	-1.22	1.31	N/A	N/A	1.77	
Difference	-0.06	-0.11	-0.21	-0.22	NA	NA	-0.21	
State Street Global Equity EX US K								Sep/2014
Total Returns [Net]	0.78	-2.90	1.86	9.87	N/A	N/A	2.95	
MSCI ACWI ex USA Index	0.71	-3.09	1.76	9.97	N/A	N/A	3.06	
Difference	0.07	0.19	0.10	-0.10	NA	NA	-0.11	
State Street Equity 500 Index Fund K								Apr/2001
Total Returns [Net]	7.66	10.55	17.79	17.25	13.79	11.82	N/A	
S&P 500 Index	7.71	10.56	17.91	17.31	13.95	11.97	N/A	
Difference	-0.05	-0.01	-0.12	-0.06	-0.16	-0.15	NA	

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Office of Hawaiian Affairs — Account Summary

Investment Summary

As of December 31, 2018

	Market Value (\$)
State Street Real Asset NL Strategy	17,306,866
State Street Real Asset NL CTF	2,131,678
State Street 1–3 Year US Treasury Index NL Strategy	7,117,340
State Street 1–3 Year US Credit Index NL Strategy	11,583,159
Total	38,139,043

Statement of Asset Changes

The following changes took place in the Office of Hawaiian Affairs account for the period of October 01, 2018 to December 31, 2018:

	Starting Balance 10/01/2018 (\$)	Contributions (\$)	Withdrawals (\$)	Appreciation/ (Depreciation)* (\$)	Ending Balance 12/31/2018 (\$)
State Street Real Asset NL Strategy	19,707,816	—	(1,042,061)	(1,358,889)	17,306,866
State Street Real Asset NL CTF	2,295,161	—	—	(163,483)	2,131,678
State Street 1–3 Year US Treasury Index NL Strategy	7,031,733	—	(6,836)	92,443	7,117,340
State Street 1–3 Year US Credit Index NL Strategy	3,414,048	8,100,000	(35,487)	104,598	11,583,159
Total	32,448,757	8,100,000	(1,084,384)	(1,325,330)	38,139,043

Source: SSGA

* Includes dividends, interest, and realized/unrealized gains and losses.

Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are the gross and net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of December 31, 2018:

	1 Month (%)	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	Since Inception (%)	Inception Date
State Street Real Asset NL Strategy								May/2013
Total Returns [Gross]	-3.74	-7.12	-7.06	-7.06	4.91	-0.33	-1.12	
Real Assets Custom Blended Index	-3.73	-7.16	-7.04	-7.04	4.97	-0.36	-1.13	
Difference	-0.01	0.03	-0.01	-0.01	-0.06	0.03	0.01	
Total Returns [Net]	-3.75	-7.18	-7.28	-7.28	4.67	-0.56	-1.35	
Real Assets Custom Blended Index	-3.73	-7.16	-7.04	-7.04	4.97	-0.36	-1.13	
Difference	-0.02	-0.02	-0.23	-0.23	-0.30	-0.20	-0.22	
State Street Real Asset NL CTF								Nov/2016
Total Returns [Gross]	-3.74	-7.12	-7.06	-7.06	N/A	N/A	2.00	
Real Assets Custom Blended Index	-3.73	-7.16	-7.04	-7.04	N/A	N/A	1.97	
Difference	-0.01	0.03	-0.01	-0.01	N/A	N/A	0.03	
Total Returns [Net]	-3.77	-7.23	-7.42	-7.42	N/A	N/A	1.63	
Real Assets Custom Blended Index	-3.73	-7.16	-7.04	-7.04	N/A	N/A	1.97	
Difference	-0.04	-0.07	-0.38	-0.38	N/A	N/A	-0.34	

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Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are the gross net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of December 31, 2018

	1 Month (%)	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	Since Inception (%)	Inception Date
State Street 1–3 Year US Treasury Index								Jan/2018
NL Strategy								
Total Returns [Net]	0.80	1.32	N/A	N/A	N/A	N/A	1.78	
Bloomberg Barclays U.S. 1–3 Year Treasury Bond Index	0.81	1.31	N/A	N/A	N/A	N/A	1.78	
Difference	0.00	0.00	N/A	N/A	N/A	N/A	0.00	
State Street 1–3 Year US Credit Index								Feb/2017
NL Strategy								
Total Returns [Gross]	0.74	0.92	1.68	1.68	N/A	N/A	1.55	
Bloomberg Barclays U.S. 1–3 Year Credit Bond Index	0.72	0.89	1.64	1.64	N/A	N/A	1.54	
Difference	0.01	0.03	0.05	0.05	N/A	N/A	0.00	
Total Returns [Net]	0.73	0.88	1.54	1.54	N/A	N/A	1.44	
Bloomberg Barclays U.S. 1 3 Year Credit Bond Index	0.72	0.89	1.64	1.64	N/A	N/A	1.54	
Difference	0.01	-0.01	-0.10	-0.10	N/A	N/A	-0.11	

Past performance is not a guarantee of future results. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross and net of fees basis. Gross of fees do not reflect and net of fees do reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

Office of Hawaiian Affairs — Account Summary

Investment Summary

As of December 31, 2018

	Market Value (\$)
State Street Aggregate Bond Index K	29,469,244
State Street Global Equity EX US K	24,104,134
State Street Equity 500 Index Fund K	28,216,189
Total	81,789,567

Statement of Asset Changes

The following changes took place in the Office of Hawaiian Affairs account for the period of October 01, 2018 to December 31, 2018:

	Starting Balance 10/01/2018 (\$)	Contributions (\$)	Withdrawals (\$)	Appreciation/ (Depreciation)* (\$)	Ending Balance 12/31/2018 (\$)
State Street Aggregate Bond Index K	32,115,334	296,867	3,100,000	157,043	29,469,244
State Street Global Equity EX US K	22,931,137	5,849,576	—	(4,676,580)	24,104,134
State Street Equity 500 Index Fund K	35,822,524	1,388,185	3,000,000	(5,994,519)	28,216,189
Total	90,868,995	7,534,628	6,100,000	(10,514,056)	81,789,567

Source: SSGA

* Includes dividends, interest, and realized/unrealized gains and losses.

Office of Hawaiian Affairs — Account Summary

Summary of Performance

Following are net returns for the Office of Hawaiian Affairs portfolios versus the corresponding benchmarks as of December 31, 2018:

	3 Months (%)	Year to Date (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)	Inception Date
State Street Aggregate Bond Index K								Sep/2014
Total Returns [Net]	1.64	-0.10	-0.10	1.81	N/A	N/A	1.86	
Bloomberg Barclays Aggregate Bond	1.64	0.01	0.01	2.06	N/A	N/A	2.05	
Difference	0.00	-0.11	-0.11	-0.25	NA	NA	NA	
State Street Global Equity EX US K								Sep/2014
Total Returns [Net]	-11.46	-14.03	-14.03	4.69	N/A	N/A	-0.10	
MSCI ACWI ex USA Index	-11.46	-14.20	-14.20	4.48	N/A	N/A	0.00	
Difference	0.00	0.17	0.17	0.21	NA	NA	-0.10	
State Street Equity 500 Index Fund K								Apr/2001
Total Returns [Net]	-13.54	-4.42	-4.42	9.16	8.35	12.91	6.19	
S&P 500 Index	-13.52	-4.38	-4.38	9.26	8.49	13.12	6.16	
Difference	-0.02	-0.04	-0.04	-0.10	-0.14	-0.21	0.03	

Past performance is not a guarantee of future results. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross and net of fees basis. Gross of fees do not reflect and net of fees do reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

Equity Indexing Skillfully Delivered

Who We Are

Why State Street Global Advisors for Index, Smart Beta & ESG Investing

Core Focus Area and Key Strength

- 40 year history of delivering high quality, broad based index solutions
- Index represents 80%¹ of assets under management and 68%¹ of revenues
- >98%¹ of equity index funds have historically tracked within their tolerance bands

Industry Leader and Innovator

- ✓ Launched first US ETF
- ✓ In-house index creation
- ✓ Developing smart beta since 2006

Groundbreaking efforts in ESG research and integrated portfolio solutions In-house proprietary ESG framework and screening tool

Experienced and Reliable Team

- 20 years average portfolio manager tenure
- Utilize a globally consistent investment management platform and processes
- Strategic focus on implementation and risk management
- Deep Research expertise with innovative heritage

¹ Source: State Street Global Advisors, June 2018.

Investment Philosophy

We aim to deliver to each client the returns and characteristics of a targeted index or strategy

We believe in...

Integration of technology & human insight

- Maintain a primary portfolio manager structure while using a state of the art portfolio management platform
- Continuous investment in our technology infrastructure to gain further efficiencies

Supporting long-term shareholder values

- Engage with investee companies to promote responsible investing and protect long term shareholder returns through asset stewardship
- Firm wide proxy voting platform

Innovating through research

- Value add strategies based on core beta research
- Development of propriety strategies and indexes
- ESG screening tools & framework, thematic strategies and portfolio integration

Source: State Street Global Advisors

State Street Global Equity Beta Solutions

150+¹ Dedicated professionals to equity indexing across the firm

30+ Traders & analysts

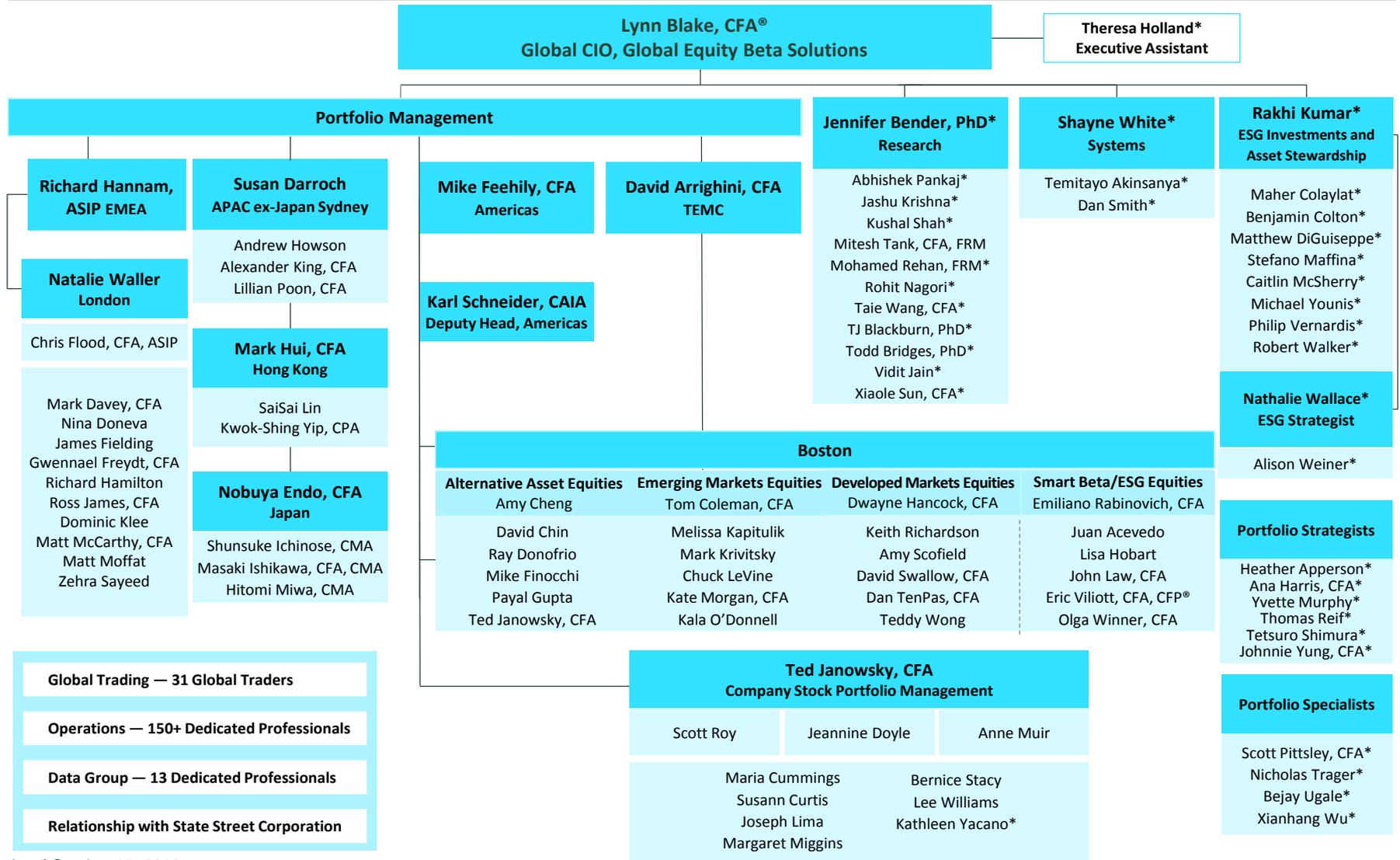
10+ Equity strategists & specialists



CIO	Exp Yrs	Senior Leadership	Exp Yrs	Portfolio Strategists	Exp Yrs
Lynn Blake, CFA	31	Mike Feehily, CFA (US)	26	Heather Apperson	14
		Richard Hannam, ASIP (EMEA)	34	Ana Harris, CFA	14
		Susan Darroch, (Asia Pac)	33	Yvette Murphy	10
		David Arrighini, CFA (TEMC)	28	Thomas Reif	24
		Jennifer Bender, PhD ³ (Research)	22	Tetsuro Shimura	32
		Rakhi Kumar, (ESG/ Stewardship)	17	Johnnie Yung, CFA	32
		Shayne White (Technology)	26		

Team Highlights	
Investment Team Members ²	62
Average Experience Years	20
Number of CFA Charter Holders	27
Number of PhDs	3

As of October 15, 2018. ¹ Includes Global Equity Beta Solutions Team Members who may not be reflected in the organization chart above. ² Investment Team members include portfolio managers and researchers. ³ Does not manage assets for the Global Equity Beta Solutions team. CFA[®] is a trademark of the CFA Institute. CAIA[®] is a registered trademark of the Chartered Alternative Investment Analyst Association.



As of October 15, 2018

* Does not manage assets for the Global Equity Beta Solutions team. CFA® is a trademark owned by CFA Institute. Certified Financial Planner Board of Standards Inc. owns the certification marks CFP®, CERTIFIED FINANCIAL PLANNER™ and federally registered CFP (with flame design) in the US, which it awards to individuals who successfully complete CFP Board's initial and ongoing certification requirements.

ESG & Asset Stewardship

Head of ESG & Asset Stewardship

Rakhi Kumar



Our Belief

Companies embracing ESG best practice have strong, effective, independent boards and are able to incorporate sustainability into their long term strategy.

ESG

- **Proprietary** ESG research and innovation driving multi asset classes solutions
- **Strong focus** on independent board leadership, financial impacts of climate change and other crucial ESG issues like gender diversity

Asset Stewardship

- **Alignment** of asset stewardship, portfolio management, research, technology and ESG solutions
- Commissioned the **Fearless Girl** statue and developed the **Gender Diversity Index**

30+ Years

of commitment to ESG investors

\$202B¹

assets under management in ESG

301² of the 700

companies we called on made positive progress on board gender diversity



Photo:
Sculpture by Kristen Visbal.

Source: State Street Global Advisors. ¹ Data as of June 30, 2018 and listed in USD.

² 152 added a female board member, and 34 pledged to do so.

Robust Research Guides Investment Decisions & Strategy Design

Global Head of Research

Jennifer Bender,* PhD



Global Team

Global Headcount **11**

Members with PhD **3**

Peer-reviewed articles & chapters authored **17**



Core Beta

Adding incremental value through risk-aware implementation and cost-reduction strategies, and strategic execution of index changes

Smart Beta

Blending empirical and theoretical research, and balancing intuition and complexity make us a leader in factor definition, combination, and implementation

Thematic & ESG

Identifying and capturing ESG-driven risks and opportunities and optimal portfolio construction across a spectrum of ESG exposures

Self-Indexed & Proprietary Beta

Developing innovative solutions while incorporating implementation insights into our range of cap-weighted, factor, and ESG indexes

As of September 30, 2018. * Does not manage assets for the Global Equity Beta Solutions team.

Global Trading

17 year global desk in place

24 hour trading capabilities

30+ Traders (Equity & Fixed Income)

+18 year's average experience

\$2.3 Trillion dollars traded in 2017

2.9 Million tickets executed in 2017



What Differentiates Us from the Competition?

Spectrum of Trading Tools

- **Internal crossing network:** Use of security & unit level crossing when possible to minimize transactions costs
- **Algo Wheel:** Seeks to reward better performing algorithmic trading strategies and remove trader bias through a performance driven broker selection process

Trading Analytics Group (TCA)

- Cross asset class team performing transaction cost analysis, data and analytics reporting, as well as market research
- TCA results incorporated into Algo selection process
- Quarterly review of best execution and governance oversight framework

Connectivity & Expertise

- Regional trading desks with local expertise — coverage across 95 global markets
- Strong partnership between trading, portfolio management and research helps drive value-add strategies and routine implementation decisions

As of December 31, 2017. Asset classes include equity, fixed income, futures and currency. Figures are in USD.

Industry Trends Q3 2018

Flows/Markets	<p>Investors continued to de-risk, although US equity markets hit new highs and rates edged higher.</p> <ul style="list-style-type: none"> Concerns over slowing growth, global trade and rising rates drove investor sentiment. Non-US equities, specifically EM continued to see outflows. Recent investor surveys showing the largest overweight in US equities in three years and don't expect a rotation in bonds until US 10 yr yields hit 3.7%¹ 	
Smart Beta / Factor Investing	<p>Focus area for institutions but implementation and manager solutions vary</p> <ul style="list-style-type: none"> 30% YoY growth rate in smart beta strategies since 2012, while 'standard' passive strategies grew 13% a year during the same period² Thoughtful implementation coupled with the ability to clearly capture and attribute factor contributions are key manager differentiators Seeing renewed interest in low volatility and value strategies given the market environment 	
Self Indexing	<p>Increasing number of asset managers announcing plans to self index</p> <ul style="list-style-type: none"> Benefits include increased flexibility, lower explicit cost (i.e., licensing fees) and potentially lower implicit costs Increasing number of ETF managers moving towards self indexed products in fixed income and smart beta 	
Asset Stewardship & ESG	<p>Dedication to asset stewardship & ESG initiatives becoming more common — however standards still vary</p> <ul style="list-style-type: none"> In a recent survey, 84%³ of respondents said to be pursuing or considering ESG integration in their investment process. 60% of respondents began doing so in the last four years. Institutions demanding more transparency — what do I own and what is the impact? Reporting on ESG metrics likely to become the norm but the industry is still establishing a base line measurement framework 	
Noteworthy Index Events	<p>MSCI</p> <ul style="list-style-type: none"> Consultation underway to increase China A from 5% to 20%, as well as add midcap stocks. Announcement set for Feb 2019 Saudi Arabia and Argentina to be promoted to Emerging Market status in May 2019 In March 2019, companies with unequal voting structures, will be eligible for inclusion in MSCI standard indices 	<p>FTSE</p> <ul style="list-style-type: none"> Announces formal addition of China A shares. Estimated around 5% initially and set to be added in multiple tranches

¹ BAML Monthly Manager Survey, September and October 2018. ² Boston Consulting Group, May 4, 2018. Unless otherwise noted, all data as of June 30, 2018.

³ Morgan Stanley, Sustainability Signals, June 2018.

What We Do

A Long History of Indexing Innovation

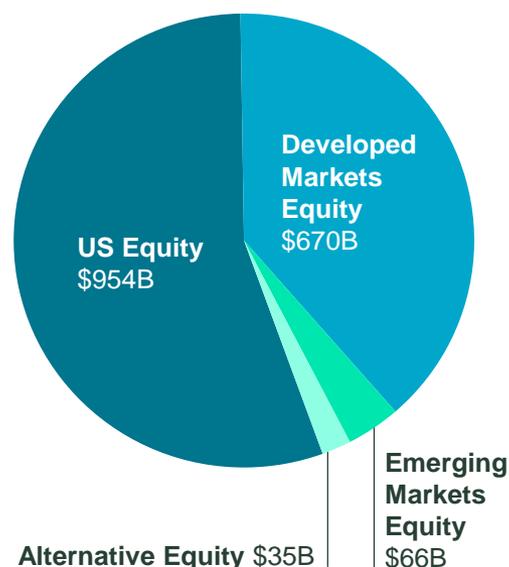
1970s	1990s	2000s	2010s
Standard Indices		FTSE RAFI US 1000 S&P HY Div Aristocrats	Nikkei 225 FTSE RAFI ALL World 3000 MSCI Min Volatility
			RAFI Low Vol MSCI World Equally-weighted
			Russell 1000 Single Factors FTSE EDHEC Risk Efficient EM MSCI Quality Mix Series
			Kensho New Economies Indices
Our Proprietary Strategies: Tilted, Optimized, ESG (Multifactor)	State Street Global Advisors launched International Index Fund and S&P Strategy (1979)	SSGA S&P 500 Equal Weighted (1993)	SSGA US Valuation-Tilted
		SSGA Global Managed Vol SSGA Global Size Tilted SSGA Global Valuation Tilted	SSGA Europe Managed Vol
			SSGA Canadian Div Tilted
			SSGA Global Multi-factor SSGA US Multi-factor SSGA Europe Multi-factor
			Gender Diversity Index — Multi-Factor Optimized US Cap Weighted Self Indices — Multi-Factor + ESG

Source: State Street Global Advisors, as of June 30, 2018. Inception date of select portfolios.

A Leading Manager of Global Indexed Assets

Equity Index AUM: \$1.72 Trillion (USD)

Breakdown of Global AUM



Cap Weighted

- US, Developed ex US, Emerging Markets
- Large, Mid & Small Cap

Style/Sector

- Value & Growth
- Sector/Industry Specific
- ESG

Smart Beta

- Third-Party Indices
- Proprietary Solutions-Tilted, Multifactor & ESG

Alternatives

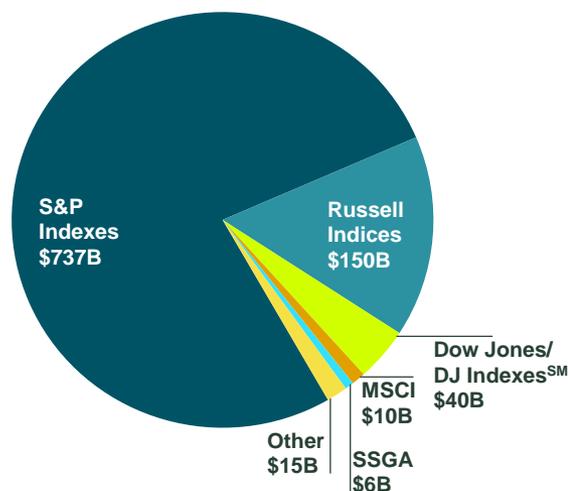
- Commodity
- REITs
- Infrastructure
- Natural Resources

Source: State Street Global Advisors. As of September 30, 2018. Exclusive of Emerging Markets Equities invested in other MSCI-benchmarked strategies such as MSCI ACWI and MSCI ACWI ex-US. Data as of September 30, 2018

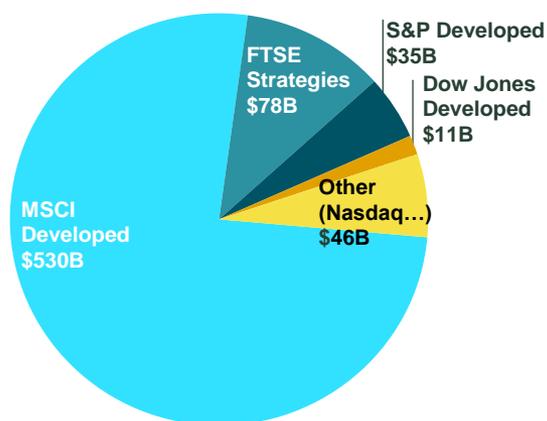
A Leading Manager of Global Indexed Assets

Total Global Equity Beta Solutions Assets Under Management: \$1.72 Trillion (USD) as of September 30, 2018

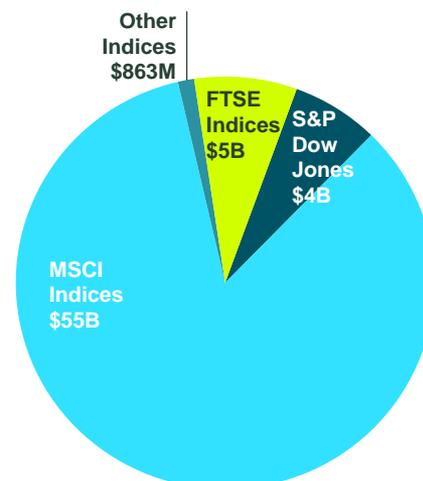
US Index AUM
\$960B



International & Global Equity AUM \$699B



Emerging Markets Equity AUM \$66B



Source: State Street Global Advisors. As of September 30, 2018.

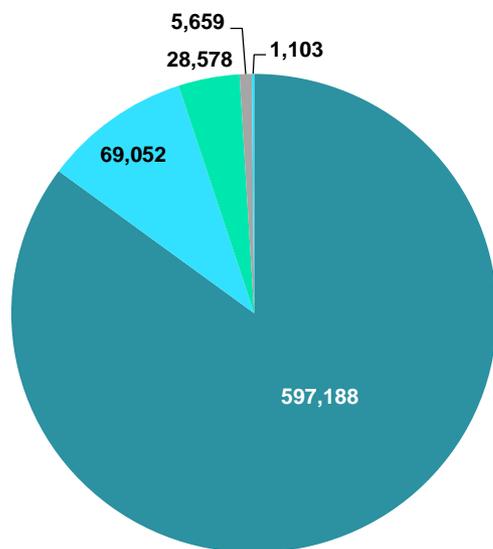
Exclusive of Emerging Markets Equities invested in other MSCI-benchmarked strategies such as MSCI ACWI and MSCI ACWI ex-US.

SPDR: Third Largest ETF Manager

ETF AUM: \$702 Billion

Offerings: 254

Global AUM by Asset Class



■ Equity ■ Fixed Income ■ Commodities ■ Convertibles ■ Allocation

Global ETF AUM

Region	Country of Domicile	ETF Offerings	Assets (\$M)
Americas	United States	140	651,618
EMEA	Ireland	94	30,632
APAC	Australia	16	4,216
	Hong Kong	2	10,972
	Singapore	2	4,141

Source: Morningstar, as of September 30, 2018.

State Street Global Advisors' Smart Beta Equity Strategies & AUM

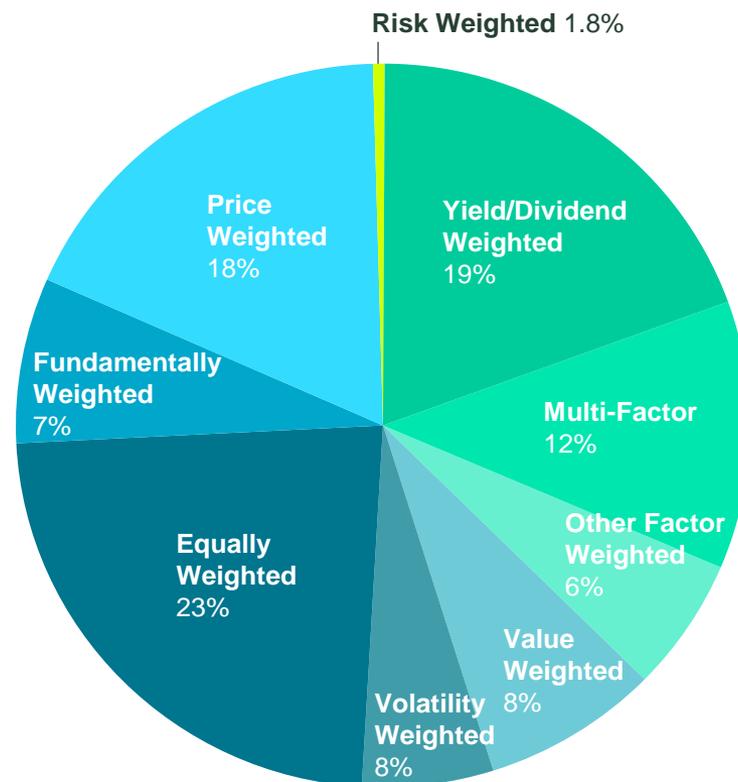
Total Smart Beta AUM \$140B

State Street has been managing Smart Beta portfolios for over 25 years

- Huge selection of strategies to meet varying interests of investors
- At forefront of research and development of Smart Beta solutions

Investor flows into Smart Beta continues to be positive

- In recent years, most interest in Low Volatility, Multi-Factor and Multi-Factor + ESG strategies

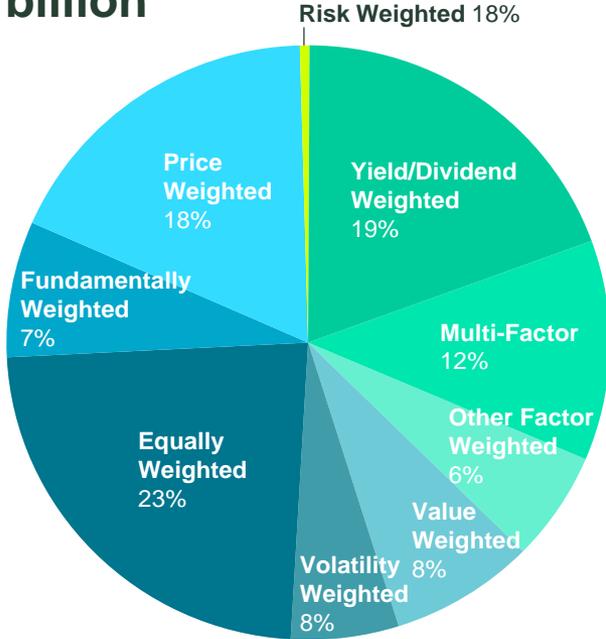


Source: State Street Global Advisors. Data as of September 30, 2018 in USD.

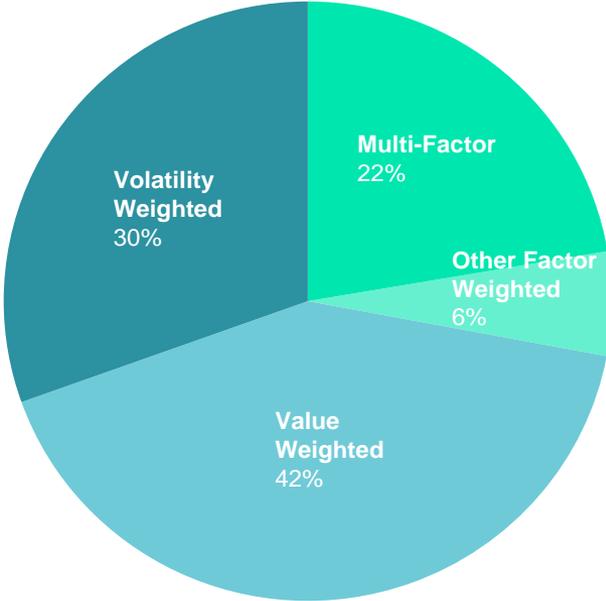
Expertise in Smart Beta Portfolio Development and Implementation

Total Smart Beta AUM: \$140 Billion

Index Provider Smart Beta Assets: \$125 billion



Proprietary Smart Beta Assets: \$15 billion



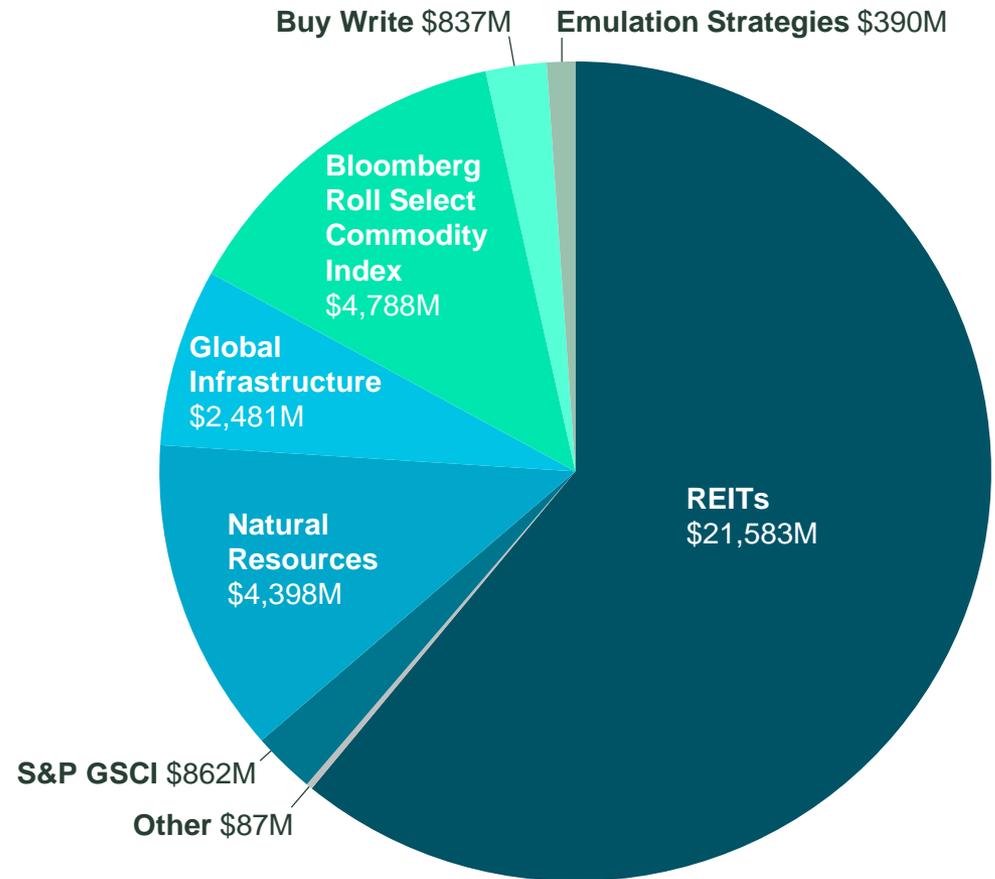
As of September 30, 2018. All figures in USD.

Alternative Asset Betas

Commodities, REITs & Additional
Alternative Asset Classes

\$35,425 Million

AUM as of September 30, 2018



Source: State Street Global Advisors. Data as of September 30, 2018 in USD.

How We Do It

Index Equity Management Techniques

Benchmark returns can be achieved through....

Replication

Hold all or the majority of securities in the index at approximately market cap weight

Typically applied to reasonable sized portfolios with minimal liquidity or accessibility constraints

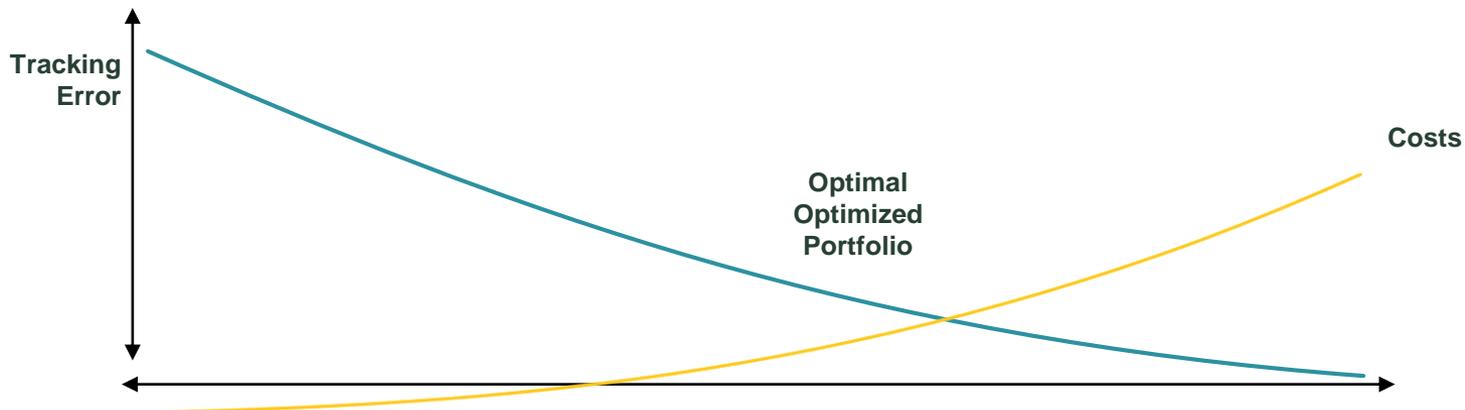
- i.e., US large cap or developed international

Optimization

Construct a portfolio with the same risk & return characteristics of the index but with a smaller subset of securities

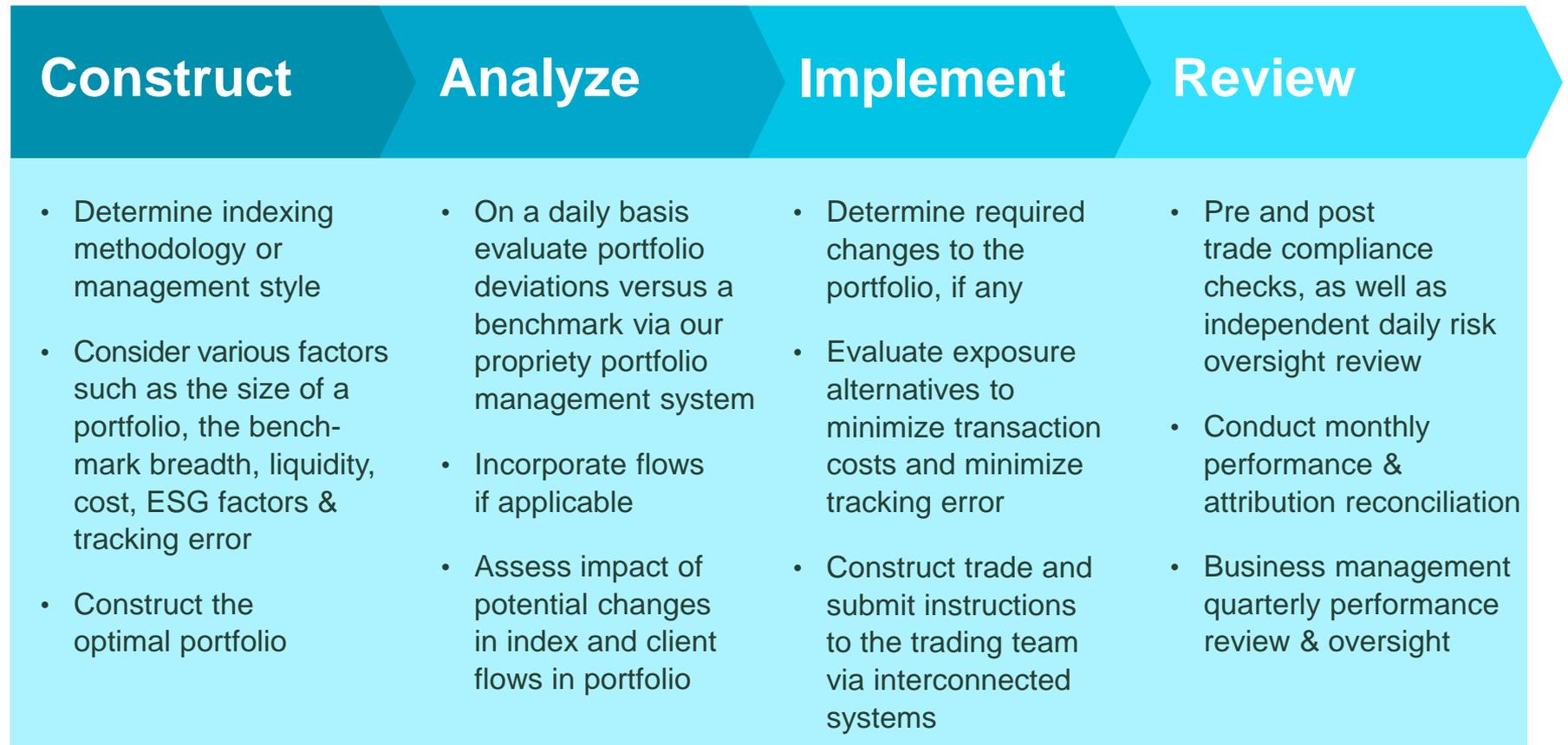
Typically applied to liquidity constrained portfolios

- i.e., International small cap (EM) or smaller sized portfolios



Investment Process

A tried and tested process marrying human insight and technology



Source: State Street Global Advisors

Improving Risk Controls & Oversight Through Technology

Features of our portfolio management system:

- Full data integration with other State Street Global Advisors applications and risk/oversight teams
- Designed and customized to our process, workflow and portfolio universe
- Provides a comprehensive portfolio view for portfolio management, as well as risk and oversight
- Dedicated software development resources to ensure continuous development and improvements



Source: State Street Global Advisors

How We Add Value

Why Choosing The Right Index Manager Matters?

Indexes make numerous assumptions, which can lead to mistracking (+/-), and wealth erosion if not managed with precision and skill

Index Assumptions	Reality
No transaction costs	Effective implementation techniques can minimize implicit and explicit costs (i.e., internal crossing)
All trades executed at market on close	Trading strategies can reduce turnover and improve execution
Dividends reinvested at ex date — before cash received	Equitize cash with futures when possible to minimize cash drag
Maximum foreign dividend withholding tax rate	Investors realize different withholding tax rates relative to the index, resulting in income via tax reclaims
Assumed corporate action elections	Multiple options may exist presenting opportunities to add value
Dividends are the only income source	Income from securities litigation payments or securities lending can help offset negative tracking*

* Other sources of tracking deviation may include but are not limited to transactions costs, taxes, cash drag, futures tracking versus the benchmark or securities mis-weights.

Adding Value Through Effective Implementation

Index Reconstitution

Pursue the best outcome for the client

Portfolio Rebalancing

Be pragmatic
It doesn't always make sense to trade

Index Events

Research corporate actions/events to assess impact fully and manage risk

Trading

Determine the most cost-efficient approach

Scrip Dividends

Look for the Premium Cash versus stock

Derivatives

Used to overlay cash and synthesize full exposure to equity markets

Stock Lending

Can help offset costs and potentially add value

Core Beta Research

Continuously look for opportunities to improve and evolve implementation

ESG integration/screening to our portfolios.

Global Organized Trading (GOT): Adding Value Through Trading

Strategy Design Using Expert Inputs

GOT Results

Trading

Historically achieving better trading prices relative to the index provides meaningful results

Portfolio Management

Research

2015*: \$70M+

2016*: \$11M+

Transaction Costs

2017*: \$48M+

Source: State Street Global Advisors. As of December 31, 2017. Figures in USD and approximate. This represents the aggregate gain/loss for both base and special situations.

* This includes MSCI, FTSE and S&P events. Only 2017 includes other ad-hoc intra-quarter dates.

Portfolio Rebalancing: Be Pragmatic

Example: S&P Quarterly Rebalance March 2017

	S&P500 Index	S&P400 Index	S&P600 Index
Rebalance Turnover	0.87%	4.27%	4.13%
Traded	0.55% approx. <small>(Typical State Street Global Advisors S&P500 portfolio)</small>	3.92% <small>(Typical State Street Global Advisors S&P400 portfolio)</small>	3.75% <small>(Typical State Street Global Advisors S&P600 portfolio)</small>
Reduction in Turnover	24%	8%	9%

By monitoring ex-ante tracking closely, we can avoid trading some of the smaller names of a given index rebalance. This **reduces the overall turnover** of a portfolio and also **reduces the transaction costs** associated with it.

Source: State Street Global Advisors. For illustrative purposes only.

Minimizing Turnover Through Internal Crossing

Index Migrations

Companies regularly move between indices

A diverse book of business creates opportunities to reduce transaction costs around index change events



As of December 2017 updated annually. Source: State Street Global Advisors. All figures are in USD. Availability of internal crossing at State Street Global Advisors may be affected by your asset class, vehicle type, jurisdiction, or other factors. * Impact and spread cost estimates are based on calculations provided by vendor tools that specialize in these estimations but are proprietary to the vendor. Commissions, taxes, and other explicit cost estimates are based on standard schedules published within State Street Global Advisors but may vary from the results experienced in actual trading. Savings are calculated by multiplying the estimated market trading costs (ranging from 10 to 20 basis points—depending on liquidity type and region) by the relevant trade volume amount. US large cap stocks account for about 64% of the noted savings.

Russell Reconstitution Trade Crossing

- Turnover due to rebalancing for the annual Russell Reconstitution totaled **\$55 billion** for the combined years 2015–2018
- Over **\$30 billion was crossed internally**. This represents an average crossing rate for the period of **55%**.
- Estimated costs to trade a full slice of US large cap stocks in the open market is 10 bps while it costs about 20 bps for US mid/small cap stocks
- **Savings** passed on to our clients are estimated to be approximately **\$34 million¹** from 2015

Russel Index Family

Russel 1000	Russel 2000 Growth
Russel 1000 Growth	Russel 2000 Value
Russel 1000 Value	Russel 3000
Russel 2000	Russel Small Cap

**State Street Global Advisors US
Russell Assets Under Management²:
\$157B**

Source: State Street Global Advisors. All currency figures in USD. Updated annually. ¹ As of June 30, 2018. Availability of internal crossing at State Street Global Advisors may be affected by your asset class, vehicle type, jurisdiction, or other factors. ² Impact and spread cost estimates are based on calculations provided by vendor tools that specialize in these estimations but are proprietary to the vendor. Commissions, taxes, and other explicit cost estimates are based on standard schedules published within State Street Global Advisors but may vary from the results experienced in actual trading. Savings are calculated by multiplying the estimated market trading costs (ranging from 5 to 20 basis points--depending on liquidity type and region) by the relevant trade volume amount. US large cap stocks account for about 70% of the noted savings.

Internal Crossing: A Powerful Source of Cost Savings & Liquidity

	Total Value ⁴	In-kind ³ /Internal Crossing/ Unit Crossing	Estimated Cost Savings ⁵	Transaction Cost Savings ⁵
US Market Case Study¹ (2015–2017)	\$108.5 Billion	90.1% of the Total	0.06% of the Total	\$64.4M
Non-US Developed Case Study² (2015–2017)	\$30.9 Billion	75.9% of the Total	0.23% of the Total	\$71.1M

Availability of internal crossing at State Street Global Advisors may be affected by your asset class, vehicle type, jurisdiction, or other factors.

¹ Based on actual client order flow trading activity in the S&P 500® Defined Contribution Commingled Fund.

² Based on actual client order flow trading activity in the Bi-Monthly EAFE ERISA Commingled Funds.

³ In-kind transfers are redemptions/contributions made via security transfers.

⁴ For calendar years 2015–2017. It is not known whether similar results have been achieved after 2017.

⁵ This represents estimated average savings across all aggregate trading over the period. These estimates are based on subjective judgments and assumptions and do not reflect the effect of unforeseen economic and market factors on decision making. There is no guarantee that a particular client transaction will experience the same level of savings. In fact, savings could differ substantially. Any savings is contingent upon other activity taking place on a given transaction day. Had other funds been selected, different results of transaction cost savings may have been achieved. All figures are in USD.

Derivatives and Other Exposures

While the goal is to remain fully invested in stocks & invest locally but
it may not be possible or the most pragmatic approach

Index Futures

Portfolios hold some residual cash to either to accommodate daily cash flows or because of dividend accruals

Futures provide a cost-efficient and liquid way of gaining exposure to the underlying index while minimizing cash drag and trading costs

Other Exposures

Investing locally is preferred; however, accessibility and cost in some markets can presents challenges

ADRs/GDRs or swaps can be used in place of locally listed securities

Securities Lending: Can Help Offset Costs and Potentially More

Securities Lending

Act of loaning a security for a specified period of time to generate additional income

Program Overview

Leading securities lending provider since 1974

Managed through State Street Securities Finance (SSSF):

- Lendable assets of \$3.86T
 - 138 borrower relationships
 - Scale & market presence is attractive for high quality borrowers
 - Manages quality of borrowers & collateral diversification
-

Focus on income generation in a risk controlled manner

Global coverage across equities and fixed income

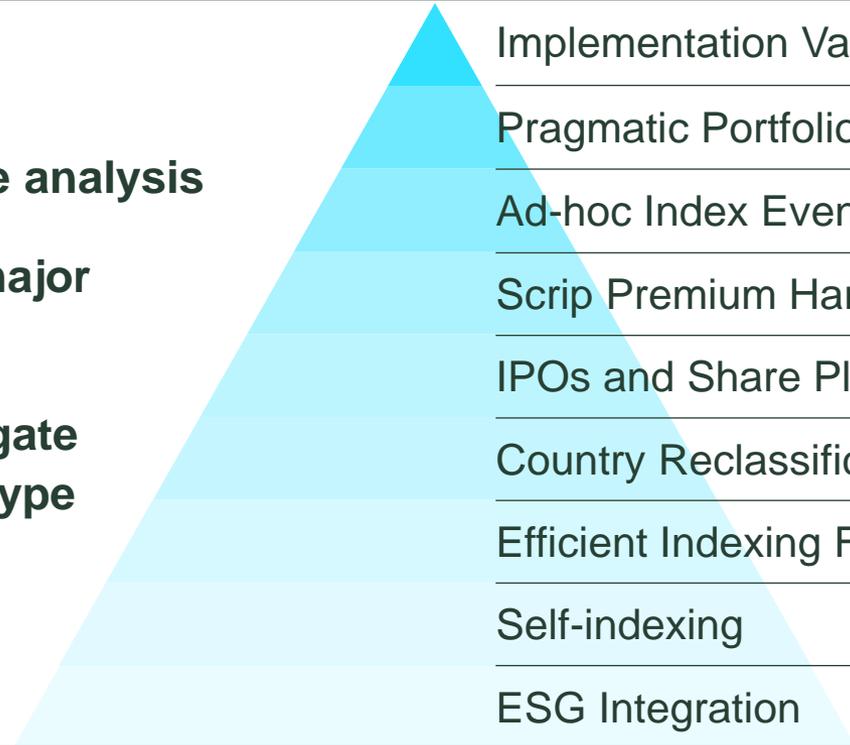
272 dedicated employees in 34 international markets

As of December 31, 2017. Figures in USD. Updated annually. Securities lending programs and the subsequent reinvestment of the posted collateral are subject to a number of risks, including the risk that the value of the investments held in the collateral may decline in value and may at any point be worth less than the original cost of that investment.

Core Beta Research: Overview

Improving portfolio implementation & building innovative core exposure strategies in an ever-evolving market microstructure

- **Robust quantitative analysis**
- **Coverage across major index families**
- **Ability to disaggregate index changes by type for further insight**



Implementation Value Add

Pragmatic Portfolio Rebalancing

Ad-hoc Index Events

Scrip Premium Harvesting

IPOs and Share Placings

Country Reclassifications

Efficient Indexing Frontier

Self-indexing

ESG Integration

The above information is for illustrative purposes only.

Why Choose State Street Global Advisors?

Indexing Skillfully Delivered

Research

Embedded research team delivering innovative solutions — such as factors, ESG and core beta implementation strategies

Client Centric Focus

Listen, understand and adapt to client needs and challenges

Performance

Deliver performance by striking the appropriate balance between return, risk and costs (>98% of funds have consistently tracked within expectations)*

Team

Tenured and stable team with dedicated portfolio managers averaging 19 years experience

Asset Stewardship

Effective steward of client assets with a coordinated firm wide proxy voting platform and focused engagement

Source: State Street Global Advisors. * Based on cumulative quarterly gross-of-fees returns for 1,322 GEBS managed pooled, and separate account portfolios from April 1, 2018 to June 30, 2018. Tracking error based on the difference between portfolio and benchmark cumulative returns.

Additional Information

Index Vehicle Considerations for Institutional Investors — US

	CIT	Segregated Account	ETF	Mutual Fund	Notes
Investor Eligibility	ERISA (DB & DC) & tax exempt entities	All Institutions	All	All	CITs and segregated accounts are not registered products.
Holding Period	Long	Long	Varies by client but typically <1 yr	Long	Institutions may use ETFs for tactical or short term purposes. However, longer term use cases may also apply.
Mandate Size	Some minimum size requirements	Preferably large	No size requirements	No size requirements	Mutual funds may have multiple share classes with different fee and investment minimums.
Relative Price Range	Low to Ultra-Low	Typically High with fee minimums	Ultra- Low to Mid	Low –High (varies by manager/fund)	Effective fee rates vary based on mandate size. However, CITs generally have a lower effective fee rate than other investment vehicles listed.
Ability to Replicate	Yes	Yes — assuming sufficient size	Yes	Yes	Replication may vary by strategy or mandate size. Generally, smaller segregated accounts and/or less liquid exposures may be optimized.
Customization	Possible but limited	Yes	No	No	CITs can be combined to create custom fund of fund structures.
Transaction Costs	Typically Lower	Higher	Typically lower*	Medium	CITs (ex DC funds) isolate t-costs at the individual client level., thus shielding market impact from other participate flows. ETFs can minimize t-costs through the 'create redeem' process.
Account set-up/ Opening & Maintenance	None for existing funds — some legal maintenance	Complex (all)	Purchased on exchange — registered fund	Purchased on exchange — registered fund	Set up time for segregated accounts can be complex and lengthy, particularly in the case of emerging markets. Additional legal attention and documentation are required as well.

* Frequent trading of ETFs could significantly increase commissions and other costs such that they may offset any savings from low fees or costs.

Fixed Income Index Investing

A Leader in Fixed Income Indexing

We Offer Real Breadth and Depth in Fixed Income

- Managing fixed income index strategies for over 30 years
- Over 40 fixed income strategies offered globally
- Investment centres in Boston, London, Singapore, Sydney, and Tokyo

Our Heritage is Index Investing

- Over 30 portfolio managers and dedicated trading desk
- Our PMs average more than 15 years of experience
- Expertize across all major regions, currencies and sectors

Innovative Client Investment Solutions

- Market-leading research
- Real-world innovations that unlock new markets for investors
- ESG investment solutions

As of September 30, 2018

Intelligent Indexing in Fixed Income

Index Change Strategies

Minimize Turnover
Pursue the best outcome for the client

Portfolio Rebalancing

Be pragmatic
It doesn't always make sense to trade

Primary Markets

Look for the premium:
Access liquidity

Security Selection

Experienced portfolio managers skilfully incorporate relative value in sampling approach

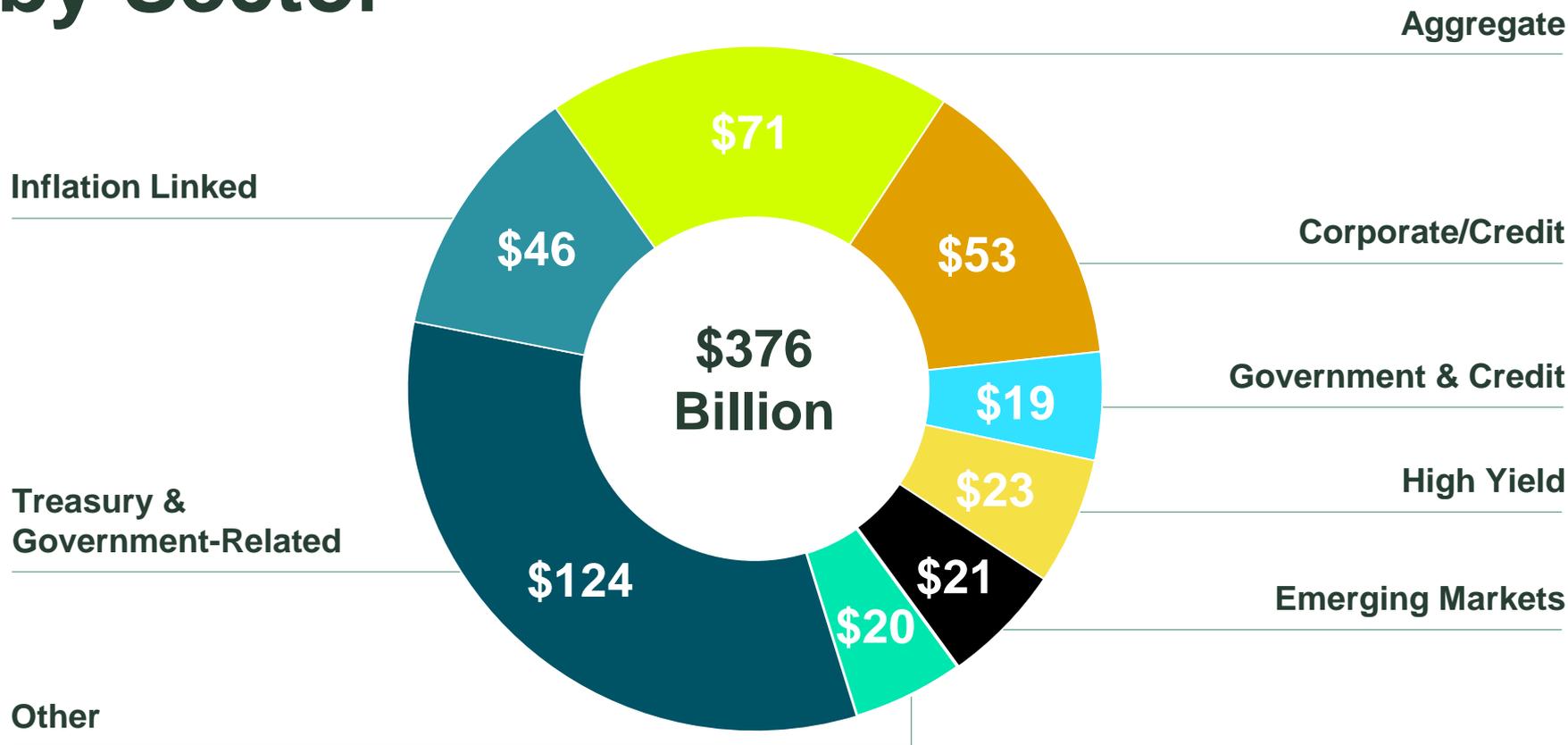
Trade Execution

Minimize costs
Experienced specialists, global reach and wide broker network

Minimising Tax Drag

Proactive positioning across taxable strategies (e.g., Emerging Market Debt)

Indexing Assets Under Management by Sector



As of September 30, 2018

Source: BIG (Fund View). Total Assets Under Management (AUM) is stated in USD and is for Fixed Income assets managed by the Fixed Income Beta Solutions team only, exclusive of all cash and securities lending assets and fixed income portfolios managed by ISG. All calculations are unaudited.

Other includes: indexing accounts with large degrees of customization, Convertible, Securitized and Municipal Indexing Strategies.

Fixed Income Indexing AUM of US\$376.07 bn is equivalent to: EUR 324.10 bn; GBP 288.63 bn ; CHF 369.28 (based on Bloomberg FX data as at date shown).

Research and Innovation

From Early Days

To Present Times

1993

Creators of the
World's First ETFs

SPDR®

2004

US High Yield
Indexed Strategy

2011

First Indexed Local
EM Bond Fund

2014

First US
Convertible Bond
Indexed ETF

2016

Multi-Factor Emerging
Markets Bond Strategy

Important Disclosure: ETFs managed by State Street Global Advisors have the oldest inception dates within the US, Hong Kong, Australia, and Singapore. State Street Global Advisors launched the first ETF in the US on January 22, 1993; launched the first ETF in Hong Kong on November 11, 1999; launched the first ETF in Australia on August 24, 2001; and launched the first ETF in Singapore on April 11, 2002.

Global Presence — Local Expertize

US Team

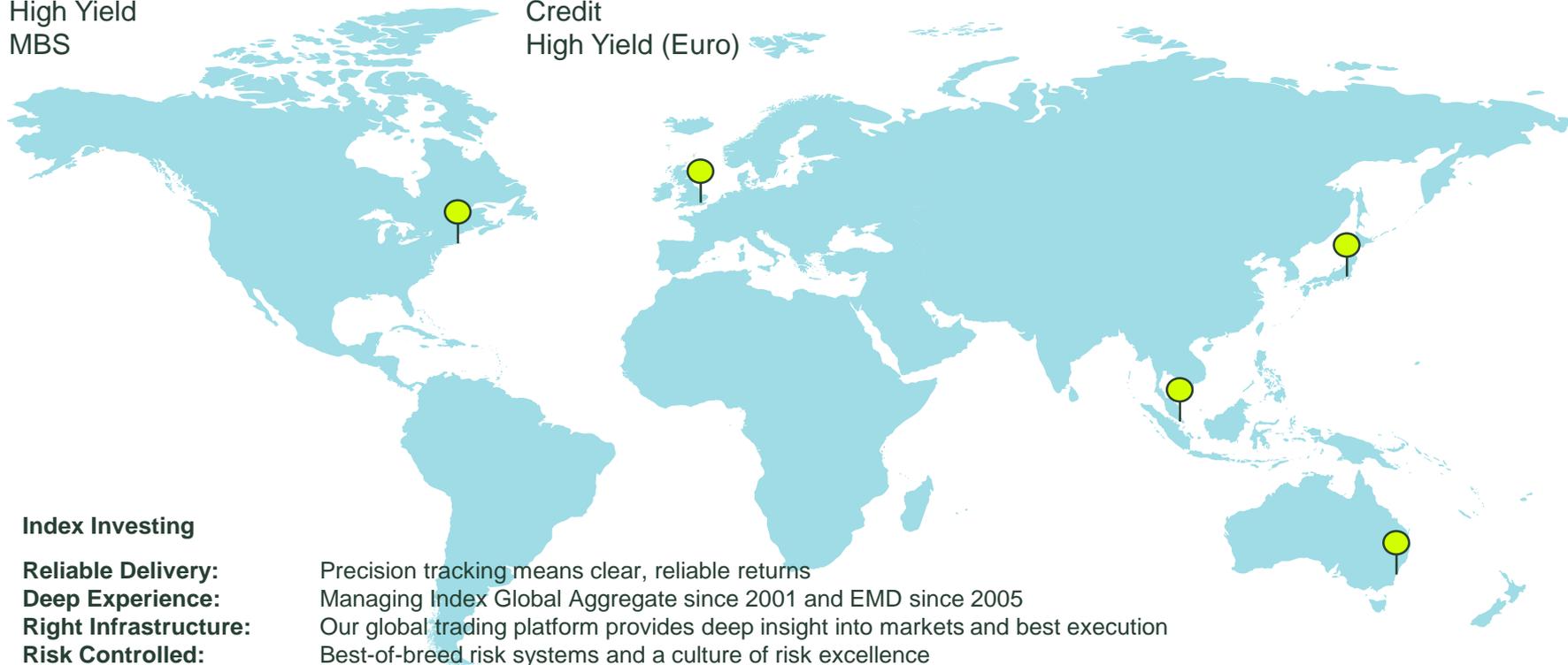
US Aggregate
Treasury
Credit
High Yield
MBS

European Team

European & Global Aggregate
Emerging Market Debt (HC & LC)
Treasury
Credit
High Yield (Euro)

Asia-Pacific Team

Asian Aggregate
Treasury
Credit



Index Investing

- Reliable Delivery:**
- Deep Experience:**
- Right Infrastructure:**
- Risk Controlled:**

Precision tracking means clear, reliable returns
Managing Index Global Aggregate since 2001 and EMD since 2005
Our global trading platform provides deep insight into markets and best execution
Best-of-breed risk systems and a culture of risk excellence

150+ Dedicated Fixed Income Professionals Globally

Global Chief Investment Officer



Matthew Steinaway, CFA

Indexed Fixed Income

Venky Venkataramani, CFA
Global Head of Fixed Income Beta

Indexing
Smart Beta

33 Investment Professionals

Macro Strategies

Matthew Nest, CFA
Global Head of Macro Strategies

Currency Solutions
Active Rates
Multi-sector Fixed Income

23 Investment Professionals

Credit Strategies

Chuck Moon
Global Head of Credit Strategies

High Yield
Investment Grade
Municipals
Structured Credit
Short Maturity Credit

23 Investment Professionals

Cash Management

Pia McCusker
Global Head of Cash Management

Cash Management
Securities Lending
Cash & Structured Credit Research
Enhanced Cash

22 Investment Professionals

Fixed Income Quantitative Research

Ramu Thiagarajan, PhD
9 Research Analysts

9 FI Portfolio Strategists & Specialists

Insurance Solutions

Mark Johnston
6 Investment Professionals

18 Traders
(11 Fixed Income & 6 FX)

Smart Beta

Collin Crownover, PhD

13 ESG & Corporate Governance Professionals*

As of September 30, 2018

* Cover Fixed Income and Equities.

CFA® is a trademark of the CFA Institute.

Specialization within Fixed Income

North America Index Investing Organization

Specialization provides the insights to manage multiple portfolios and is designed to deliver world-class index solutions and performance



Venky Venkataramani, CFA
Global Head of Fixed Income Index Strategies



Patrick Bresnehan, CFA
North America Head of Fixed Income Index Strategies

Credit

Mike Brunell, CFA
Brad Sullivan, CFA
Christopher Distefano
Kyle Kelly, CFA, FRM

Dave Marchetti, CFA
Frank Miethe, CFA
Read Burns
Christian Hoffmann, CFA

Global Rates

Jim Kramer
Orhan Imer, PhD, CFA
Nikita Imennov, PhD, FRM

Cindy Moy
Joanna Madden

Securitized

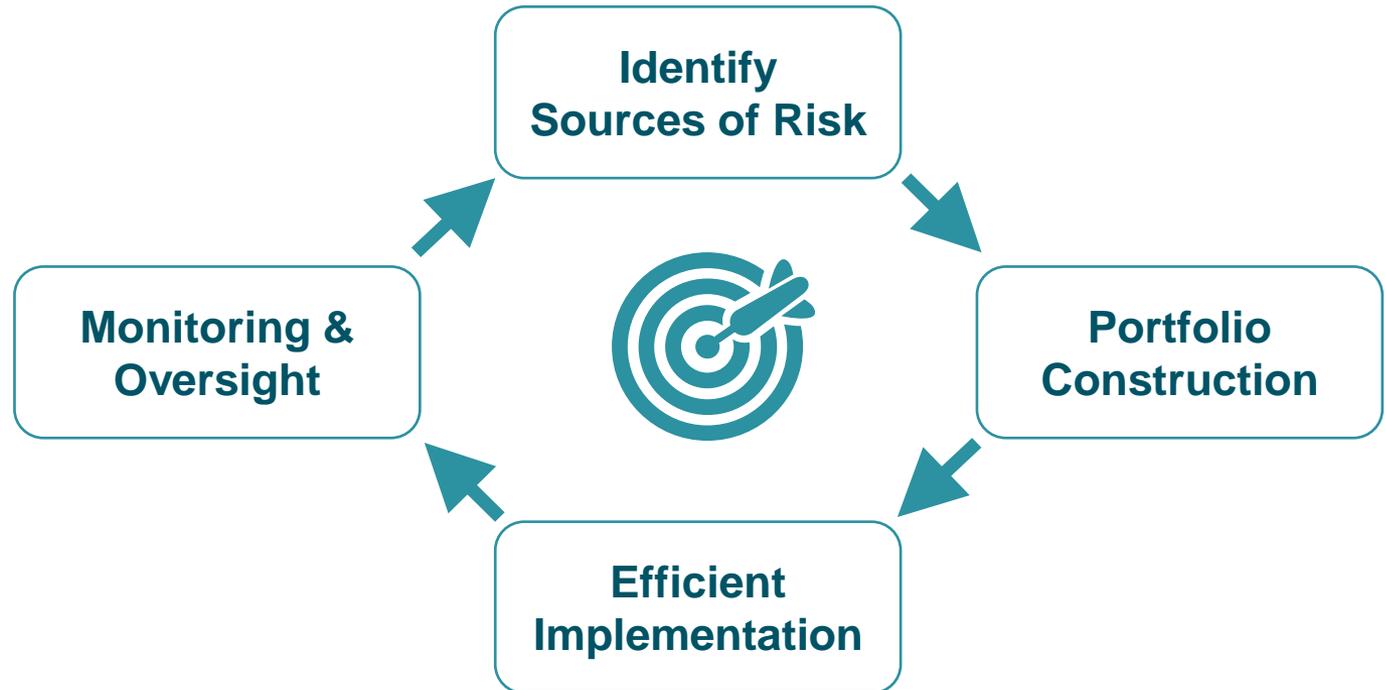
Marc DiCosimo, CFA
Nic Fischer, CFA
Mike Przygoda, CFA

Source: SSGA, as of September 30, 2018.

Index Investment Process

Index Investment Management Process

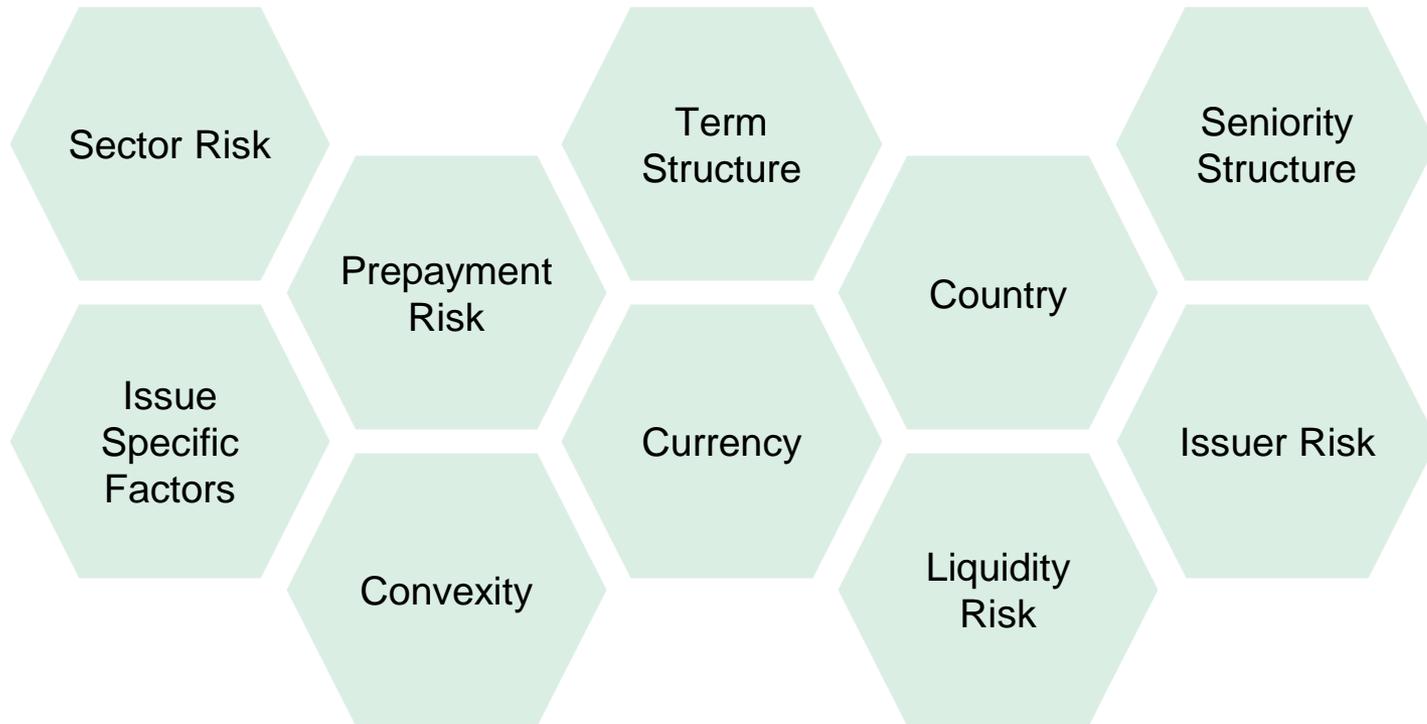
- We understand markets
- We manage risks and costs
- Aim to deliver superior index investment outcomes



Source: SSGA

We Identify Sources of Risk

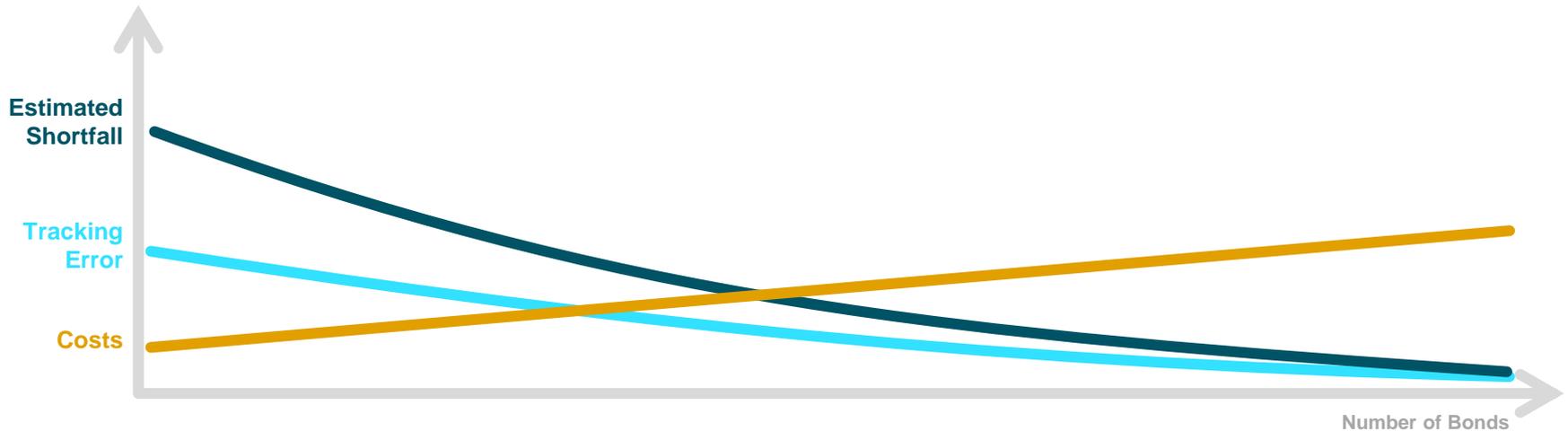
We slice the benchmark into precise risk categories and construct investment portfolios designed to deliver the desired investment outcome.



Source: SSGA

Constructing the Portfolio

Our stratified sampling process has a proven track record of delivering consistent investment outcomes



From Stratified Sampling

Best for broad investment-grade mandates
We aim to minimize risk exposures and limit trading costs to achieve consistent tracking error

To Full Replication

Employed in a small set of indices with highly liquid securities. High transaction costs may increase tracking error for larger indices

The above information is for illustrative purposes only.

We Trade and Implement Efficiently

Portfolio Managers Work with Our Dedicated Securitized Trading Desk to Achieve Best Execution

- Centralized trading desk
- Dedicated EMD, Credit and MBS Traders

Strong Relationship with Major Broker/Dealers

- Leverage our size to achieve superior execution
- Trade in primary and secondary markets
- Adapt trading venue for size, instrument and conditions

Global Desk In Place For Over 16 Years

24-hour trading capabilities, with traders located in Boston, London, and Hong Kong

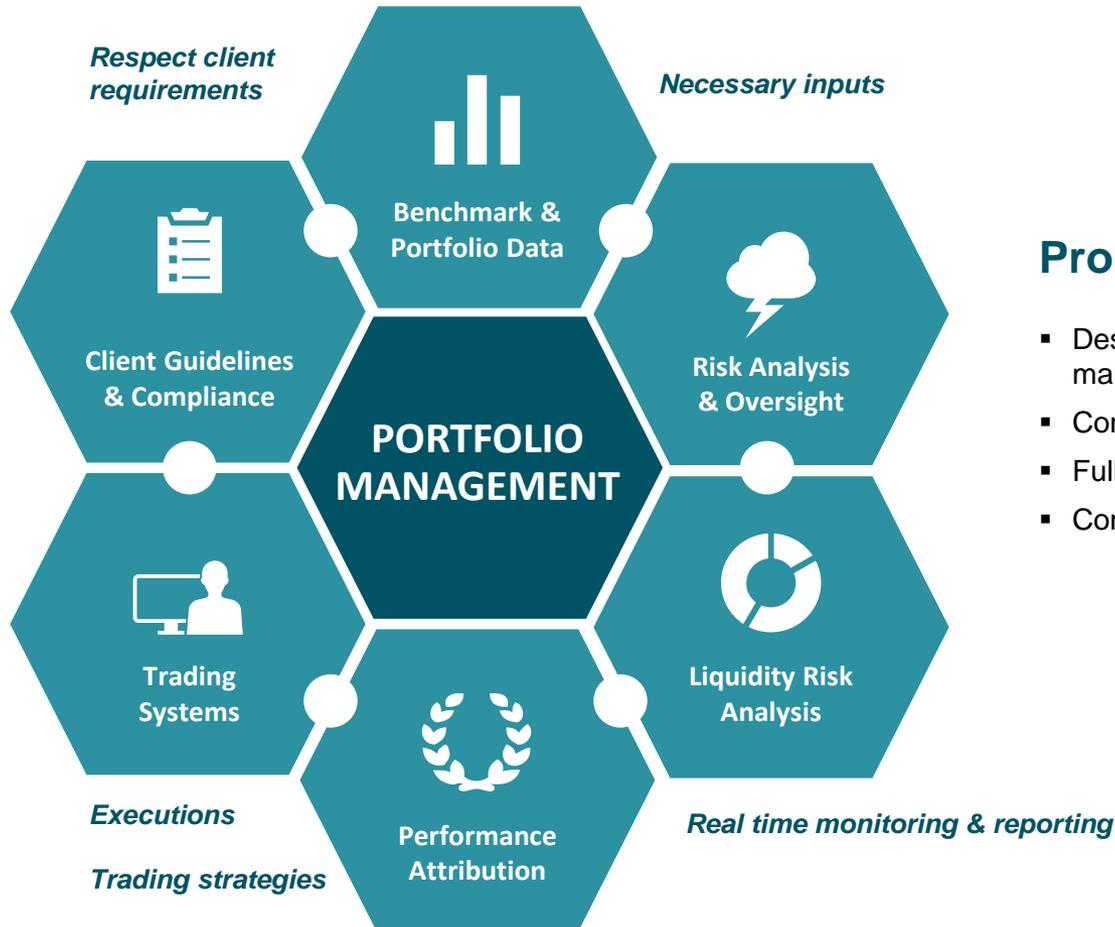
**34 Traders Servicing
243 Portfolio Managers Across
10 Investment Centres**

US\$2.3 trillion notional traded in 2017

**2.9 Million Tickets
Executed Last Year**

As of January 18, 2018. Asset classes include equity, fixed income, futures and currency Fixed Income figures include activity under Boston and London desks only.

Interconnected Functions Improve Control and Oversight



Proprietary PM System

- Designed and built around our portfolio management process and workflow
- Comprehensive view of portfolios
- Full data integration with other SSGA applications
- Continuous development and improvements

Where does performance come from?

What We Deliver

Fixed income business with **proven track record**

Expertize across all major regions, currencies and sectors

Managed by an **experienced team** within a **disciplined framework**

Investment innovation unlocks new markets and strategies

Emphasis on **collaboration** to support clients in achieving the desired outcome

Appendix A: Important Disclosures

Important Disclosures

For Investment Professional Use Only.

Past performance is not an indicator of future results. Diversification does not ensure a profit or guarantee against loss.

Equity securities are volatile and can decline significantly in response to broad market and economic conditions.

Indexing strategies are managed with a passive investment strategy, attempting to track the performance of an unmanaged index of securities. As a result, indexing strategies may hold constituent securities of the Index regardless of the current or projected performance of a specific security, which could cause their return to be lower than if they employed an active strategy. While the strategy seeks to track the performance of the Index as closely as possible, its return may not match or achieve a high degree of correlation with the return of the Index due to operating expenses, transaction costs, cash flows and operational inefficiencies.

Foreign investments involve greater risks than US investments, including political and economic risks and the risk of currency fluctuations all of which may be magnified in emerging markets. Investing in foreign domiciled securities may involve risk of capital loss from unfavourable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations. Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Currency Risk is a form of risk that arises from the change in price of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

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Investing in futures is highly risky. Futures positions are considered highly leveraged because the initial margins are significantly smaller than the cash value of the contracts. There are a number of risks associated with futures investing including but not limited to counterparty credit risk, basis risk, currency risk, derivatives risk, foreign issuer exposure risk, sector concentration risk, leveraging and liquidity risks.

Derivative investments may involve risks such as potential illiquidity of the markets and additional risk of loss of principal.

Investing involves risk including the risk of loss of principal. Past performance is not a guarantee of future results.

This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected. The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor. All material has been obtained from sources believed to be reliable. There is no representation or warranty as to the accuracy of the information and State Street shall have no liability for decisions based on such information.

Bonds generally present less short term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Investing in high yield fixed income securities, otherwise known as "junk bonds", is considered speculative and involves greater risk of loss of principal and interest than investing in investment grade fixed income securities. These Lower-quality debt securities involve greater risk of default or price changes due to potential changes in the credit quality of the issuer.

Important Disclosures

Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long term returns.

ETFs trade like stocks, are subject to investment risk, fluctuate in market value and may trade at prices above or below the ETFs net asset value. Brokerage commissions and ETF expenses will reduce returns.

Passively managed funds invest by sampling the index, holding a range of securities that, in the aggregate, approximates the full Index in terms of key risk factors and other characteristics. This may cause the fund to experience tracking errors relative to performance of the index.

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Appendix B: Biography

Biography



Sonya K. Park

Sonya is a Vice President of State Street Global Advisors and a Senior Relationship Manager in the San Francisco Office. She is responsible for managing existing SSGA client relationships and driving new business development in the Western U.S. Prior to joining State Street Global Advisors in 2011, Sonya was a Vice President at Dimensional Fund Advisors in the Institutional Sales & Services Group.

Prior to Dimensional Fund Advisors, Sonya was an Associate Director at Watson Pharmaceuticals. Sonya has also worked at Lehman Brothers as an Equity Research Analyst and began her career at SEI Corporation.

Sonya earned a BA from the University of Pennsylvania and an MBA from the NYU Stern School of Business and has been working in the financial services industry since 1993. Sonya holds the FINRA 7 and 63 registrations. Sonya also holds the NFA Series 3 and is an Associated Person of SSGA Funds Management, Inc. ('SSGA FM') SSGA FM is a Commodity Trading Advisor registered with the Commodity Futures Trading Commission.