FOR INFORMATION **OPEN SESSION**

TO: Business Board

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PRESENTER: Sheila Brown, Chief Financial Officer
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DATE: June 7, 2017 for June 15, 2017

AGENDA ITEM: 6

ITEM IDENTIFICATION:

Revisions: University Funds Investment Policy

JURISDICTIONAL INFORMATION:

The Business Board is responsible for financial policy, including policy delegating financial authority, and approval of financial transactions as required by the policy. With respect to investments, these responsibilities are further delineated as follows:

- Review and approval from time to time of the investment policies for University investment funds and amendments thereto;
- Review and approval from time to time of the return targets and risk tolerances for the investment of the University funds;
- Review from time to time of the asset allocation for the investment of University funds;
- Review of annual reports, or more frequent reports as the Board may from time to time determine, on the investment of University funds, such reports to include without limitation: (i) reports on investment risk and return; and (ii) reports on fees and expenses incurred.
- Approval of the delegation of authority to a University-controlled asset management corporation (or other entity established for a similar purpose) for the management of the investment of University funds.

GOVERNANCE PATH:

1. Business Board [For Approval] (June 15, 2017)

PREVIOUS ACTION TAKEN:

The University Funds Investment Policy was last approved by the Business Board at its meeting on June 21, 2007.

HIGHLIGHTS:

University funds include funds pooled in the Long-term Capital Appreciation Pool (LTCAP), the Expendable Funds Investment Pool (EFIP), and in a small number of specially invested trust funds. This policy includes the investment return target and the risk tolerance for LTCAP and EFIP, and recognizes that specifically invested trust funds are subject to externally imposed investment requirements.

This policy has been updated to align the policy investment return target and risk tolerance for LTCAP with those for Pension Master Trust, while reflecting the differing governance requirements for University funds and Pension funds. At the same time, we have taken the opportunity to bring the overall format and content up to date, and to include a more fulsome statement in respect of conflicts of interest.

LTCAP:

LTCAP consists primarily of the University's endowed funds along with a small number of other funds of a long-term or permanent nature. Investment returns generated through investment of these funds support annual spending allocations to faculties and divisions for expenditures in accordance with the terms and conditions of individual endowments and other funds.

In order to meet planned spending allocations to LTCAP unit holders, the investment return target is a real investment return of at least 4.0% over 10-year periods, net of all investment fees and expenses, while taking an appropriate amount of risk to achieve this target, but without undue risk of loss.

The investment return target of 4.0% real, net of all investment fees and expenses, is unchanged from the previous policy. The risk tolerance has changed from a static risk tolerance of 10% volatility of nominal returns, also net of all investment fees and expenses, to a risk statement which is operationalized by the President of the University, under his delegated authority, as described below.

The policy risk tolerance and return target are operationalized by the President of the University, with input from the Investment Committee, by establishment of a passive policy portfolio known as the Reference Portfolio together with limits, ranges and restrictions, including those with respect to risk, allocation ranges, currency exposures and liquidity. The Reference Portfolio, as with any portfolio, includes a level of risk, which for the purposes of this policy is currently defined as volatility. The asset allocation in the Reference Portfolio includes a level of volatility risk that is viewed as appropriate to the nature of the LTCAP. Given the decision to allow an active management approach, it is prudent to establish an LTCAP-level risk limit within which UTAM has discretion to make and implement investment decisions with the objective of earning returns above the Reference Portfolio. This LTCAP-level risk limit is defined as the volatility of the Reference Portfolio plus an additional amount of active risk. Active risk is defined as the volatility of the actual portfolio minus the volatility of the Reference Portfolio. Acceptable levels of active risk are managed within a "traffic light" risk framework, with normal (green), watch (orange) and alert (red) zones. At December 31, 2016, the volatility risk for the Reference Portfolio was 5.50%, and the active risk was 0.25%, for a total volatility risk for the actual portfolio of 5.75%. In summary, while volatility risk moves around with changes in market uncertainties, the risk level at December 31, 2016 was less than the 10% nominal risk identified in the previous policy.

EFIP:

The Expendable Funds Investment Pool (EFIP) contains expendable funds which are pooled and invested until they are spent. It includes the University's unspent cash from operations, capital projects, ancillary operations, expendable donations, spending allocations from endowments and research grants.

EFIP includes very short-term funds that are managed within the University in cash and cash-like investments, longer term assets that are invested in internal loans primarily in support of capital projects and pension in accordance with the Debt Strategy approved by the Business Board in 2012, and longer term assets that are managed by UTAM. For all three categories, the risk tolerance is "minimal risk". The investment return targets are a 30 day T-bill return for investments managed by U of T, an appropriate spread over Government of Canada bonds of similar duration for internal loans, and one-year T-bill return plus 50 bps for assets managed by UTAM. Both the risk tolerances and the investment return targets are unchanged from the previous policy.

Specifically invested trust funds:

While the wording has been updated, there are essentially no changes to this section.

General:

This section of the policy includes conflict of interest guidelines and custody responsibilities.

The conflict of interest section has been updated to provide a more fulsome description of the requirements around conflicts of interest and to include a one up reporting requirement for reporting of conflicts and potential conflicts.

The custody section has also been updated to provide a high-level description of the overall custody responsibilities.

There are four attachments to this cover sheet. Appendix A contains the proposed revised policy, dated June 15, 2017, for approval. Appendix B contains the current policy, dated June 21, 2007. Appendix C, which is provided for information purposes, includes a summary of the University's investment process, including participants, key documents, and a flow chart describing how investment decisions are made, what they are, who makes them, and who provides oversight. Appendix D, which is provided for information purposes, describes the Reference Portfolio.

FINANCIAL IMPLICATIONS:

N/A

RECOMMENDATION:

Be it Resolved

THAT the proposed *University Funds Investment Policy* dated June 15, 2017 be approved, replacing the *Policy* approved by the Business Board on June 21, 2007.

DOCUMENTATION PROVIDED:

Appendix A: University Funds Investment Policy, June 15, 2017
Appendix B: University Funds Investment Policy, June 21, 2007
Appendix C: *Investments Who does What?*
Appendix D: Reference Portfolio Primer

APPENDIX A

UNIVERSITY OF TORONTO

University Funds Investment Policy

June 15, 2017

Table of Contents

Preamble

The financial assets ("University funds") of The Governing Council of the University of Toronto ("the University of Toronto" or "the University") are grouped and managed for investment purposes in two pools: the Long-term Capital Appreciation Pool (LTCAP), which holds endowment funds and other funds held for the long term, and the Expendable Funds Investment Pool (EFIP), which holds the University's expendable cash. There are also a small number of specifically invested trust funds with investment terms and conditions that preclude their pooling into LTCAP or EFIP.

Roles

Each of the Governing Council, the Business Board, and the President or designate have roles, as outlined in the Business Board Terms of Reference, with respect to investment of University funds.

The Business Board of Governing Council is responsible for:

- Financial policy, including policy delegating financial authority, and approval of financial transactions as required by the policy. With respect to investments, these responsibilities are further delineated as follows:
    - Review and approval from time to time of the investment policies for university investment funds and amendments thereto.
    - Review and approval from time to time of the return targets and risk tolerances for the investment of the University funds.
    - Review from time to time of the asset allocation for the investment of University funds.
    - Review of annual reports or more frequent reports as the Board may from time to time determine on the investment of University funds, such reports to include, without limitation: (i) reports on investment risk and return; and (ii) reports on fees and expenses incurred.
    - Approval of the delegation of authority to a University-controlled asset management corporation (or other entity established for a similar purpose) for the management of the investment of University funds.

The President of the University or designate is responsible for:

- With the advice of the Investment Committee, approval of asset allocation for the University funds.
- Negotiation and settlement of a detailed investment management agreement between the University and a University-controlled asset management corporation, pursuant to the approved delegation of authority to the corporation (or other entity) for the management of University funds.

Such of the funds invested in LTCAP and/or EFIP that the University desires to have invested by the University of Toronto Asset Management Corporation ("UTAM"), together with a small number of specifically invested trust funds, are invested by UTAM on behalf of the University in accordance with the Delegation of Authority from the University to UTAM and in accordance with an investment management agreement between the University and UTAM. UTAM, which was formed in April 2000, is a separate non-share capital corporation whose members are appointed by the University of Toronto. Its primary mandate is to manage, or see to the management of, the investment funds that are delegated to it by the University of Toronto.

The Investment Committee reports to the President of the University and provides expert advice to the University Administration, collaborating extensively with the University Administration and with UTAM management on investment objectives and investment activities. The Investment Committee approves proposals from UTAM management staff for execution of investment strategy, and provides monitoring and oversight of investment performance. The Investment Committee recommends investment risk and return objectives to the University Administration. Its concurrence is sought by the President in proposing risk tolerance and investment return targets which are then put forward for approval by governance.

Risk Tolerance and Return Targets

This policy specifies the risk tolerance and investment return targets for LTCAP and EFIP, which are operationalized by the President of the University or designate.

Long-term Capital Appreciation Pool (“LTCAP”)

The Long-term Capital Appreciation Pool is a unitized fund which pools, for investment purposes, the University’s endowed trust funds along with some other funds of a permanent or long-term nature. In addition, small amounts of external funds may be invested in LTCAP in those situations where the University is a beneficiary. The purpose of LTCAP is to generate investment returns net of all investment fees and expenses that will preserve purchasing power and provide the same or better level of support for future generations of unit holders as those provided today[1]. This necessitates a balance between the desire to reward unit holders in the present and a long-term view toward developing a sustained or increasing spending allocation from these funds.

In order to meet planned spending allocations to LTCAP unit holders, the investment return target is a real investment return of at least 4.0% over 10-year periods, net of all investment fees and expenses, while taking an appropriate amount of risk to achieve this target, but without undue risk of loss.

The return target and risk tolerance are operationalized by the President of the University, with input from the Investment Committee, through the President’s approval of LTCAP’s asset allocation and the investment management agreement between the University and UTAM. Asset allocation is defined as the division of a portfolio’s assets among a variety of asset classes in accordance with long-term policy goals and includes ranges, restrictions and limitations of various kinds on investments. Currently, the President does so, with input from the Investment Committee, by establishment of a passive policy portfolio, known as the Reference Portfolio, together with limits, ranges and restrictions, including those with respect to risk, allocation ranges, currency exposures, and liquidity. Taken together, these are viewed as being sufficiently large to permit

[1] The University’s *Policy for the Preservation of Capital of Endowment Funds* identifies the need to maintain the inflation-adjusted value of endowment capital; and the need to provide a stable flow of expendable income for the purposes of each fund.

UTAM management the flexibility to achieve its value-added objective but not so large as to put the portfolios at undue risk of significant underperformance relative to the Reference Portfolio. The Reference Portfolio provides a means of comparing the outcomes of passive management of investments, to an allocation that is made pursuant to an active management approach, which is the approach currently used by UTAM. The Reference Portfolio, as with any portfolio, includes a level of risk, which for the purposes of this policy is currently defined as volatility. The asset allocation in the Reference Portfolio includes a level of volatility risk that is viewed as appropriate to the nature of the LTCAP. Since active management also includes a level of volatility risk, three zones of active risk are identified, with a target zone (green), a zone that requires notification and analysis (orange), and a zone that requires mitigation steps (red). This can be described as a "traffic light" risk framework approach.

This approach is described in more detail in the following narrative and table:

> The Reference Portfolio represents a simple, low-cost, passive portfolio which is believed to be appropriate to LTCAP's long-term horizon and associated return and risk profile. By design, the Reference Portfolio is not exposed to active management decisions and thus is expected to be reviewed only periodically. Given the current environment, it is believed that the Reference Portfolio may have difficulty achieving the 4% real return objective and therefore successful active management decisions need to be implemented to achieve the return objective. The Reference Portfolio provides a transparent replicable benchmark against which to compare an active management approach, although over shorter periods of time the Reference Portfolio's real return may deviate from the longer term expectation. Given the decision to allow an active management approach, it is prudent to establish an LTCAP-level risk limit within which UTAM has discretion to make and implement investment decisions with the objective of earning returns above the Reference Portfolio. This LTCAP-level risk limit is defined as the volatility of the Reference Portfolio plus an additional amount of active risk. Active risk is defined as the volatility of the actual portfolio minus the volatility of the Reference Portfolio. The table below outlines the current "traffic light" risk framework.

Active Risk Zone	**Active Risk (in basis points)**
Target Zone ("Normal")	$-50 \leq Active\ Risk \leq 100$
Notification and Analysis Zone ("Watch")	$100 < Active\ Risk \leq 125$
Mitigation Zone ("Alert")	$Active\ Risk > 125$

The President, pursuant to his approval authority, and with the advice of the Investment Committee, may periodically revise the active risk framework (including, without limitation, the "traffic light" risk framework and the definition of active risk), while ensuring that the total risk in LTCAP is consistent with the risk tolerance and investment return targets identified in this policy.

UTAM will provide a periodic investment performance report to the Business Board not less frequently than annually that will compare actual investment results for LTCAP to the risk tolerance and investment return targets, and to the Reference Portfolio results.

Expendable Funds Investment Pool ("EFIP")

The Expendable Funds Investment Pool ("EFIP") contains expendable funds that are pooled and invested until spent. It includes the University's unspent cash from operations, capital projects, ancillary operations, expendable donations, expendable payouts from endowments, and research grants.

EFIP has several categories of investments: very short-term funds that are held and managed within the University in cash and cash-like investments, longer term assets that are invested in internal loans primarily in support of capital projects and pension, and longer term assets that are managed by UTAM. The return objective and risk tolerance for each category of EFIP funds is as follows:

Category	**Return Objective**	**Risk Tolerance**	**Asset Allocation**
Assets managed by U of T	30 day T-bill return.	Minimal risk.	University Administration shall establish investment mandates and select investment vehicles. Assets normally held in bank accounts or short-term institutional money market pooled funds.
Internal loans	Appropriate spread over Government of Canada bonds of similar duration.	Minimal risk.	University Administration shall issue internal loans using EFIP funds, or using externally borrowed funds, in accordance with the Business Board-approved Debt Strategy.
Assets managed by UTAM	One-year T-bill return plus 50 bps.	Minimal risk.	University Administration shall approve the asset allocation. UTAM shall implement investment strategy in accordance with its mandate.

For EFIP funds managed by UTAM, portfolio diversification, categories and subcategories of investments and investment restrictions and other elements of investment strategy will be recommended by

UTAM to the University Administration for approval. UTAM will provide a periodic investment performance report to the Business Board no less frequently than annually with respect to EFIP investment results.

Specifically Invested Trust Funds

The assets of specifically invested trust funds shall be invested to adhere to the investment requirements specifically imposed on the University by contractual agreement, whether by a donor, by condition of an estate, or by external administrative arrangement.

General

Conflict of Interest Guidelines

Anyone involved directly or indirectly with the investment of University funds ("the Affected Persons") shall promptly declare any actual or perceived conflict of interest that could be reasonably expected to impair, or could be reasonably interpreted as impairing, his/her ability to render unbiased and objective advice to fulfill his/her responsibility regarding the investment of University funds. Declarations shall be made to the next level of accountability (e.g. depending on the circumstances, and without limitation, to the supervisor, UTAM President, University of Toronto President, Business Board Chair, or Chair of Governing Council).

Any such disclosure shall include, but is not limited to, any material ownership of securities, or any material ownership of any kind, either by an Affected Person or a member of the Affected Person`s immediate family, which could impair, or could reasonably be viewed as impairing, their ability to render unbiased advice, or to make unbiased decisions affecting the investment of the University funds. For clarity, financial interests that are in the ordinary course of personal affairs, and that are not reasonably viewed as material, fall outside the disclosure obligation. If the Affected Person has any doubt as to whether a conflict of interest may exist, including whether a particular interest may reasonably be viewed as material, disclosure should be made.

Further, no Affected Person shall make any personal financial gain (direct or indirect) because of his or her fiduciary position. However, normal and reasonable fees and expenses incurred in the discharge of their responsibilities are permitted upon notification in advance and in writing to the University.

No Affected Person shall accept a gift or gratuity or other personal favour, other than one of nominal value, from a person with whom the Affected Person deals in the course of performance of his or her duties and responsibilities regarding the investment of University funds.

No Affected Person who has or is required to make a disclosure as contemplated in this policy shall participate in any discussion, decision or vote relating to any proposed investment or transaction in respect of which he or she has made or is required to make a disclosure.

Custody

The University Administration appoints the custodian and delegates operational oversight of the custodian to UTAM. The custodian/trustee will:

- Maintain safe custody over the University funds.
- Execute the instructions of the University, of UTAM and of the investment managers.
- Record income and provide monthly financial statements to the University and to UTAM as required.
- Meet with the University and UTAM as required.

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Sheila Brown, Chief Financial Officer

June 15, 2017

APPENDIX B

UNIVERSITY OF TORONTO

University of Toronto
Governing Council

University Funds Investment Policy

June 21, 2007

To request an official copy of this policy, contact:

The Office of the Governing Council
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University of Toronto
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UNIVERSITY FUNDS INVESTMENT POLICY

1. DESCRIPTION OF UNIVERSITY FUNDS

1.1. Long-Term Capital Appreciation Pool (LTCAP)

The LTCAP, formerly known as the Consolidated Investment Pool (CIP), consists of the university's endowed trust funds or other funds of a permanent or long-term nature. In addition, external funds may be invested in the LTCAP including funds of affiliated organizations and funds where the university is a beneficiary.

1.2. Expendable Funds Investment Pool (EFIP)

The EFIP consists of expendable funds, which are pooled for investment purposes until the funds are required for expenditure.

1.3. Specifically Invested Trust Funds

The specifically invested trust funds consist of both endowed and expendable funds which cannot be pooled for investment purposes because of constraints or conditions attached to the funds.

2. LONG-TERM CAPITAL APPRECIATION POOL (LTCAP)

2.1. General Description of the Fund and Governance

The LTCAP represents the pooling of invested assets accumulated by or donated to the University for endowed purposes.

The Governing Council has delegated management of the LTCAP assets to the University of Toronto Asset Management Corporation in accordance with the Service Agreement dated May 1, 2000 between The Governing Council and the University of Toronto Asset Management Corporation (UTAM). The investment decisions of UTAM and its Board of Directors are subject to the overall policy direction of the Business Board as reflected in this policy and in amendments the Board may make from time to time.

3. THE NATURE OF LTCAP LIABILITIES

The LTCAP provides funding to the faculties and departments of the university to be used for endowed purposes in accordance with the terms of each endowment or trust. The LTCAP is subject to the capital preservation policy currently in place and as may be amended from time to time, and as such the distribution and reinvestment rates must be harmonized on an inflation-adjusted basis.

4. INVESTMENT POLICIES AND GOALS OF LTCAP

4.1. Investment Policy, Objectives and Risk Tolerance

The University of Toronto has engaged the University of Toronto Asset Management Corporation (UTAM) to manage the LTCAP. As a client of UTAM, it is important that the University delivers to its fund manager a concise statement of return objectives as well as risk tolerance, and that these two components are congruous. The purpose of this policy is to establish both of these objectives with regard to the Long-Term Capital Appreciation Pool (LTCAP).

The purpose of the LTCAP is to provide cash flows that will grow each year at a minimum of the rate of inflation in order to preserve the purchasing power of the fund and provide the same or better level of support for future generations. This necessitates a balance between the desire to reward unit holders in the present and a long-term view toward developing a sustained or increasing contribution from endowed assets. In addition, the University's Policy for the Preservation of Capital of Endowment Funds identifies the following:

a) The need to maintain the inflation-adjusted value of endowment capital; and

b) The need to provide a stable flow of expendable income for the purposes of each fund.

4.2. Return Expectations and Risk Tolerance

In order to meet the planned payouts, the return objective is a 4.0% real, inflation-adjusted return over a 10-year period. This return objective is net of all fees and levies. For purposes of this return objective, the level of University levies should be set at no more than 0.5% of assets.

To keep risk at a reasonable level, UTAM shall manage the asset portfolio to achieve a target standard deviation of 10.0% or less in nominal terms over 10 year periods.

4.3. Asset Mix

UTAM shall establish the asset mix investment mandates and then select investment managers to be responsible for the management of the portfolios in accordance with those mandates. Funds will normally be allocated to external managers in accordance with those mandates. Funds will normally be allocated to external managers, or when determined to be advantageous, may be allocated to internal management.

Performance benchmarks against market indices and peer universes will be established for the fund. The details of these benchmarks will be described in the service agreement between the University and UTAM. Portfolio diversification, categories and subcategories of investments, use of derivatives, and investment restrictions will be accountabilities of UTAM and a requirement that UTAM develop, approve and review these policies will be incorporated into the service agreement between the University and UTAM.

Each investment manager shall adhere to this policy and shall follow the investment policies and goals with the care, diligence and skill that a person of ordinary prudence would use in dealing with the property of another and shall use all relevant knowledge and skill that the investment manager possesses or ought to possess. Investment managers are expected to be in compliance with the standards of professional conduct and code of ethics established by the CFA Institute.

5. INVESTMENT POLICIES AND GOALS OF EFIP

5.1. Investment Policy, Objectives, Risk Tolerance, Asset Mix and Performance Benchmarks:

The expendable funds investment pool (EFIP) contains expendable funds that are pooled and invested until spent. It includes the University's cash for operations, capital projects, ancillary operations, expendable donations, expendable payouts from endowments and research grants. It excludes endowments funds and the supplemental retirement arrangement, which are part of the long term capital appreciation pool (LTCAP).

EFIP has three categories of investments: very short-term funds that are held and managed within the University in cash and cash-like investments, longer term assets that are invested in internal loans in support of capital projects, and longer term assets that are managed by UTAM.

The return objective, risk tolerance and performance benchmark for each category of EFIP funds is as follows:

	Return Objective	Risk Tolerance	Asset Mix	Performance Benchmark
Assets managed by U of T.	30 day T-bill return	Minimal Risk	University shall establish investment mandate and select investment vehicles. Assets normally held in bank accounts or short-term institutional money market pooled funds.	N/A
Internal loans	Appropriate spread over Government of Canada bonds of similar duration	Minimal Risk	University to issue internal loans using EFIP funds, or using externally borrowed funds, at discretion of Chief Financial Officer.	N/A
Assets managed by UTAM	1 Year T-bill return plus 0.5%	Minimal Risk (standard deviation not appropriate for short duration).	UTAM shall establish the asset mix investment mandates and then select investment managers to be responsible for the portfolios in accordance with those mandates. Funds will normally be allocated to external managers in accordance with those mandates, or when determined to be advantageous, may be allocated to UTAM's internal management.	Performance benchmarks are part of the service agreement between UTAM and U of T.

5.2 Additional accountabilities of UTAM:

For EFIP funds managed by UTAM, portfolio diversification, categories and subcategories of investments and investment restrictions will be accountabilities of UTAM and a requirement that UTAM develop, approve and review these policies is a part of the service agreement between the University and UTAM.

Each investment manager shall adhere to this policy and shall follow the investment policies and goals with the care, diligence and skill that a person of ordinary prudence would use in dealing with the property of another and shall use all relevant knowledge and skill that that the investment manager possesses or ought to possess. Investment managers are expected to be in compliance with the standards of professional conduct and code of ethics established by the CFA Institute.

6. SPECIFICALLY INVESTED TRUST FUNDS

The assets of Specifically Invested Trust Funds shall be invested to achieve the maximum total rate of return through a combination of capital appreciation and current income consistent with any liquidity or other constraint specified and subject to any consultation required by contractual agreement, or by condition of the estate, or administrative arrangement.

7. GENERAL

7.1. Conflict of Interest Guidelines

Anyone involved directly or indirectly with the University's fund investments shall immediately disclose, at the time of its discussion of the policy or of matters related to the investment of University funds, any actual or perceived conflict of interest that could be reasonably expected to impair, or could be reasonably interpreted as impairing, his/her ability to render unbiased and objective advice to fulfill his/her fiduciary responsibility to act in the best interests of the funds.

7.2. Custody

Custody requirements will be an accountability of UTAM and a requirement that UTAM develop, approve and review these requirements will be incorporated into the service agreement between the University and UTAM.

Catherine Riggall
Vice-President, Business Affairs
June 21, 2007

Approved by Business Board on June 21, 2007 replacing policy approved by Business Board on March 27, 2006

APPENDIX C

What are the key documents?

Investment policy for university funds: contains risk tolerance and investment return targets for LTCAP and EFIP. Approved by the Business Board.

Pension Statement of Investment Policies and Procedures (SIPP): contains investment return targets, risk tolerance, policy asset allocation, restrictions, and other elements prescribed by pension legislation and regulation. Approved by the Pension Committee.

Business Board terms of reference: specifies the involvement of the Business Board in investment matters, including approval of risk tolerance and investment return targets for university funds, delegation of investment strategy and execution to the President of the University, and monitoring and oversight of both university and pension investments. Approved by Governing Council.

Pension Committee terms of reference: specifies the involvement of the Pension Committee in pension investment matters including monitoring and oversight of pension investments and approval of investment return targets, risk tolerance, policy asset allocation, and other restrictions. Approved by Governing Council.

Delegation of Authority to UTAM: delegation by the University to UTAM to review the risk tolerance and investment return targets for university funds and PMT. In addition, UTAM develops and proposes the policy asset allocation (i.e. the Reference Portfolio) and implements investment strategy. The activities just described are jointly completed by UTAM and the Investment Committee. The Delegation of Authority allows UTAM to act as agent on behalf of the University for relevant investment matters. Approved by the Business Board.

Investment Management Agreement: between the University and UTAM and which outlines the specifics of the investment mandate and the operational working relationship, including accountabilities, services the University provides to UTAM, and what activities UTAM undertakes. Agreed between the University administration and UTAM.

UTAM by-law: outlines the purpose, duties and responsibilities of UTAM, of its board and its officers. Approved by Business Board. Certain clauses can be independently modified by the UTAM Board.

UTAM Board terms of reference: using the UTAM by-law as its reference, outlines the regular responsibilities of the UTAM Board. To be proposed by the University Administration and accepted by the UTAM Board.

Investment Committee terms of reference: outlines the responsibilities of the Investment Committee and how it relates to the UTAM Board and University management and governance. The terms of reference are approved by the President of the University.

This brochure provides a summary of investment activities and approvals. In the event of any discrepancies between this brochure and the formal documents, the formal documents prevail.

An Example of Decision Making in Practice: The Reference Portfolio

The investment strategy for PMT and LTCAP is reflected in the Reference Portfolio (also sometimes referred to as the Policy Portfolio), which represents a simple, low cost, passive portfolio which is believed to be appropriate to the PMT and LTCAP's long-term horizons and associated return and risk profiles. By design, the Reference Portfolio is not exposed to active management decisions and thus is expected to be reviewed only periodically. Consequently, it also provides a transparent replicable benchmark against which to compare an active management approach, although over short periods of time the Reference Portfolio's real return may deviate from the longer term expectation.

The Reference Portfolio is jointly developed by UTAM Management and the Investment Committee and proposed by the Investment Committee to the University Administration for approval. In the case of PMT, once approved by the University Administration, it is embedded in the SIPP and approved by the Pension Committee. The current Reference Portfolio is shown below.

REFERENCE PORTFOLIO AND ASSET CLASS BENCHMARKS

		Reference Portfolio %	Asset Class Benchmark
Equity:			
	Canadian	10	S&P TSX Composite Total Return Index
	US	20	S&P 500 Total Return Index
	EAFE	15	MSCI EAFE Total Return Index (Net)
	EM	10	MSCI Emerging Markets Total Return Index (Net)
	Global	5	MSCI All Country World Total Return Index (Net)
	Total	60	
Credit:		20	FTSE TMX Canada All Corporate Bond Total Return Index
Rates:		20	FTSE TMX Canada All Government Bond Total Return Index
Other:		0	
Total:		100	
Unhedged Currency Exposure:		32.5	

UNIVERSITY OF TORONTO

Investments

Who Does What?

What funds are invested?

University funds:

Long term capital appreciation pool (LTCAP) – mostly endowments

Expendable funds investment pool (EFIP) – operating, capital, and ancillary funds, donations, unspent research grants

A small number of specifically invested funds

Pension fund:

University of Toronto pension plan invested in the Pension Master Trust (PMT)

University funds and PMT have different approval processes but in other respects the LTCAP and PMT are managed together (although the funds are maintained separately)

Who are the participants in the investment process?

University management:

University Administration (President and designates)

Investment Committee (members appointed by the President)

Investment Manager:

UTAM Board of Directors. Members appointed by the University of Toronto

UTAM Management

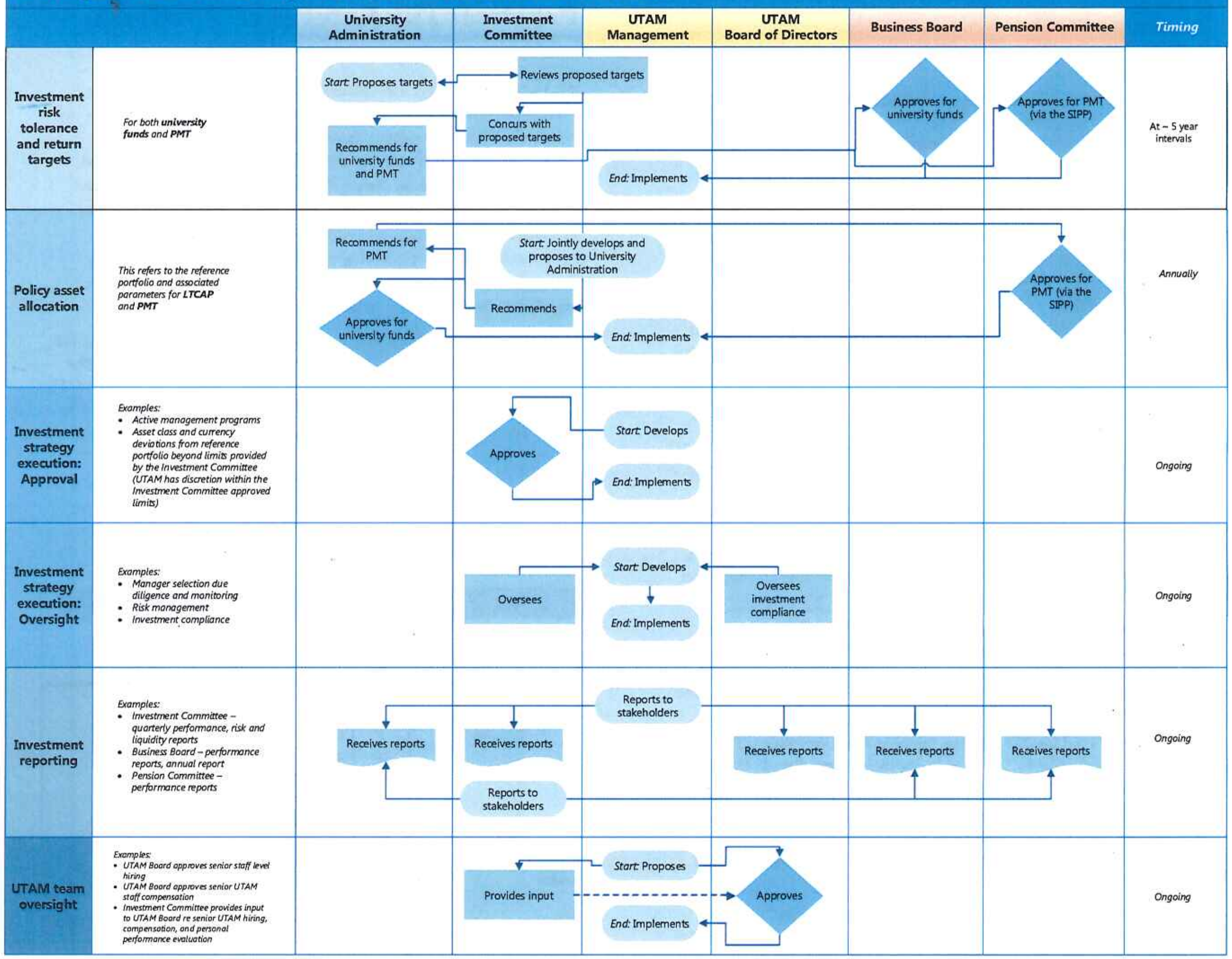
University governance:

Business Board

Pension Committee

Refer to the 'What are the key documents?' information overleaf for a summary of the mandate, role and authority of each of these participants

How are investment decisions made, what are they and who makes them? Who provides oversight of investment activities?



Additional Notes: University Administration works together with UTAM staff on operational matters. The President and CFO of the University are directors and members of UTAM, and are Investment Committee observers. The President appoints members of the Investment Committee and has delegated certain investment functions to the Investment Committee as per the Investment Committee terms of reference.

UNIVERSITY OF TORONTO
ASSET MANAGEMENT CORPORATION

Appendix D

REFERENCE PORTFOLIO PRIMER

Daren M. Smith, CFA
President and Chief Investment Officer

Presentation to the Business Board

June 15, 2017

Defining the Reference Portfolio

- It is an objective measure of risk and return against which to measure UTAM's active management approach.

- It is a portfolio that the university could implement on its own without an asset manager (i.e. without UTAM).

Characteristics of the Reference Portfolio

By design it has the following characteristics:

1. Reflects the risk and return objectives of the Pension Plan and LTCAP
2. Simple (i.e. public market asset classes only)
3. Passive (i.e. no active strategies)
4. Easy to implement (i.e. no need for a large investment team to implement)
5. Low cost to implement

Who is involved in creating the Reference Portfolio?

- It is jointly developed by UTAM Management and the Investment Committee and proposed by the Investment Committee to the University Administration for approval.

- Once approved by the University Administration it is adopted for LTCAP and recommended to the Pension Committee for the Pension Plan.

- Both the University Administration and the Pension Committee must approve the Reference Portfolio before it is adopted by the Pension Plan.

Steps Involved in Developing the Reference Portfolio

1. Estimate the long-term expected risk and return for all eligible asset classes.

2. Model various portfolio combinations.

3. Choose from those portfolios that reflect the investment risk and return objectives of LTCAP and Pension (which are currently the same).

Steps Involved in Developing the Reference Portfolio (Continued)

4. Use judgment to determine which of the modelled portfolios would be reasonable (e.g. ignore portfolios that are heavily concentrated in only one asset class).

COMMENTS

- Determining the final Reference Portfolio is as much an art as it is a science.
- The main driver of the risk and return of the Reference Portfolio is the split between equity and fixed income, which has always been 60% equity and 40% fixed income.

Reference Portfolio and Allocation "bands" (as of December 31, 2016)

	Reference Portfolio		Actual Portfolio[1]	Outside Band	------- Bands ------- Min.	Max.
Equity:						
Canadian	10.0		**10.1**	**N**	5.0	15.0
US	20.0		**19.9**	**N**	15.0	25.0
EAFE	15.0		**15.0**	**N**	10.0	20.0
EM	10.0		**10.0**	**N**	5.0	15.0
Global	5.0		**5.0**	**N**	0.0	10.0
Total Equity	60.0		**60.0**	**N**	50.0	70.0
Credit (Corporate Credit)[2]	20.0		**20.5**	**N**	10.0	30.0
Rates (Government Bonds)	20.0		**10.6**	**N**	10.0	30.0
Other (Primarily Absolute Return)	0.0		**8.9**	**N**	0.0	15.0
Total:	**100.0**		**100.0**			
Currency Exposure:	32.5		**32.3**	**N**	25.0	40.0

(1) Numbers may not add due to rounding. (2) Actual Portfolio contains more than just corporate credit.

- Actual Portfolio for Pension is shown in the table above but LTCAP is similar in all material respects.

How much flexibility does UTAM have to deviate from the Reference Portfolio?

- All constraints contained in the Statement of Investment Policies and Procedures (SIPP) for Pension and all constraints approved by the University Administration for LTCAP, must be adhered to.
- Actual asset class exposures must be within the allowable allocation "bands" (i.e. within 5% for each equity asset class, within 10% for all equity asset classes combined, and within 10% for each fixed income asset class).
- Various liquidity constraints must be met.
- UTAM may invest in asset types not in the Reference Portfolio (e.g. private equity) but they must be permitted by the SIPP for Pension, and approved by the University Administration for LTCAP.

How much flexibility does UTAM have to deviate from the Reference Portfolio? (Continued)

- The amount of additional risk UTAM is allowed to use in the actual portfolio for Pension and LTCAP is constrained by the "traffic light" risk framework shown below. For example, the "green zone" extends from taking 0.5% less risk than the Reference Portfolio to 1% more risk than the Reference Portfolio. If the Reference Portfolio risk is 5.5% then UTAM can operate from 5% to 6.5% risk for the Pension and LTCAP portfolios.

Active Risk Zone	Active Risk (in basis points)
Target Zone ("Normal")	$-50 \leq Active\ Risk \leq 100$
Notification and Analysis Zone ("Watch")	$100 < Active\ Risk \leq 125$
Mitigation Zone ("Alert")	$Active\ Risk > 125$

How often is the Reference Portfolio reviewed?

- UTAM reviews the Reference Portfolio annually but significant changes are only expected to occur every few years given the long-term nature of the Reference Portfolio.

Summary

- The Reference Portfolio reflects the risk and return objectives of the Pension Plan and LTCAP and is an important tool to measure the effectiveness and value of UTAM.

- The Reference Portfolio and associated constraints limit the ability of UTAM to invest the actual Pension and LTCAP portfolios in a manner that is significantly different than the Reference Portfolio.