BOARD OF GOVERNORS
Investment Committee

Wednesday, May 24, 2017
Public Session
10:40 a.m. to 11:50 a.m.
North Campus, ERC 3023
Toll-Free: 1-877-385-4099 Participant Passcode: 1028954#

Members: Nigel Allen (Chair), Miles Goacher, Adele Imrie, Tim McTiernan, John Speers, Tyler Turecki

Staff: Robert Bailey, Craig Elliott, Cheryl Foy, Douglas Holdway, Brad MacIsaac, Sue McGovern, Deborah Saucier

Guests: Stephen Pitts & Peter Dawkins (PH&N)

AGENDA

No.	Topic	Lead	Allocated Time	Suggested End Time
1	**Call to Order**	Chair	1	
2	**Agenda (M)**	Chair	2	
3	**Conflict of Interest Declaration**	Chair	2	
4	**Chair's Remarks**	Chair	5	
5	**Approval of Minutes of the Meeting of February 15, 2017* (M)**	Chair	5	10:55 a.m.
6	**Investment Review**			
6.1	Fourth Quarter Investment Review* (D)	PH&N	20	11:15 a.m.
7	**Investment Learning – Diversified Growth Funds* (D)**	PH&N	15	11:30 a.m.
8	**PH&N Investor Seminar – March 13, 2017* (U)**	Chair	10	11:40 a.m.
9	**Other Business (M)**		5	11:45 a.m.
10	**Termination (M)**		5	11:50 a.m.
	M - Motion			
	U - Update			
	D - Discussion			
	* Documents attached			

Becky Dinwoodie, Secretary

BOARD OF GOVERNORS
Investment Committee

Public Session Minutes for the Meeting of February 15, 2017
10:55 a.m. to 12:00 p.m., ERC 3023

Attendees: Nigel Allen (Chair), Miles Goacher, Tim McTiernan, John Speers (*via teleconference*), Tyler Turecki

Staff: Becky Dinwoodie, Craig Elliott, Cheryl Foy, Doug Holdway, Sue McGovern

Guests: Leila Fiouzi and Peter Dawkins from PH&N

Regrets: Adele Imrie

1. Call to Order

The Chair called the meeting to order at 10:59 a.m.

2. Agenda

Upon a motion duly made by J. Speers and seconded by T. Turecki, the Agenda was approved as presented.

3. Conflict of Interest Declaration

There was none.

4. Chair's Remarks

The Chair kept his remarks very brief. He welcomed D. Holdway to the meeting, as he attended his first Investment meeting as a guest. The Chair also welcomed L. Fiouzi and P. Dawkins. He noted that the Committee would be receiving a timely presentation on the effect of U.S. protectionism.

5. Approval of Minutes of the Meeting of November 16, 2016

Upon a motion duly made by T. Turecki and seconded by J. Speers, the Minutes were approved as presented.

6. Investment Review
6.1 Third Quarter Investment Review

L. Fiouzi provided an overview of the portfolio's performance and reviewed the report with the Committee.

(M. Goacher joined the meeting at 11:08 a.m.)

7. Investment Learning – Economic Impact of U.S. Protectionism

L. Fiouzi informed the Committee that the market reaction to the US election results has been positive and the US currency has strengthened. Further, bond yields have gone up. The credit spreads have narrowed and investors are demanding less risk for holding a bond.

L. Fiouzi reviewed the key drivers of the rally:
- U.S. corporate tax cuts
- Stronger global economy
- Commodity rebound – increase of oil price
- Political maneuvering – personal tax cuts, infrastructure spending, reduce regulation

It is important to examine the starting point. L. discussed economic slack – it has shrunk in a number of countries. The global recession risk has fallen. In the US, the recession risk has not changed much due to the uncertainty of the situation.

Protectionism

We can see slow growth and a disparity in income levels. For the past few years, we have seen globalization weakening and a change in the structure of the global economy. There is more economic parity internationally. The impact of the fall of the Soviet Bloc was discussed. The turning point for China was when it joined the World Trade Organization in 2000.

Populism

The new focus of populism is changing the shift – it reflects that a section of the population feels left behind. A few of the factors contributing to the rise in populism are the decline in manufacturing jobs as a result of automation, and immigration.

L. Fiouzi reviewed the concerns associated with U.S. Protectionism, including:

1. Policy Balloons -
Trump platform includes potential for:
- o 45% China tariff and 35% Mexico tariff
- o 35% tariff on U.S. firms that open factories overseas
- o "Border adjustability" tariff of 25%

- o Blanket 5% tariff

It also includes the potential to cancel the TPP and European trade plans, and to renegotiate NAFTA.

Appointments
- o Political appointments contradict view that Trump will tack to the center
- o Peter Navarro, a known China hawk, is set to lead the National Trade Council
- o Wilbur Ross, the Commerce Secretary, wants more selective free trade

Powers
- o President can exit trade deals and can veto new trade deals without Congress
- o Tariff of up to 15% already allowed against nations with large trade surplus and tariff of up to 50% already allowed against nations that "discriminate" vs U.S.
- o U.S. already active: initiated 74 anti-dumping investigations from 2013 to 2015
- o American courts not allowed to interfere to stop a trade war

L. Fiouzi examined which countries would be most affected by US protectionism, including Mexico as the biggest exporter to the US. China has the largest trade deficit with the US and is most likely to be the target of protectionist measures. In the short term, Trump's policies are likely to have a positive impact but will be negative in the long term. The high tech sector is reliant on foreign labour.

The links between the type of government and economic growth were examined. Regardless of what type of society is it, protectionism has a negative impact on the economy. The biggest cause of populism is the displacement of people and the number of internally displaced people is at its highest level.

(J. Speers left the meeting at 11:30 a.m.)

There was also a discussion regarding the reasons for Brexit and the challenges of implementing it. L. Fiouzi identified potential future populist risks - Italy is at highest risk as of November 2016. She noted upcoming changes to monitor, including elections in Iran, Mexico and Russia.

The key themes for 2017 and beyond:
- Better growth prospects
- Financial market rotation
- Rise of populism around the world
- Shift from monetary to fiscal stimulus
- Higher inflation

L. Fiouzi advised that she will be unable to attend the Committee meeting on May 24 and Stephen Pitts will attend instead.

(L. Fiouzi and P. Dawkins left the meeting at 11:42 a.m.)

8. Disbursement Committee Recommendation

C. Elliott presented the endowment disbursement recommendations to the Committee. At our current investment level, we need to disburse between 3-4% of the principal value to cover our gift requirements. The Disbursement Committee recommended a distribution of 4% totalling $480,000. He identified the members of the Disbursement Committee.

Upon a motion duly made by M. Goacher and seconded by T. Turecki, pursuant to the recommendation of the Disbursement Committee, the Investment Committee recommended that the Board of Governors approve the disbursement of $480,000 from the Endowment Funds to be distributed as student awards in 2017-18.

(D. Holdway left the meeting at 11:47 a.m.)

C. Elliott responded to questions from the Committee. There was a discussion regarding whether we have long-term targets as to where we want to be for scholarships in comparison to other institutions. Consideration must be given to not only how much money we have to disburse, but to whether we have qualified students to whom to disburse the funds. As we think about the growth of the institution, we must think about how to disburse endowments. S. McGovern advised that some of the terms of donations are too specific and it becomes a challenge to find students who meet all of the criteria.

9. Annual Review of Statement of Investment Policies (SIP)

C. Elliott presented the SIP and there were no recommended changes. He responded to questions from the Committee.

10. Annual Review of Endowment Policy

C. Elliott presented the Endowment Policy and there were no recommended changes. He responded to questions from the Committee.

11. Other Business

12. Termination

There being no other business, upon a motion duly made by T. McTiernan and seconded by T. Turecki, the meeting terminated at 11:54 a.m.

Becky Dinwoodie, Secretary

Presentation to
University of Ontario Institute of Technology

Public Session

Stephen Pitts, CFA
Portfolio Specialist

Peter Dawkins
Associate

May 24, 2017

Wealth Management
PH&N Investment Counsel

Summary Investment Returns
March 31, 2017

Market Value:	Investment Account	$23,015,785
	Cash Account	$ 537,111

	Three Months %	One Year %	Three Years %	Five Years %	Since Inception* %
UOIT (Investment A/C)	3.78	13.07	7.74	9.10	8.42
*Benchmark ** *	3.44	12.44	6.54	7.72	7.59
Difference	+0.34	+0.63	+1.20	+1.38	+0.83

*Inception date Aug 31, 2010

	Three Months %	One Year %	Three Years %	Five Years %	Since Inception* %
UOIT (Cash A/C)	0.27	0.94	0.99	-	0.99
FTSE TMX Canada 30 Day T-Bill	0.13	0.48	0.62	-	0.64
Difference	+0.14	+0.46	+0.37	-	+0.35

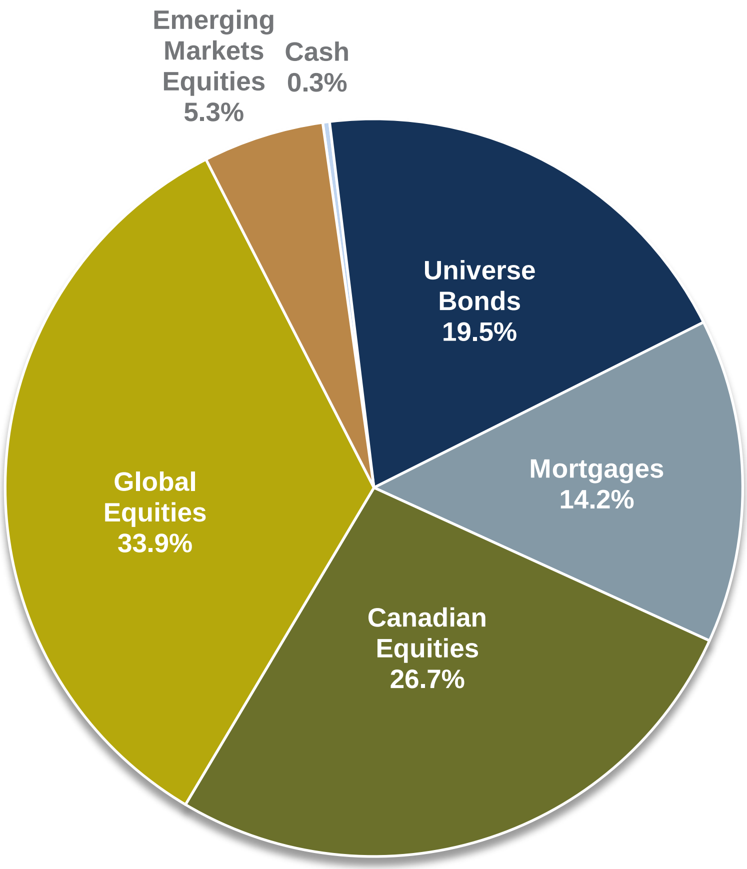
*Inception date Nov 30, 2013

** Current Custom benchmark: 20% FTSE TMX Canada Universe Bond Index; 15% FTSE TMX Canada Short Term Overall Bond Index; 27% S&P/TSX Capped Composite Index; 33% MSCI World Net Index (C$); 5% MSCI Emerging Markets Net Index (C$).

Note: All performance is shown gross of annual investment management and custody fees of 38 basis points.

Wealth Management
PH&N Investment Counsel

University of Ontario Institute of Technology
Asset Mix as at March 31, 2017



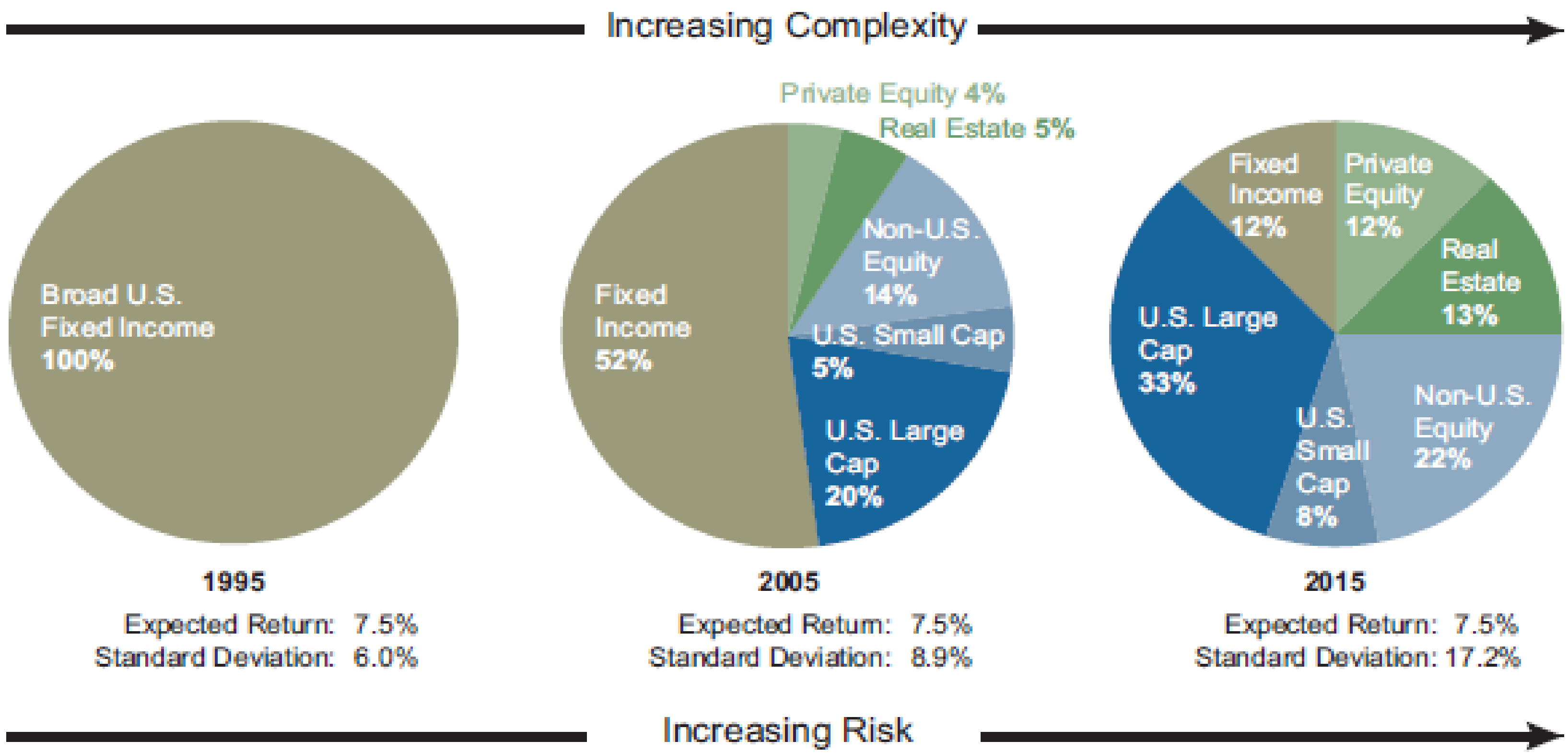
Asset Class	Target Allocation (%)
Cash and Cash Equivalents	0.0
Conventional Mortgages	15.0
Universe Fixed Income	20.0
Canadian Equities	27.0
Global Equities	33.0
Emerging Market Equities	5.0

Diversified Growth Funds

A Challenging Environment Has Led to New Investor Realities

Meeting Future Objectives from 2017

- Take More Risk
- Add New Asset Classes
- Increase Fulfillment Complexity
- Manage Asset Mix



Source: Callan Capital Market Projections

What are the Implications for Institutional Investors?

- More **Time, Energy** and **Resources** must be devoted to:
  - Managing asset mix over short and long term horizons
  - Benchmarking performance against multiple objectives
  - Researching and understanding new investment products
  - Monitoring more investment managers
  - Managing the liquidity and cash flows of complex portfolio structures
  - Keeping management fees under control

The DGF Concept

Increasing Manager Flexibility to Pursue Better Risk-Adjusted Returns

Lower **Degree of Manager Flexibility** *Higher*

Typical Growth Portfolio

- Domestic Equities
- Foreign Equities
- Alternatives

Diversified Growth Fund

Dynamically Managed array of growth strategies including **Equities, Credit, Alternatives Etc…**

Investor **Responsibility for Asset Allocation** *Managers*

RBC Wealth Management
PH&N Investment Counsel

Diversified Growth Funds
What are they?

- **DGFs are:**
  - Targeting equity-like returns with less risk
  - Multi-asset class diversified solutions
  - Total return oriented over a full market cycle (Cash/CPI+ Benchmark)
  - Dynamically managed with a high degree of asset allocation flexibility
  - Focused on risk management and tail risk mitigation

- **DGFs are not:**
  - Hedge Funds
  - Tactical Asset Allocation vehicles
  - Credit Beta
  - Magic

Diversified Growth Funds
Background

- The term "DGF" was first coined in ***2006*** by HSBC[1] to describe the emergence of a "new age balanced fund" in the UK

  - ***1990s***: Allocations to bonds and equities that were static relative to the benchmark
  - ***Early 2000s***: Wider range of asset classes and more benchmark agnostic
  - ***Post 2008***: Increasing emphasis on dynamic asset allocation

[1] "Diversified Growth Funds: A Recipe for Growth", HSBC Actuaries and Consultants, August 2006

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Diversified Growth Funds
Evolution

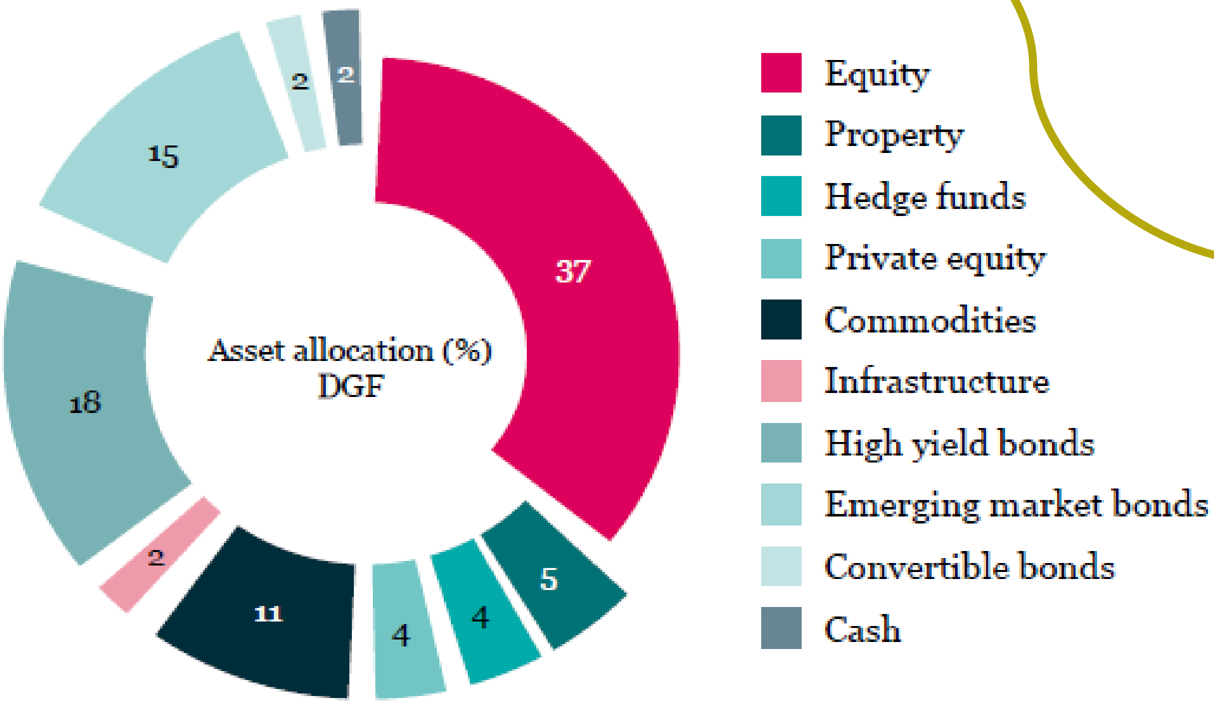
- Proliferation has led to different ***sub-classes of DGF*** strategies, primarily differentiated by the sources of risk and return driving performance[1]

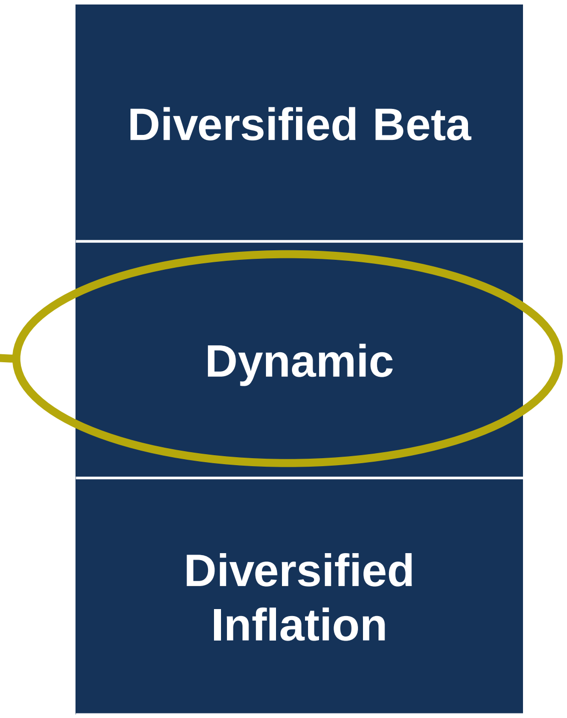
Diversified Beta	Dynamic	Diversified Inflation
• Passively managed funds with fairly static asset allocation	• Dynamic portfolio construction mixing strategic and opportunistic asset allocation • Greater focus on risk management	• Explicit focus on real assets (real estate, infrastructure, commodities, RRBs) • Targeting growth with inflation sensitivity

[1] Sources: Cambridge Associates, Mercer, HSBC Global Asset Management

Diversified Growth Funds
Example

Asset Allocation Snap Shot in a Leading Dynamic DGF[1]





[1] Source: Buck Consultants

Diversified Growth Funds

How are They Being Used by Institutional Investors?

Growth Portfolio Replacement

- *Substitute **entire exposure** to growth assets (e.g. equities) by one or more DGF managers*
- *Typically small and medium-size pension plans, de-risking pension plans*

Growth Portfolio Complement

- *Dedicate **a portion** of growth assets (e.g. equities) to one or more DGF managers*
- *Typically public and large pension plans*

Outcome-Oriented Investors

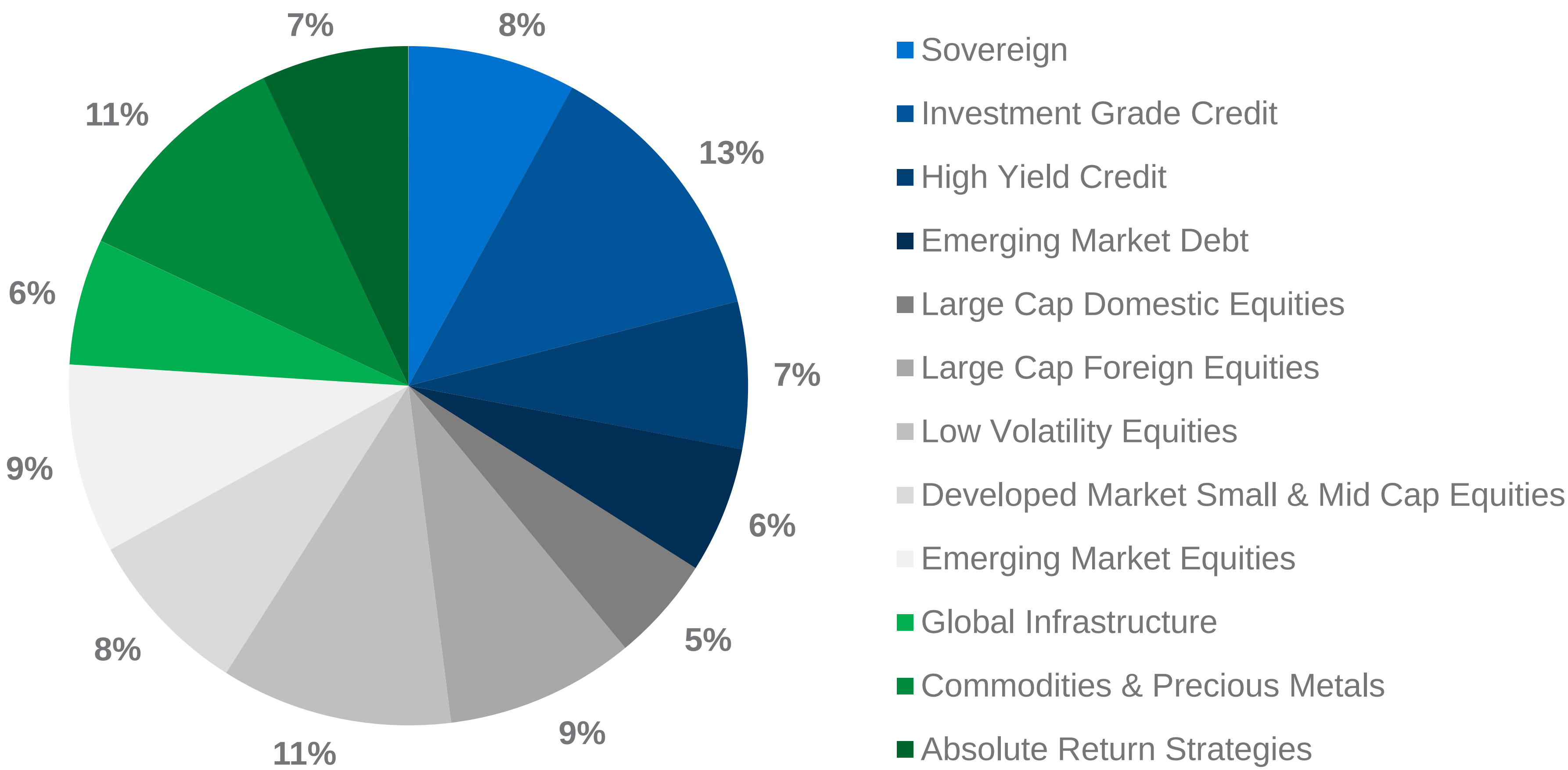
- *Dedicate **a portion** of total assets to one or more DGF managers*
- *Typically public pension plans, endowments and foundations*

DC Investment Option

- *Allow plan members to allocate to one or more DGF managers / **set as part of default option***

Diversified Beta Fund

Sample Asset Mix* – *For Illustrative Purposes*

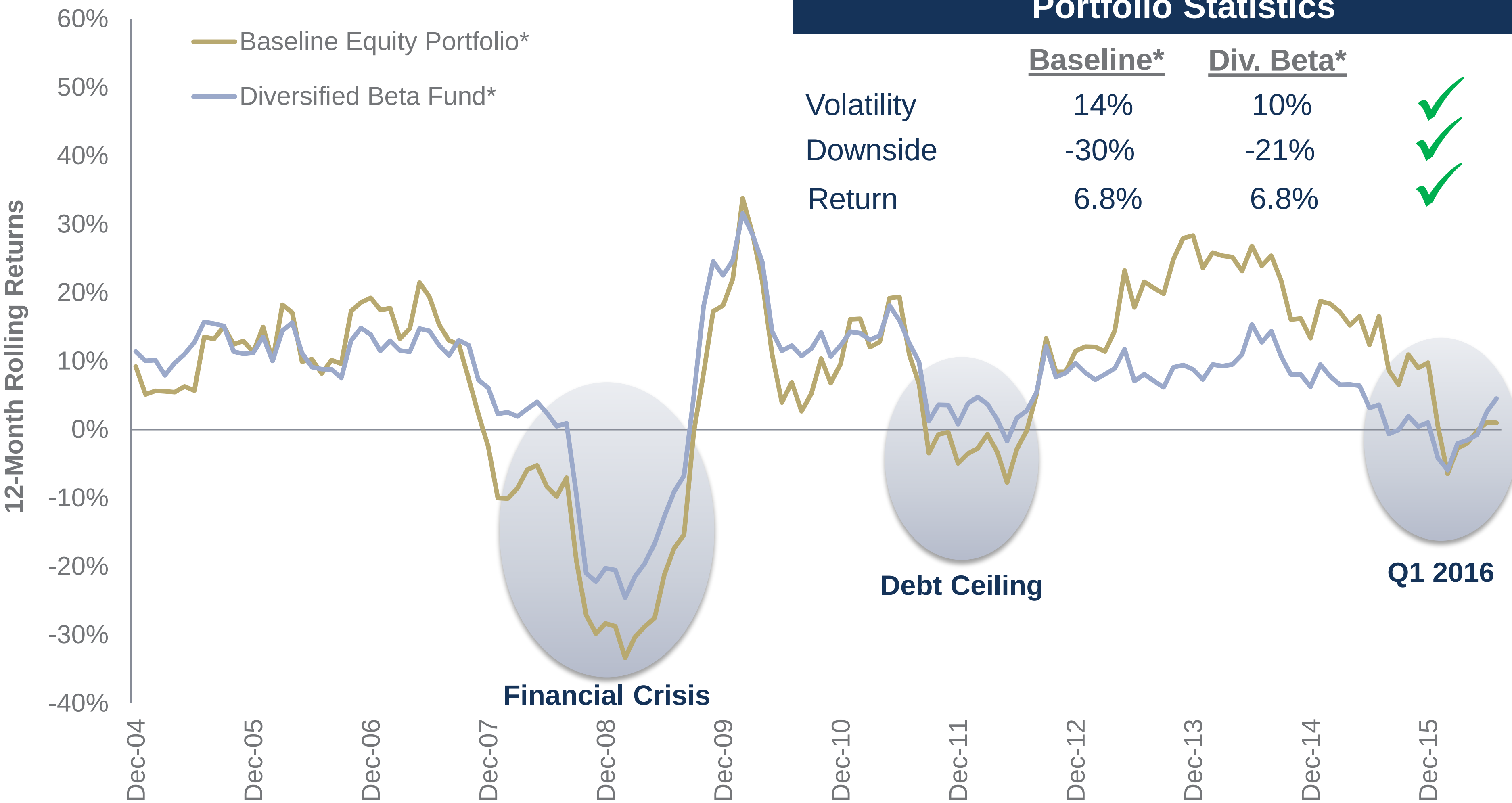


Total Sovereign:	**8%**
Total Credit:	**26%**
Total Equity:	**42%**
Total Alternatives:	**24%**

*See portfolio disclosures and methodology described in appendix.

Aiming to Achieve Equity-Like Returns With Lower Risk

Simulated Historical Analysis – *For Illustrative Purposes*



Portfolio Statistics

	Baseline*	Div. Beta*	
Volatility	14%	10%	✓
Downside	-30%	-21%	✓
Return	6.8%	6.8%	✓

*See portfolio disclosures and methodology described in appendix. January 2004 to July 2016

This information is meant for investors with sophisticated investment knowledge sufficient to fully understand the risks and limitations of simulated performance data. Simulated performance data is for illustrative purposes only and not indicative of actual results. Please refer to the simulation disclosure at the end of this presentation for complete disclosure of notes and simulated performance information.

Dynamic DGF
Adjusting Risk Allocations to Enhance Downside Protection

Basic Principle of Dynamic Risk Allocation

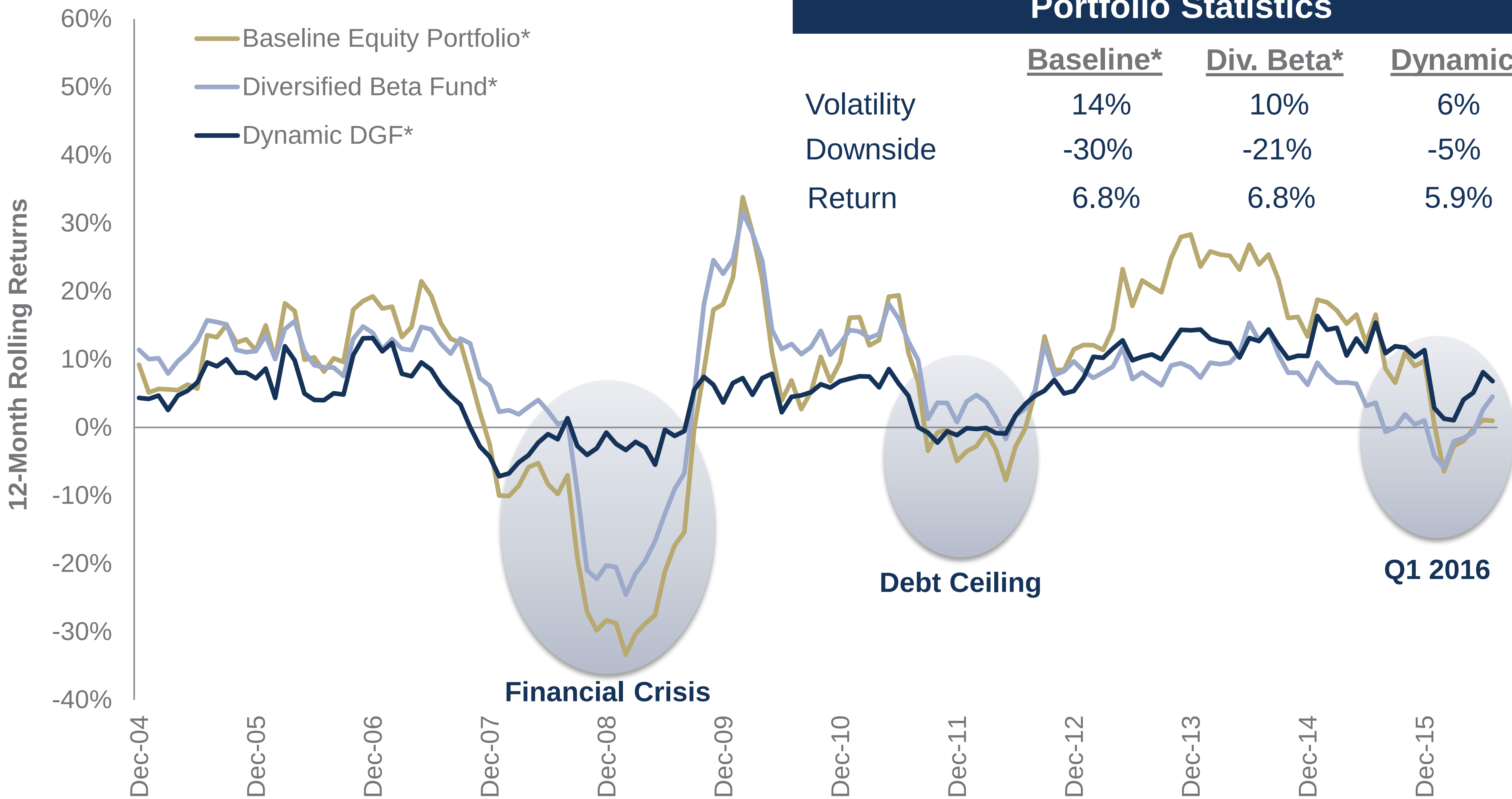
Volatility & Uncertainty ⬆ = LOWER portfolio risk

Volatility & Uncertainty ⬇ = HIGHER portfolio risk

Objective: Winning by not Losing

Dynamic Asset Allocation Improves the Risk/Return Profile

Simulated Historical Analysis – *For Illustrative Purposes*

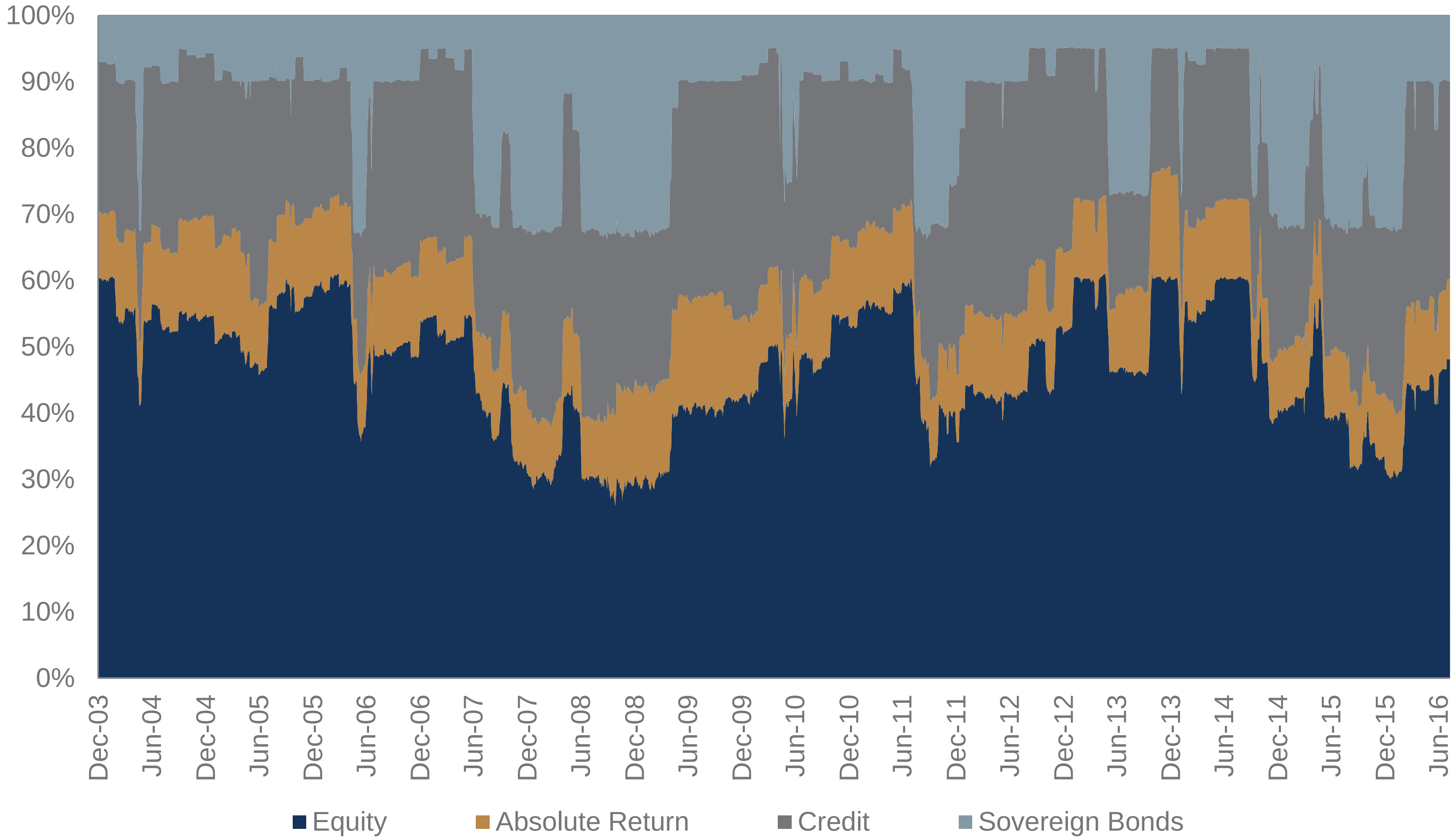


Portfolio Statistics

	Baseline*	Div. Beta*	Dynamic*
Volatility	14%	10%	6%
Downside	-30%	-21%	-5%
Return	6.8%	6.8%	5.9%

*See portfolio disclosures and methodology described in appendix. January 2004 to July 2016
This information is meant for investors with sophisticated investment knowledge sufficient to fully understand the risks and limitations of simulated performance data. Simulated performance data is for illustrative purposes only and not indicative of actual results. Please refer to the simulation disclosure at the end of this presentation for complete disclosure of notes and simulated performance information.

Dynamic DGF – Time Varying Portfolio Exposures
Simulated Historical Analysis – *For Illustrative Purposes*



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Diversified Growth Funds
Considerations For Investors

- Benchmarking
- Delegation of Asset Mix Authority
- Exposure to New Asset Classes
- Lack of Performance History
- Looking Different than Peers

Diversified Growth Funds
Summary of Value Proposition

- **Aim to Achieve Long-Term Investment Objectives with Greater Likelihood**
  - *A total return orientation for the fund allows the manager flexibility to implement best ideas supporting the objective of delivering the desired premium over inflation*

- **Potential to Reduce Downside Risk**
  - *Dynamic tail risk mitigation strategies can reduce the risk of short-term drawdowns and result in a smoother path of returns*

- **Diversify Growth Assets**
  - *Multi-asset, multi-strategy approach including traditional and alternative asset classes that can replace or complement existing return-seeking allocations*

- **Simplify Governance**
  - *Single manager provides access to multiple asset classes and reduces the burden on investors to allocate across, fulfill and monitor different individual strategies*

Disclosures

Baseline Equity Portfolio & Diversified Beta Fund
Disclosures Regarding Simulated Performance History

Baseline Equity Portfolio

- 30% S&P/TSX Composite TR Index
- 70% MSCI World TR Index (CAD)

Diversified Beta Fund

- 8% FTSE TMX Canada Federal Bond Index
- 4% FTSE TMX Canada All Corporate Bond Index
- 9% BofA/ML U.S. Corporate Index (USD)
- 7% BofA/ML U.S. High Yield Index (USD)
- 2% JPM EMBI Global Diversified Index (USD)
- 2% JPM CEMBI Diversified Index (USD)
- 2% JPM GBI-EM Broad Diversified Index (USD)
- 5% S&P/TSX Composite Index
- 3% BMO Canadian Small Cap Index
- 3% S&P/TSX Canadian Low Volatility Index
- 2% S&P 500 Index (CAD)
- 3% Russell 2500 Index (CAD)
- 2% Russell 2000 Index (CAD)
- 4% MSCI U.S. Minimum Volatility Index (CAD)
- 2% MSCI EAFE Index (CAD)
- 5% MSCI World Index (CAD)
- 4% MSCI World Minimum Volatility Index (CAD)
- 5% MSCI Emerging Markets (EM) Index (CAD)
- 4% MSCI Emerging Market (EM) Small Cap Index (CAD)
- 7% HFRI EH: Equity Market Neutral Index (USD)
- 6% S&P GSCI Commodity Index (USD)
- 5% S&P GSCI Gold Official Close Index (USD)
- 6% S&P Global Infrastructure Index (USD)

Dynamic DGF
Disclosures Regarding Simulated Performance History

Simulated Performance Disclosure
The simulated data is hypothetical performance for a period. The Dynamic DGF returns are a simulation of a quantitative investment strategy and the purpose of the data is to demonstrate the capability of such a strategy if it had been employed during that period. This data is shown for illustrative purposes only, and should not be relied on as an indicator of future returns.

Quantitative investment strategies use complex statistical models in an effort to control portfolio-level risk and to construct an optimal portfolio using the existing opportunity set and information at hand. Portfolio construction using the model involves trade offs between various risk measures such as drawdown, value at risk, volatility etc. The mathematical and statistical models that guide portfolio construction are reliant on historical data and the long term return expectations of underlying assets.

The simulated historical performance record was constructed using a custom quantitative investment model and assumes that the same portfolio construction and risk management algorithms used to manage the portfolio today were used in the past, based on the data available at the time. We use the benchmark of the funds (or market index representations where applicable) as proxies to simulate the performance of the actual underlying funds the strategy invests in, to span periods when the funds may not have been in existence. Performance of the proxies may not accurately represent the performance of investments in actual funds. Simulated results are shown before management fees and before the fixed fund operating expense.

Hypothetical or simulated performance results have certain inherent limitations. Unlike an actual performance record, simulated results do not represent actual trading. Simulated results are achieved by means of the retroactive application of a back-tested model that has the benefit of hindsight. The back-testing of performance also differs from actual account performance because an actual investment strategy may be adjusted any time, for any reason, including a response to material, economic or market factors. As trades have not actually been executed, the results may have under-or-over compensated for the impact of certain market factors, such as lack of liquidity. Some relevant events or conditions may not have been considered in the assumptions and actual events or conditions may differ materially from assumptions.

Prospective investors should fully understand the risks, assumptions and limitations of the simulated performance data, and evaluate whether they are appropriate for their investment purposes.

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Wealth Management
PH&N Investment Counsel

PH&N Investor Education Seminar

The seminar was held on March 6, 2017 and covered four topics:

Making Sense of Macroeconomic Uncertainty
-rise in populism have economic implication of lower economic growth, higher inflation, and more focus on the distribution of growth. Examples of populism include Brexit, US election, potential failure of several trade deals, and various EU nations souring on the EU union. Trump economic effect positive in short term, long term drag – most vulnerable nations to US tariffs include China, Germany, and Mexico.
-globalization no longer advancing as evidenced in the lower world real exports decline from 2X economic growth 2004-2008 to a level below economic growth from 2012 onward
-inflation is now rising, but still low. Monetary stimulus after 2008 crisis was not inflationary as not all money made it into the economy, and most economies had slack – high unemployment
-Monetary policy involves changing the interest rate and influencing the money supply. Fiscal policy involves the government changing tax rates and levels of government spending to influence aggregate demand in the economy. N America moving away from monetary, to Fiscal stimulus but rest of world not following so global economic growth will continue to be slow

The Liquidity Risk Premium
-a risk premium is an expected excess return for bearing a risk. Asset classes have different risk premiums such as economic growth, interest rate, inflation, credit, political, and liquidity. Liquidity risk is related to experience and expertise, transaction costs, limited buyers, unbalanced information, price impact, and access to credit.
-more liquidity risk, more credit risk, and higher premiums are available as you move along the spectrum of fixed income investments starting with Federal, and moving out to Provincial, then public investment grade (conventional mortgages and private placement corp. debt), and finally high yield (high yield mortgages and direct lending)
-liquidity risk premium is an investment opportunity if you have a longer term strategy, predictable cash needs, and appropriate investment manager analysis

Diversified Growth Funds(DGF)
-DGF funds have the basic principle of dynamic risk allocation to actively manage risk with the objective of winning by not losing. Aim to increase the likelihood of achieving long-term investment objectives, reduce short term down-side risk, and simplify governance using single manager with access to multiple asset classes
-target equity-like returns with less risk using multi-asset class diversification, dynamic asset allocation management, and focused on tail risk mitigation
-used extensively in UK Pension funds, but just now becoming popular in N America because they provide a better risk/reward proposition, increased diversification, strong emphasis on risk management, simplified governance, and are challenging to replicate in “a la carte” scenarios
-used by institutional investor as Growth Portfolio (Equity) complement, typically in large pension funds
-employ a formula of “market signals” to identify risky times in the market, and alter investment strategies. Requires active management, and a high degree of asset allocation flexibility.
-DGF focus on Total Return means there is not a composite benchmark to measure performance – use something like CPI = %. New to N America so not much performance history to analyse

<u>ESG: A Source of Alpha and Reduced Risk</u>

-ESG is Responsible Investment with consideration of Economic, Social, and Governance (ESG) factors.
-it involves enhanced analysis of companies on ESG matters to better understand risk and opportunities, working with companies to address ESG issues, and utilize proxy voting to engage with management.
-it is not Socially Responsible investment, or Ethical investing
-global regulations are driving growth in Responsible Investment (eg) UNPRI, EU Shareholder Rights, US Dept. of labour Guidelines on ESG, and Can Changes to Ont. Pension Benefits Act
-at PH&N ESG is part of their fundamental analysis. They employ this strategy to reduce risk and enhance returns. They do not exclude sectors or securities – feel engagement is more powerful tool than divestment. Proxy voting is an important tool to reinforce engagement efforts