2018

long-term focus + experienced professionals + rigorous processes +
innovative thinking + disciplined approach + diversified portfolios +
in-depth analysis + expert advisors + handpicked managers +
advanced systems + integrated processes + clear mandate +
objective benchmarks + measurable goals +
client focus + transparent communication + collaborative environment +
prudent management + thorough due diligence + constant monitoring +
continuous improvement + responsible investing + ESG integration +
strong governance + strategic partners + well-managed risk

It all adds up to long-term value.

As we manage the Pension, Endowment and short-term financial assets of the University of Toronto, we draw upon our proven processes, evolving best practices and deep investment expertise. At the same time, we collaborate closely with U of T's senior leadership, the expert advisors of the Investment Committee, our carefully selected investment managers and strategic partners, and other key stakeholders, benefiting from their insights and experience as we manage the university's assets to achieve its risk and return objectives.

This year's annual report examines how we bring these various building blocks together, expertly and systematically, to deliver long-term value.

Message from the Chair

"The mandate of UTAM's Board of Directors is to plan and act with a long-term time horizon, overseeing the activities of the management team to ensure the organization is appropriately structured to achieve the objectives of our sole client.

THROUGHOUT 2018, DESPITE significant fluctuations in investment markets worldwide, UTAM remained focused on the long term in its management of the University of Toronto's Pension, Endowment and short-term working capital funds. During periods of short-term instability, investors have a tendency to overreact. Clearly this is not in the best interests of U of T pension plan members, nor of the many stakeholders whose futures depend on this great educational institution maintaining its financial health. Sound asset management by definition requires a long-term perspective.

The mandate of UTAM's Board of Directors is to plan and act with a long-term time horizon, overseeing the activities of the management team to ensure the organization is appropriately structured to achieve the objectives of our sole client. In fulfilling this role, we're deeply indebted to the university's Investment Committee, which complements the Board's focus on corporate matters by advising on investment priorities.

On behalf of the Board, I want to thank the Investment Committee's volunteer members – and especially its Co-Chairs, David Denison and Geoff Matus – for generously sharing their time, energy and expertise while providing crucial oversight of UTAM's investment decision-making. They work diligently to develop UTAM's investment framework and measure its effectiveness – not simply by looking at the annual rate of return, but by evaluating performance results over periods of five years, 10 years and beyond. All U of T stakeholders benefit from their dedication and guidance.

Managing all dimensions of risk

The Board also provides oversight with respect to enterprise risk management. During the past year, we assessed a comprehensive review by management of UTAM's existing processes, considering not only financial risk, but also the various dimensions of corporate risk, along with the actions required to mitigate or remediate them. In exercising this responsibility, we reviewed management's proposed changes in organizational structure, as well as the hiring of new senior team members, the updating of accountability guidelines and longer-term succession planning.

Building a sustainable future

In closing, I want to thank my fellow Board members for the astute judgment and practical insights they bring to our collective stewardship of the university's assets. And I know they join me in paying tribute to my predecessor as Chair, John Switzer, who exemplified an ideal balance between strategic focus and sound governance – and who showed such remarkable grace in facing his health challenges before he passed away in 2018.

Lastly, I know the entire Board joins me in expressing our continued admiration for the technical acumen and collaborative strength of the entire UTAM team – and for the skill, intelligence and leadership of our President and Chief Investment Officer, Daren Smith.

Everyone at UTAM understands the tremendous responsibility we share, working together to protect and grow the assets of one of the world's great universities. To the pension plan members who've earned a well-deserved retirement, to the donors who generously contributed to the Endowment – to all of the diverse stakeholders who benefit from the University of Toronto's impact – UTAM has a straightforward message: we will continue to invest the capital entrusted to us prudently, thoughtfully and transparently, looking beyond short-term fluctuations to build a secure and sustainable future.

Richard B. Nunn
Chair, UTAM Board of Directors

Message from the President and CIO

> With our disciplined investment and risk management practices, and our breadth and depth of technical expertise, we are well positioned to continue delivering long-term value to the university and its diverse stakeholders.

THE PAST YEAR WAS CHALLENGING for many investors, as global equity markets struggled and fixed-income returns were below average. Within this context, our management of the University of Toronto's Pension and Endowment portfolios generated a return of -1.6% for Pension and -1.5% for Endowment (both net of fees and expenses), outperforming the benchmark Reference Portfolio by 0.7% in Pension and 0.8% in Endowment. This result did not meet the university's target return of 6.0%, but as Board Chair Richard Nunn emphasizes in his message – echoing a view shared by U of T's leadership and our broader community of stakeholders – we remain pleased with performance over the longer term.

Over the past five years, the Pension and Endowment portfolios have generated annualized returns of approximately 7.5% (net of fees and expenses). This was significantly higher than the Reference Portfolio's 5.7% return over the same period, which coincidentally was the same as the university's target return. Moreover, this excess return represents approximately $550 million in added value for the two portfolios combined. Extending that five-year view forward, we're confident the portfolios will continue to withstand the ups and downs of global capital markets. With our disciplined investment and risk management practices, and our breadth and depth of technical expertise, we are well positioned to continue delivering long-term value to the university and its diverse stakeholders.

As we enhance and evolve our investment approach and systems, we're also deepening our commitment to responsible investing. Over the past year, we have increasingly adopted a leadership role in the responsible investing space, collaborating with other institutional investors to coordinate efforts and promote best practices. At the same time, we've continued to integrate environmental, social and governance (ESG) considerations more fully into our own investment process.

Expert advice and support

In all of our asset management activities, we're indebted to the university's Investment Committee, which helps to construct the Reference Portfolio and approves various aspects of our investment strategy and programs, including the limits with regard to risk, asset allocation ranges and liquidity. As we implement our investment strategy, we benefit enormously from the insights and guidance of this team of respected industry experts led by Co-Chairs David Denison and Geoff Matus.

It all adds up to long-term value

As always, our actions in managing the assets entrusted to us are aligned with the vision and goals of the University of Toronto. Our close collaboration with the university's leadership, including my regular consultations with President Meric Gertler and Chief Financial Officer Sheila Brown, reinforce our understanding of the current needs and future aspirations of this great institution. In working to preserve and grow the Pension, Endowment and short-term working capital portfolios, we're proud to play a part in advancing the scope and impact of a leading global centre of learning and research.

As we strive to meet and exceed the expectations of the university's stakeholders, we continually invest in new technologies and systems to improve our investment process. We apply rigorous analytics to select, monitor and gauge the performance of our investment managers. Importantly, we've built an in-house team with the talent and expertise to probe deeper into data and to ask more discerning questions – which I believe ultimately leads to better investment outcomes. I am fortunate to work alongside more than 20 outstanding individuals who bring insight, skill and tireless energy to the pursuit of our mission. I thank them for their hard work and dedication.

Our continued success depends not on any single factor, but – as this year's annual report theme suggests – on the many building blocks of our investing approach and how we bring them together in pursuing a consistent strategy for the University of Toronto. We're also indebted to our U of T colleagues, as well as the many investment managers and service providers we work closely with. This year we've invited some of them to offer their perspectives on our collaborative efforts. I hope their words provide added insight into our investment processes and the expectations we have of our partners and ourselves.

We're confident that UTAM's diverse stakeholders, in reviewing this annual report, will see our continued progress on the various dimensions of our strategy – and that it all adds up to sustainable long-term value.

Daren M. Smith

Daren M. Smith, CFA
President and Chief Investment Officer

Investment highlights

Investment returns (annualized)

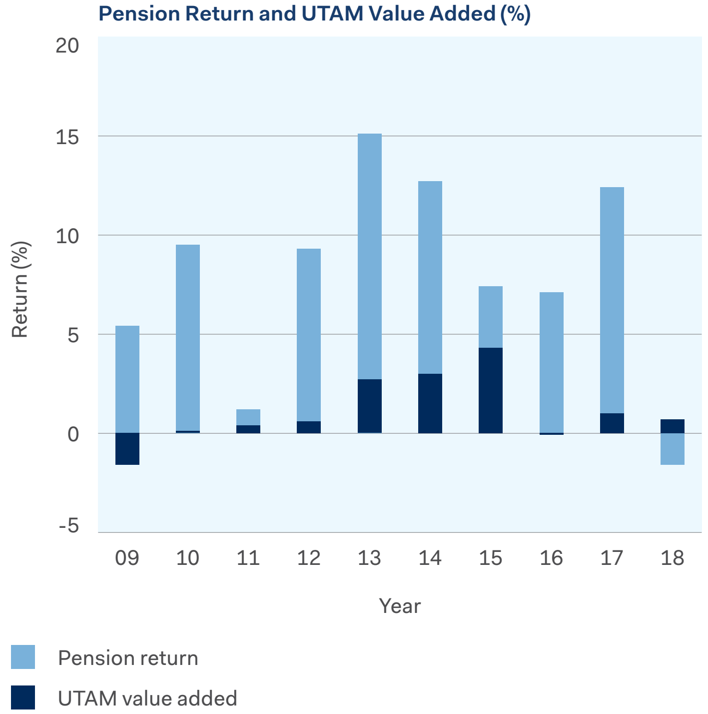
Pension

2018
-1.6%

Five-year
7.5%

10-year
7.8%

Pension Return and UTAM Value Added (%)



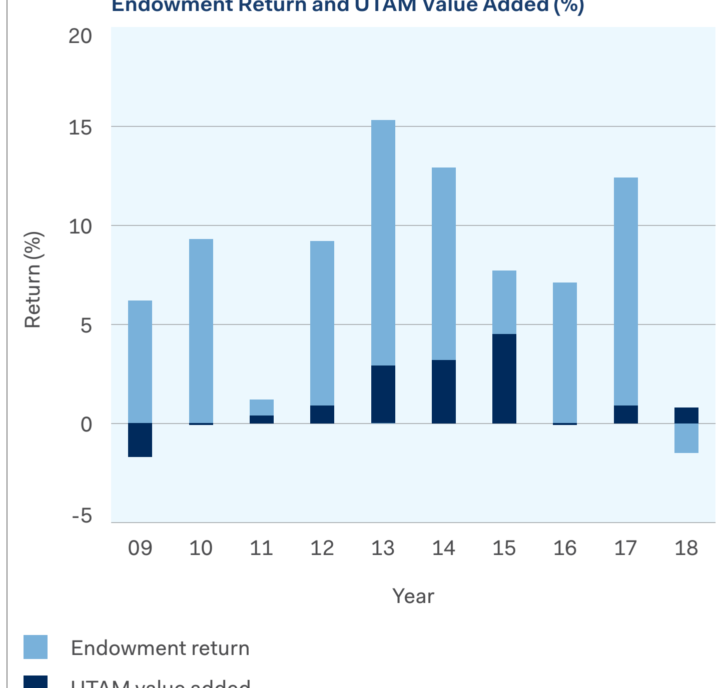
Endowment

2018
-1.5%

Five-year
7.6%

10-year
7.9%

Endowment Return and UTAM Value Added (%)



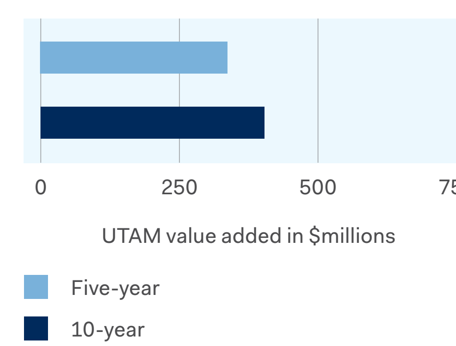
UTAM value added

Pension

2018
$36 million

Five-year
$337 million

10-year
$403 million

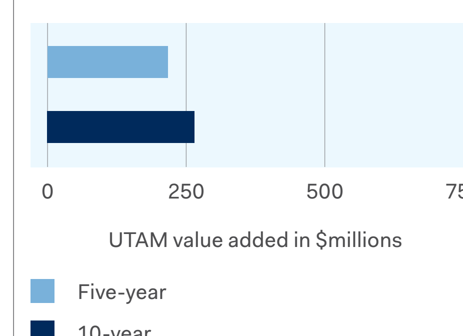


Endowment

2018
$23 million

Five-year
$217 million

10-year
$265 million

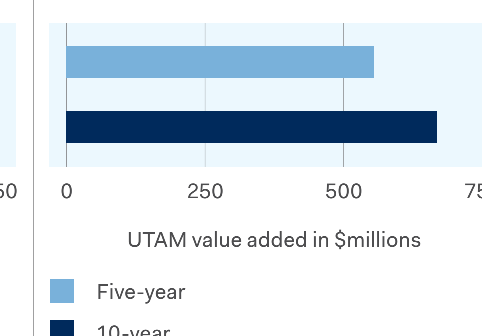


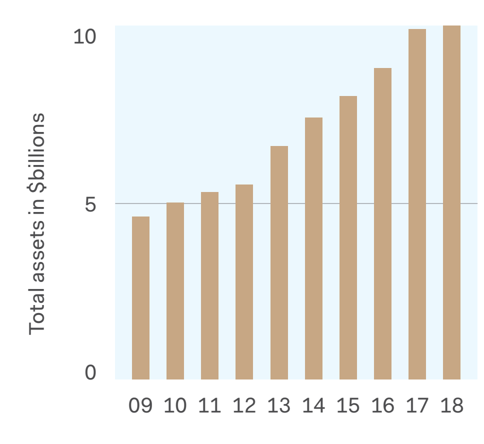
Pension + Endowment

2018
$59 million

Five-year
$554 million

10-year
$668 million





Total assets under management

Pension, Endowment and short-term working capital funds

at December 31, 2018
$10.0 billion

at December 31, 2017
$9.9 billion

Year-over-year increase
1.3%

A focus on long-term performance

The University of Toronto and its stakeholders count on UTAM to prudently invest the capital entrusted to us, building a strong foundation for continued growth. As we help Canada's largest university reinforce its global leadership in higher education and research – while providing a secure retirement for thousands of employees – our focus, like that of our U of T colleagues, is on the long term.

THE MANDATE OF UTAM is to prudently invest the capital entrusted to us by the University of Toronto. As Canada's largest university extends its global leadership in teaching and research, we work to strengthen some of the key financial pillars on which that vision is built – and to help provide a secure retirement for thousands of employees who've helped build it.

Established as a separate corporation by the University of Toronto in 2000, UTAM invests funds according to objectives and guidelines set out by the university's administration and the Investment Committee, as well as U of T's Business Board and Pension Committee. In fulfilling this mandate, we typically don't make direct investments in traded securities. Rather, UTAM follows what is known in the investment industry as a manager of managers approach. We select investment managers that we believe are best in class and then evaluate their performance against our risk and return expectations – given the market environment – in an assessment process framed by our commitment to responsible investing.

UTAM focuses exclusively on investing university-owned assets. Our purpose is clear: to serve as a strategic and disciplined manager, realizing the highest possible returns while respecting our client's risk tolerance, policy constraints and guiding values. Working in close collaboration with the U of T administration and the university's Investment Committee, we manage three distinct portfolios, as detailed on page 11.

"Everyone at UTAM understands the tremendous responsibility we share, working together to protect and grow the assets of one of the world's great universities. To the pension plan members who've earned a well-deserved retirement, to the donors who generously contributed to the Endowment – to all of the diverse stakeholders who benefit from the University of Toronto's impact – UTAM has a straightforward message: we will continue to invest the capital entrusted to us prudently, thoughtfully and transparently, looking beyond short-term fluctuations to build a secure and sustainable future."

—

RICHARD B. NUNN
CHAIR, UTAM BOARD OF DIRECTORS

UTAM timeline

The following timeline shows significant events in UTAM's history and highlights our focus on good governance, risk management, transparency and responsible investing.

2000
UTAM established

2005
Registered with the Ontario Securities Commission

2008
Daren Smith joined UTAM in November 2008

2010
The Investment Advisory Committee is formed to provide advice and guidance to UTAM management

2011
Appointed its first Chief Risk Officer

2012
Implemented a comprehensive risk system

2013
Implemented a detailed performance attribution system

2016
- Daren Smith appointed as President and Chief Investment Officer
- Value added to the Pension and Endowment portfolios over a five-year period exceeds $500 million for the first time
- Became a signatory to the PRI and committed to responsible investing
- The expert external Investment Committee replaced the Investment Advisory Committee
- UTAM relaunched its website and annual report in an effort to improve transparency and communications with stakeholders

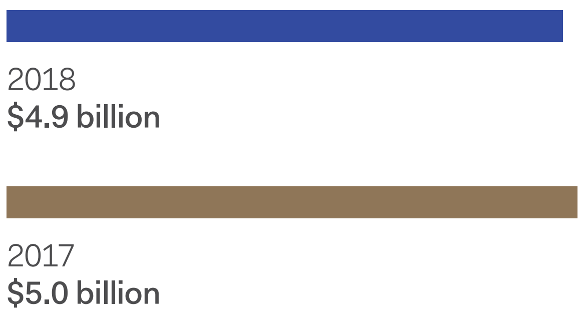
2018
UTAM's assets under management on behalf of the university reached $10 billion

A focus on long-term performance
cont'd

Assets under management

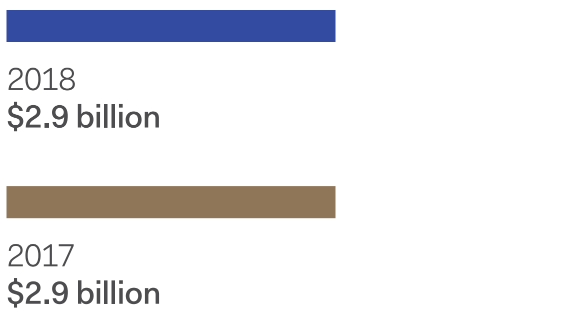
01 Pension

The assets of the university's employee pension plan comprise what is officially called the University of Toronto Master Trust. Changes in the value of this portfolio reflect employer and employee contributions, pension payments to retirees, and investment gains/losses. At the end of 2018, pension assets totalled **$4.9 billion**, down from **$5.0 billion** at the end of 2017.



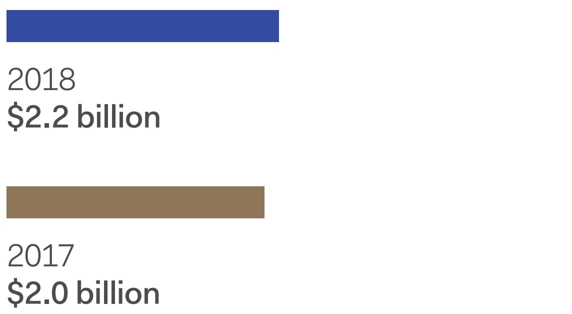
02 Endowment

Known formally as the Long-Term Capital Appreciation Pool, the Endowment portfolio (as we refer to it throughout this annual report) consists primarily of certain Endowment assets but also includes other funds invested for the long term. The size of this portfolio changes in value with contributions, investment gains/losses and withdrawals to fund Endowment projects. At the end of 2018, the assets in this pool had a value of **$2.9 billion**, unchanged from the end of 2017.



03 Short-Term Working Capital

Expendable university funds that can be invested over the short to medium term make up the Expendable Funds Investment Pool (EFIP). Principally comprising the university's working capital, EFIP assets can fluctuate significantly in the course of a year. Factors that affect these fluctuations include student tuition fees, staff and faculty salaries, facilities maintenance costs, government grants and investment gains/losses. At the end of 2018, EFIP was valued at **$2.2 billion**, up from **$2.0 billion** at the end of 2017.



A commitment to responsible investing

We are increasingly taking a leadership role in responsible investing, embracing its guiding principles and promoting best practices. Our annual Responsible Investing Report details how we consider material environmental, social and governance (ESG) factors in our investment analysis, making well-informed decisions that advance our goals for the portfolios while reinforcing the University of Toronto's commitment to managing all facets of its operations responsibly.

UTAM'S FORMALIZED APPROACH to responsible investing is consistent with our fiduciary duty and complements our overall investment strategy for the university's Pension, Endowment and short-term working capital assets. We pursue a responsible investing approach because we believe that material ESG factors can have a significant impact on investment returns. By integrating ESG considerations into our investment activities, we believe we can make better-informed decisions and ultimately achieve better outcomes for the portfolios we manage on behalf of the university.

In 2018, we further developed our ESG integration practices such that they are now considered in every aspect of our investment process. The members of our Responsible Investing Committee and all staff engaged in the investment and risk process routinely consider ESG risks and opportunities.

As our approach to responsible investing has evolved over time, we've moved from playing catch-up to assuming leadership roles in various responsible investment organizations. We now actively participate in discussions to identify and shape best practices. For example, our Chief Risk Officer, Doug Chau, is a member of the PRI's (Principles for Responsible Investment) Asset Owner Advisory Committee, which provides advice, tools and support to asset owners implementing the PRI, as well as insights into the opportunities offered by incorporating ESG factors into investment decision-making. And our Chief Operating Officer, Lisa Becker, is a board member of the Responsible Investment Association. She also chairs its Governance Policy Committee and participates in associated working groups.

We've always incorporated a degree of ESG analysis into our investment approach. But as that commitment has become more systematic, we've put the building blocks in place for a sophisticated and holistic approach to ESG integration. Notable ESG-related activities in 2018 are shown on page 15.

Responsible investing timeline

The following timeline shows significant events in UTAM's responsible investing journey.

2008

UTAM joined the Canadian Coalition for Good Governance (CCGG)

2016

- Became a signatory to the Principles for Responsible Investment (PRI) on behalf of U of T's Endowment and Pension portfolios
- Became a signatory to CDP (formerly known as the Carbon Disclosure Project)
- Joined the Responsible Investment Association (RIA)
- Initiated proxy voting under Institutional Shareholders Services' Sustainability Policy

2017

- Doug Chau, UTAM's CRO, joined the PRI's Asset Owner Advisory Committee
- Lisa Becker, UTAM's COO, joined the Pension Investment Association of Canada's (PIAC) Investor Stewardship Committee
- Signed the Montréal Carbon Pledge
- Published Responsible Investing Policy
- Published first annual responsible investing report, covering 2016
- Joined Climate Action 100+

2018

- Lisa Becker joined the Board of the Responsible Investment Association (RIA)
- Released first PRI Assessment Reports, which gave strong marks
- Published the carbon footprint of the Pension and Endowment portfolios
- Joined the Investor Group of the 30% Club Canada
- Joined Intentional Endowments Network (IEN)
- Joined Standards Board for Alternative Investments (SBAI)

"UTAM's leadership in the responsible investing space was an important factor in our decision to become a signatory to the UN-supported Principles for Responsible Investment. It has long been our view that a manager's fiduciary responsibility can only be fully met by considering material ESG factors. Through our collaboration with UTAM, we found a like-minded partner who shares our belief in the importance of responsible investing."

MICHAEL QUINN
CHIEF INVESTMENT OFFICER, RPIA

A commitment to responsible investing
cont'd

Our first PRI scorecard
In 2018, we participated in our first formal assessment as a signatory of the PRI. Responding to a series of asset-specific modules in the PRI's reporting framework, we provided data on our activities related to various responsible investing indicators. The resulting Assessment Reports evaluated our progress in implementing responsible investing practices over time, across asset classes and in comparison to peers at the national and global levels. We received four A+ marks and one A for our responsible investing activities in managing U of T's Pension and Endowment assets, and we scored higher than the median PRI signatory in all applicable categories.

Our first Carbon Footprint Report
In September 2017, UTAM joined more than 120 global investors – collectively responsible for over US$10 trillion in assets under management – in signing the Montréal Carbon Pledge. Aligned with the Paris Agreement on climate change, the pledge reinforces our commitment to measure and disclose the carbon footprints of the university's Pension and Endowment portfolios. In 2018, we published our first Carbon Footprint Report for the Pension and Endowment public equity portfolios.

Climate Action 100+
As mentioned in our 2017 report, UTAM, on behalf of the University of Toronto, became a founding participant in Climate Action 100+, an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change. The companies include 100 "systemically important emitters," accounting for two-thirds of annual global industrial emissions, alongside more than 60 others. UTAM has joined with other investors in engagement activities with four of the companies. In 2018, we participated as a collaborative investor, writing letters and having calls with company management.

We have seen great initial progress over the course of 2018 and into early 2019, with a number of focus companies making both public and private commitments that align with the objectives of this initiative. For example, in December 2018, Shell announced a commitment to reduce its carbon footprint in a joint public statement with Climate Action 100+ investors.

Carbon neutrality achieved
UTAM as a corporation is now substantially carbon neutral. Following our purchase of carbon offsets in 2017 to mitigate the impact of staff air travel, we extended the program in 2018 and bought additional offsets to mitigate the carbon footprint of our electricity and gas consumption, as well as our use of paper. Including our travel offsets, we purchased greenhouse gas offsets representing 168.74 tonnes of CO_2 equivalent.

Strong governance and management

A commitment to sound corporate governance underpins UTAM's purpose and defines our culture. We are empowered to act on behalf of the University of Toronto, which appoints our Board of Directors, oversees our business activities and designates the independent Investment Committee to provide expert guidance on investment strategy. The structure and relationships by which we're governed reflect a shared set of values and a commitment to transparency, accountability and respectful collaboration.

UTAM Board of Directors

A corporation without share capital, UTAM is governed by a Board of Directors whose members are nominated by the University of Toronto. The Board approves our annual corporate budget and oversees matters such as regulatory compliance, enterprise risk and executive compensation. While it does not guide investment strategy (that is the mandate of the university's Investment Committee), the Board is focused on ensuring that UTAM has developed an effective investment management infrastructure and organization in order to fulfill the responsibilities delegated to it by the University of Toronto.

Members

Richard B. Nunn (Chair)
Independent Director
Senior Client Service Partner,
Deloitte

Sheila Brown
Chief Financial Officer,
University of Toronto

Meric S. Gertler
President,
University of Toronto

Daren M. Smith
President and Chief Investment Officer,
UTAM

Alan D. White
University of Toronto Faculty Association (UTFA) Appointee
Professor,
Rotman School of Management

"UTAM, through its management of the Pension, Endowment and short-term working capital assets, plays an integral role in our efforts to ensure sound, strategic financial management at the University of Toronto. We collaborate closely on setting targets, defining risk appetite and developing plans designed to achieve our long-term investment objectives. UTAM's leadership team has a gift for simplifying complex investment concepts and communicating transparently with our diverse stakeholders."

—

SHEILA BROWN
CHIEF FINANCIAL OFFICER, UNIVERSITY OF TORONTO


> "The Investment Committee, in consultation with UTAM's leadership team, has established an investment framework and strategic direction that are informed by our extensive collective experience. We review and approve investment programs and then monitor management's execution. We maintain discipline and a long-term focus in discharging our responsibilities, with a primary objective of helping the University of Toronto achieve its mission."

—

DAVID DENISON AND GEOFF MATUS
CO-CHAIRS, UNIVERSITY OF TORONTO INVESTMENT COMMITTEE

Strong governance and management
cont'd

U of T Investment Committee

The five members of the Investment Committee (IC) are all appointed by the President of the University of Toronto. They bring a wealth of senior-level investment industry experience to their oversight of UTAM's efforts to grow the university's Pension, Endowment and EFIP assets.

The IC's responsibilities include:

- recommending investment strategy, including explicit risk and return objectives, to the university administration
- approving various elements of strategy execution proposed by UTAM's management
- overseeing all of our investment activities and monitoring performance
- providing input on the hiring, compensation and evaluation of UTAM's senior leadership.

The IC reports directly to U of T's President and collaborates extensively with the university administration, as well as the UTAM Board. The IC is empowered to provide direct input to UTAM's management team, conveying the President's objectives and instructions, and acting on his behalf with regard to all relevant investment-related activities.

UTAM meets formally with the IC every other month and has ad hoc interactions as needed to discuss emerging issues and seek expert advice. We're extremely fortunate to have such a distinguished and highly qualified group of volunteer advisors actively engaged in overseeing our investment management activities. The university and its stakeholders benefit immeasurably from the IC members' insights, experience and wise counsel.

Members

David Denison (Co-Chair)
A corporate director with extensive experience in the financial services industry, Mr. Denison served as President and CEO of the Canada Pension Plan Investment Board from 2005 to 2012. He was previously President of Fidelity Investments Canada. He also sits on the boards of Royal Bank of Canada and BCE and is Chair of the Board of Element Fleet Management Corporation.

Geoff Matus (Co-Chair)
A co-founder (in 1988) of Tricon Capital Group, Mr. Matus remains on the company's board, serving as Chair of the Executive Committee and as a member of the Investment Committee. He is also Chair and co-founder (in 1998) of Cidel, a global financial services group, and Chair of The TEAM Companies, an international payroll provider serving the entertainment industry. In addition, he is on the board of the MaRS Discovery District, chairing the Real Estate Committee.

Brent Belzberg
Mr. Belzberg is the founder and Senior Managing Partner of TorQuest, a private equity firm based in Toronto. He also sits on the Board of CIBC and is Chair of the Board of the Sinai Health System.

Heather A. T. Hunter
Retired after nearly 40 years in the investment industry, Ms. Hunter most recently served as VP and Head of Canadian Equities at Invesco, a global investment manager.

Craig Rimer
The Chief Executive Officer of Cidel Bank Canada, Mr. Rimer is also Chairman of Cidel Asset Management.

The University of Toronto's President and its Chief Financial Officer, as well as the Chair of UTAM's Board of Directors, are ex officio observers of the IC.

Strong governance and management
cont'd

Other U of T oversight

UTAM's relationship with the University of Toronto is governed by a formal delegation of authority, which empowers us to act as the university's agent, and by an investment management agreement specifying the services to be provided by UTAM. Within that framework, we collaborate formally and informally with many areas of the university administration. We value this mutually supportive relationship, and we're committed to serving the university and its stakeholders with the utmost diligence and care.

University Administration
We typically meet with U of T's Chief Financial Officer every two weeks, and with the President quarterly. We work closely with the university's Financial Services Department, collaborating on cash and expense management, stakeholder reporting, various audits of the university's investment assets, and other aspects of UTAM's operations.

Business Board
Established by the university's Governing Council, the Business Board approves investment risk tolerance and return targets for the Endowment and EFIP portfolios, delegating approval of asset allocation to U of T's President, who in turn relies on the advice of the Investment Committee. UTAM reports to the Business Board on the management and performance of all portfolios every six months.

Pension Committee
We report regularly to the Pension Committee, which is responsible for approving investment risk tolerance, return targets and the policy asset allocation (i.e., the Reference Portfolio) for the Pension portfolio, guided by the recommendations of the university administration.

UTAM compliance

Investment compliance
Consistent with our fiduciary duty, as well as our obligations as a Portfolio Manager registered with the Ontario Securities Commission, UTAM has developed a comprehensive program to ensure compliance with applicable regulations, client investment restrictions and internal guidelines. Our Chief Compliance Officer works closely with UTAM's President and CIO, and she reports regularly to our Board of Directors.

Code of Ethics
UTAM's Code of Ethics, administered by our Chief Compliance Officer, sets out clear standards of professional behaviour and guides how we manage actual and potential conflicts of interest. All employees have an obligation to:

- place the interests of UTAM's client first
- protect confidential information
- avoid taking inappropriate advantage of their positions (adhering, for example, to stringent policies on personal trading, as well as on the acceptance of gifts and entertainment).

UTAM committees

Management Committee
The Management Committee, chaired by the President and Chief Investment Officer (CIO), considers issues related to enterprise risk, human resources, information technology, business continuity, cybersecurity management and compliance matters. This Committee typically meets monthly and is responsible for approving most of UTAM's policies.

Management Investment Committee
The Management Investment Committee, chaired by the President and CIO, considers matters related to UTAM's investment activities, such as investment strategy, investment manager appointments and investment performance. The Committee comprises all investment staff and senior members of the Risk and Research and Operations teams. This Committee is responsible for approving all investment mandates and typically meets monthly.

Management Investment Risk Committee
The Management Investment Risk Committee, chaired by the Chief Risk Officer, oversees the development and implementation of UTAM's investment risk framework. The Committee is responsible for developing investment risk policies, reviewing risk reports and addressing all investment-related risk issues. The Committee comprises staff on the Risk and Research team, the CIO and other senior investment staff, and it typically meets monthly.

Responsible Investing Committee
The Responsible Investing Committee, chaired by the President and CIO, oversees all matters relating to the development and implementation of UTAM's responsible investing practices. The Committee is composed of the most senior leaders at UTAM and typically meets quarterly.

UTAM teams

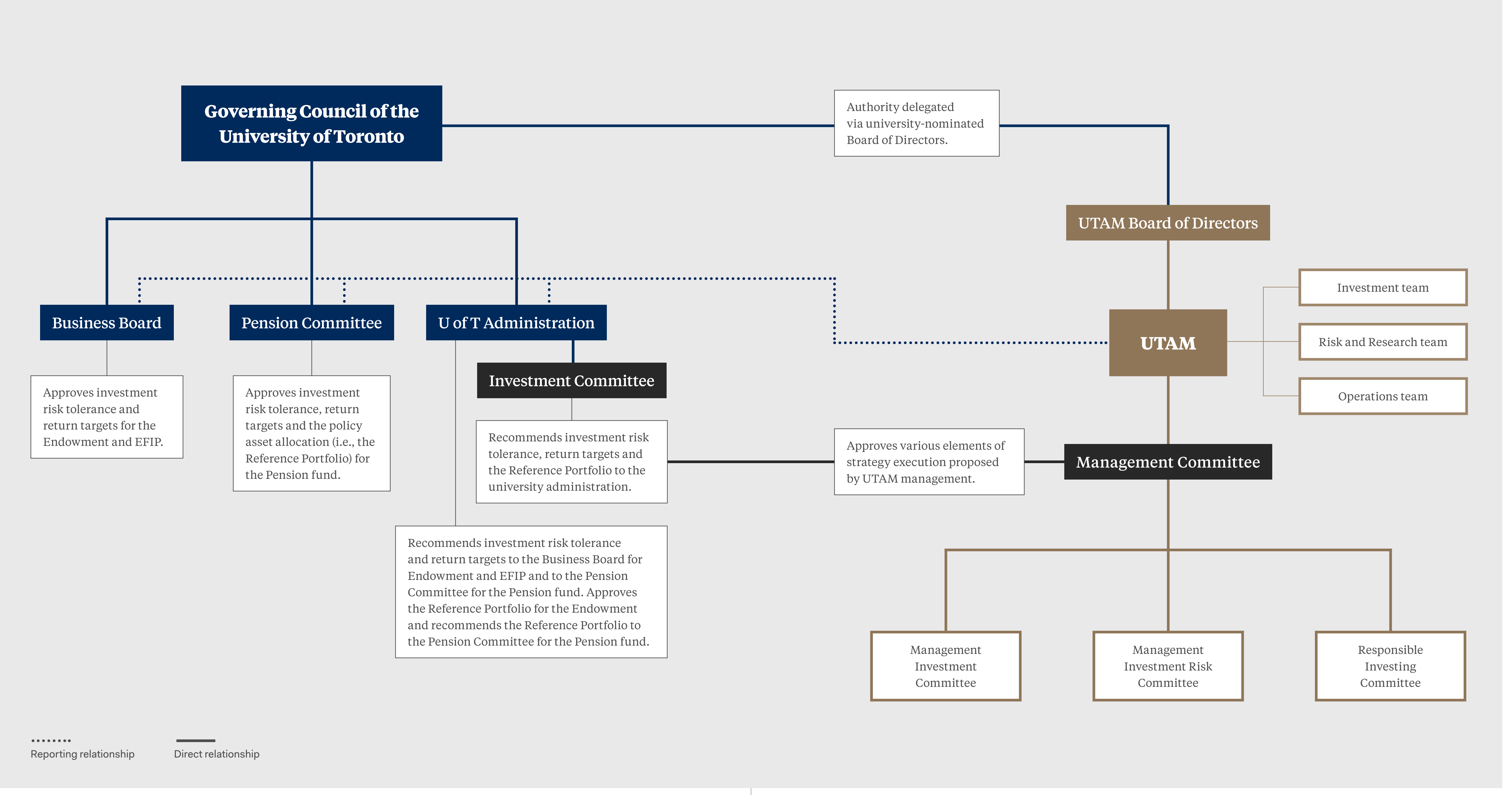
Investments
The Investments team, led by the President and CIO, is divided among three areas: public equity, fixed income and private markets (excluding private credit). The head of each group is supported by one or more analysts. The Investments team is responsible for portfolio construction within each portfolio and identifying, evaluating and recommending investment managers to the Management Investment Committee, as well as ongoing monitoring of appointed managers.

Risk and Research
The Risk and Research team is led by the Chief Risk Officer and is responsible for the measurement of investment risk and portfolio performance, and it is the internal research hub for investment matters. The identification, measurement and monitoring of a wide variety of investment risks are achieved using a third-party holdings-based risk system. Risk and Research manages the implementation, development and use of this system, ensuring that data on which its validity relies are complete and accurate.

Operations
Operations, led by the Chief Operating Officer, encompasses the oversight and execution of all matters related to investment operations, operational due diligence, compliance, corporate financial accounting, human resources, information technology, enterprise risk and legal matters. The Investment Operations function ensures the accurate and timely execution of investment transactions and the payment of portfolio fees and expenses. It also ensures that official investment books and records for the portfolios are accurately maintained by the university's appointed independent custodian. Operations staff work closely with their Investments and Risk and Research colleagues within UTAM, as well as with the university's Financial Services Department and key external service providers.

Governance structure

The following chart shows the roles and responsibilities of the various groups described on the previous pages.



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A defined benchmark for performance

The starting point for all of UTAM's active investment decisions is the Reference Portfolio, which establishes an investment benchmark based on the risk and return objectives of the Pension and Endowment portfolios. As we implement our strategy, the Reference Portfolio provides us with an objective yardstick for measuring the risk and value added of our investment activities.

UTAM'S PERFORMANCE IN MANAGING the Pension and Endowment portfolios is evaluated in relation to an agreed-upon benchmark: the Reference Portfolio, which reflects the risk and return objectives of the Pension and Endowment portfolios. The Reference Portfolio provides an objective yardstick to measure the value gained or lost by UTAM's active management activities.

The Reference Portfolio is developed jointly by UTAM management and the Investment Committee. It is then recommended to the university administration, which must approve its use for the Endowment portfolio and recommend its adoption for the U of T pension plan – subject to approval by the Pension Committee.

Design features of the Reference Portfolio

The Reference Portfolio must have the following characteristics:

1. Risk and return attributes consistent with the objectives of the Pension and Endowment portfolios
2. Simple asset mix – public market asset classes only
3. Passive investing approach – no active strategies
4. Easy to implement – no need for a large investment team
5. Low cost – can be deployed without significant expense

The current Reference Portfolio consists of 60% equity exposure and 40% fixed income exposure. The equity exposure is further divided into allocations to five categories: Canadian, US, International Developed Markets, Emerging Markets and Global. The fixed income exposure is split between Canadian Corporate Bonds and Canadian Government Bonds.

Asset mix

Table 1 (see page 25) shows the asset class weights for the Pension, Endowment and Reference portfolios as of December 31, 2018. We calculate the weights on an exposures basis, meaning they reflect the economic exposure of any derivative instruments that may be used to maintain an asset class exposure at the desired weight. We believe that this reporting method most accurately represents the asset class exposures and risks of the investment portfolios.

It should also be noted that the asset class weights in Table 1 reflect the impact of mapping investments not in the Reference Portfolio – for instance, private equity and hedge funds – to the most appropriate asset class within the Reference Portfolio.

Table 1 – Pension and Endowment Asset Mix Compared to the Reference Portfolio

Reference Portfolio Asset Class	Benchmark	Reference Portfolio Weight	Pension Weight	Endowment Weight
Equity		**60.0%**	**60.4%**	**60.5%**
Canadian Equity	S&P TSX Composite Total Return Index	10.0%	10.3%	10.3%
US Equity	S&P 500 Total Return Index (50% hedged to Canadian dollars)	20.0%	20.1%	20.1%
International Developed Markets Equity	MSCI EAFE Net Total Return Index (50% hedged to Canadian dollars)	15.0%	15.1%	15.2%
Emerging Markets Equity	MSCI Emerging Markets Net Total Return Index	10.0%	9.8%	9.8%
Global Equity	MSCI ACWI Net Total Return Index	5.0%	5.0%	5.0%
Fixed Income		**40.0%**	**39.6%**	**39.5%**
Canadian Corporate Bonds	FTSE Canada All Corporate Bond Total Return Index	20.0%	19.8%	19.9%
Canadian Government Bonds	FTSE Canada All Government Bond Total Return Index	20.0%	19.8%	19.6%

Please note that due to rounding in the table above and other tables in this report, some totals may not add up precisely, and some values may differ from the results of simple subtraction.

How much flexibility do we have?

Although the Reference Portfolio includes only public market asset classes, UTAM has the flexibility to invest in other asset classes and strategies. However, this freedom is tightly controlled with agreed-upon risk guidelines that are monitored and regularly reported on. Investments in any asset class or strategy not in the Reference Portfolio are subject to the relevant plan documents and require explicit permission from the Investment Committee. UTAM retains discretion to select investments within these approved asset classes and strategies.

Our decisions with regard to the Endowment and EFIP portfolios are governed by our investment management agreement with the university and the University Funds Investment Policy. Pension investments are managed in accordance with the Pension Statement of Investment Policies and Procedures.

We have the flexibility to deviate from the target Reference Portfolio asset class weights for Pension and Endowment, but the actual weights must be within the allowable bands – that is, within 5% for each equity asset class; within 10% for all equity asset classes combined; and within 10% for each fixed income asset class.

In addition to the above, we must adhere to various liquidity, concentration and rebalancing constraints.

Last but by no means least, our investment decisions are framed by a rigorous risk management process and a formal risk budget – as detailed later in this report.

Rigorously selected investment managers

A core strength that we believe sets UTAM apart is our thoughtful, systematic approach to evaluating and selecting our external investment managers. We follow a clear set of steps in identifying, vetting and monitoring the practices and performance of the managers we choose to work with – and we're constantly looking for ways to improve that collaborative process.

Active vs. passive

An important part of our manager selection process is determining whether to invest with an active manager or to invest passively. Our default position is to invest passively at the lowest possible cost. In other words, we only pursue active management when we have a high level of conviction that a specific investment manager's approach will outperform passive investment alternatives (net of all fees and expenses) over time. As a consequence, we have a significant amount of passive exposure in certain asset classes.

Sourcing and assessing managers

We review over 100 investment managers every year. Primary sourcing methods include drawing on the knowledge and experience of the UTAM team, proactively reaching out to managers and networking with other investors. Secondary methods include attending conferences, responding to inbound inquiries from managers and searching industry databases. The initial screening process consists of reviewing the manager's marketing materials, and in some cases running a quantitative analysis of returns, to quickly determine if there is a potential fit. If there's still interest after the first pass, we request a call or meeting with the manager to better understand the organization and investment team, their investment philosophy and strategy, their investment performance, the level of transparency they are willing to provide and the terms of the investment (including the firm's fee structure). When a manager seems potentially well matched to our investment beliefs and objectives, we conduct more in-depth research and analysis.

Investment due diligence

For managers who make it to this stage of the process, we focus on the five P's: people, philosophy, process, performance and portfolio fit. We also look at the alignment of interests between the investment manager and our client and take into account ESG considerations. This analysis includes both a qualitative assessment of the manager's organization and its people, and a quantitative review of historical portfolio holdings and/or returns.

As an institutional investor, we expect a great deal of transparency from potential and current managers – far more than a typical individual investor would receive. This level of transparency is necessary for UTAM's team to effectively evaluate active managers. For example, in reviewing public equity strategies, managers typically provide historical month-end holdings, which UTAM runs through sophisticated analytical tools to produce reports detailing performance attribution; factor exposures (e.g., value, growth, momentum) and their contributions to return; risk exposures; ESG scores, including carbon footprints; sector and country exposures; the trading history of each position; and more. This information helps us better understand the manager's investment process and allows us to ask more targeted questions when interviewing the manager's investment team about their strategies.

At UTAM, we believe that leveraging quantitative tools, while essential for a best-in-class manager selection process, is not sufficient on its own. We therefore complement our rigorous quantitative insights with qualitative judgment and experience, working as a team to make optimal manager choices that we expect will benefit our client over the long term.

"UTAM's disciplined approach, balancing innovative thinking with a rigorous methodology, epitomizes what we look for in an investment partner. Our teams are aligned in all the critical areas that drive excellence: in-depth research, sound strategy, collaborative culture, ethical best practices – and most importantly, a commitment to achieving long-term success."

—

PETER RATHJENS
CHIEF INVESTMENT OFFICER, ARROWSTREET CAPITAL

"UTAM is always looking to dig deeper into investment managers' skills and performance, and we contribute some of the underlying analytics that make those insights possible. A strong due diligence process requires asking great questions – supported by sophisticated, evidence-based tools that help capture the nuances."

—

JORGE MINA
HEAD OF ANALYTICS, MSCI

Rigorously selected investment managers
cont'd

Operational due diligence
Once there is a reasonable probability that the Investment team will recommend investing with a particular manager, we conduct a similarly rigorous review of the firm's business operations. Factors we examine include ownership and management structure; the experience and competence of key operational personnel; the soundness of operational processes; the manager's compliance and control environment, including conflicts of interest; other formal policies and procedures; and relationships with external service providers. We also look at the firm's cash management practices, compliance track record, information systems, cybersecurity measures and business continuity planning, among other operational dimensions.

In short, we must be confident that a manager not only offers a promising investment opportunity but also operates a sound, well-run business. This is crucial for us: should a prospective manager's operations not meet our standards, UTAM's Operational Due Diligence team has a right of veto over the investment.

Risk analysis
Before any funds are allocated to a manager, our Risk and Research team calculates the expected risk contribution of the potential new investment. Armed with this comprehensive analysis, we can make more informed decisions about prospective managers and strategies, focusing on those that offer the highest expected return for the amount of risk being taken.

Manager recommendation
All material allocations must be approved by UTAM's Management Investment Committee. To help this Committee evaluate potential allocations, formal Investment Due Diligence (IDD) and Operational Due Diligence (ODD) reports are prepared by the Investment team and the Operational Due Diligence team, respectively. In addition, a risk report, a legal review and a tax review are also submitted to the Committee. The IDD report, a detailed account of the IDD process and findings, including a section on ESG considerations, can range from 50 to more than 150 pages. The ODD report describes the review undertaken and its findings, and also includes a detailed account of key operational risks and mitigations (if any). It provides a conclusion on whether the manager's operations are sufficiently sound and indicates any operational improvements identified as necessary conditions for investment. After reviewing and discussing each of the reports, the voting members of the Committee decide whether to approve the allocation.

Ongoing monitoring
After an investment has been made, the Investment and Operational Due Diligence teams follow a rigorous monitoring and reporting process. The Investment team typically has touchpoints at least quarterly with each manager. The focus of the monitoring process remains on the five P's and responsible investing considerations. The process includes an assessment of realized performance, taking into account the market environment and how we expected the manager to perform in that environment. We also conduct regular reassessments of operational risk to consider any relevant changes.

For UTAM, choosing to work with an investment manager is not a one-time decision – it's a continuous process of analysis, evaluation, dialogue and renewal.

Prudent risk assessment and management

UTAM's robust risk framework takes into account a broad spectrum of potential investment risks, from counterparty concentration and liquidity needs to ESG factors and climate. The dedicated team of risk practitioners led by our Chief Risk Officer weighs all formal constraints, as well as our commitment to responsible investing, in ensuring that investment decisions reflect the University of Toronto's risk appetite and long-term expectations for its Pension and Endowment assets.

THE REFERENCE PORTFOLIO IS DESIGNED to reflect the university's long-term return objective and risk appetite for the Pension and Endowment assets. Taking into account all other formal constraints, as well as our focus on responsible investing, we make investment decisions with the goal of achieving returns (after fees and expenses) that exceed those of the Reference Portfolio.

Risk in the Pension and Endowment portfolios is determined by the asset class mix specified by the Reference Portfolio, along with any incremental risk arising from decisions made by UTAM or the managers that we invest with. Our investment risk management framework is anchored by three components focusing on market, concentration (including credit and counterparty) and liquidity risks. Each outlines the specific risk levels that UTAM operates within. The actual risk limits, such as the active risk budget, are set by various groups, including the university administration, the Investment Committee and the Pension Committee; they are subsequently incorporated into our processes to ensure that any risk we assume to earn returns in excess of the Reference Portfolio is managed in a thoughtful and efficient manner. To that end, we manage the risk of the Pension and Endowment portfolios against the university's specified active risk budget and incorporate several limits on exposure, concentration and liquidity.

A comprehensive risk management process

Market risk

UTAM identifies, measures and monitors a variety of risks on a point-in-time basis and a trend basis using a third-party holdings-based risk system. We begin by loading all available investment holdings from our managers into the system. Where positions are not available, we use a variety of techniques to incorporate relevant risk exposures. For private investments, we develop multi-factor proxies that reflect the key risk drivers of the private positions.

Once we've populated the risk system with actual holdings and proxies, we measure active risk (i.e., portfolio risk versus Reference Portfolio risk) and total portfolio risk, and we identify specific risk contributors by asset class, investment strategy and investment manager. We monitor the exposures of the Pension and Endowment portfolios to different sectors, geographical regions and credit-rating categories. (For the EFIP portfolio, we apply other risk monitoring and measurement techniques appropriate to those holdings.) We also assess the highest risk concentrations among individual issuers across a variety of categories. We estimate the sensitivity of the portfolio to potential changes in market risk factors such as equity market shocks, shifts in interest rates and credit spreads, and adverse movements in foreign exchange rates. These analytics are all integrated through a simulation analysis to assess the possible portfolio impacts and sensitivities to different capital market regimes and scenarios, including a severe global market downturn.

In 2018, we further expanded our analysis to include asset liability modelling using a dynamic scenario generator, which allows us to analyze the behaviour of the portfolios across a number of different plausible forward-looking path-wise scenarios. Our analysis provides insights into overall risk exposures and identifies specific markets, factors and regimes to which the portfolios are most vulnerable. The output of this analysis is discussed at regular meetings of our Management Investment Risk Committee and informs our decision-making on how these risks should be managed going forward.

"Working alongside the UTAM team, we provide the risk systems and data management tools they need to evaluate risk and exposures across multiple asset classes, as well as the total portfolio – and together we've developed custom analytics to gauge risk from many different perspectives. They continually challenge us to take the analysis even deeper as we deliver the quality of insights that UTAM needs to manage the University of Toronto's Pension and Endowment investments for the long term."

—

ZOUBAIR ESSEGHAIER
HEAD OF INVESTMENT ANALYTICS NORTH AMERICA, STATE STREET GLOBAL EXCHANGE

Prudent risk assessment and management
cont'd

We compare the various risk measures developed for the Pension and Endowment portfolios against the Reference Portfolio, and we model all three at the individual security level. We conduct this process monthly with updated holdings, gaining a detailed picture of active risk across the portfolios over time. Through constant measurement and monitoring, we're able to better manage risk associated with specific investment decisions on both a relative and an absolute basis, which enables us to make well-informed investment decisions.

Liquidity and counterparty risk

We've developed a system that models the potential liquidity needs of the Pension and Endowment portfolios under stressed market conditions. This helps ensure that adequate cash and other sources of liquidity are available to meet all liquidity needs over an extended period. The same modelling analysis ensures that we can, if necessary, rebalance the Pension and Endowment portfolios to align with the target asset class weights of the Reference Portfolio.

The Pension and Endowment portfolios have credit exposures to individual counterparties through security holdings in the equity and bond markets. We also generate credit exposure through our use of derivatives, which are mainly used to hedge foreign exchange exposures and to rebalance our portfolios back to the target asset class weights of the Reference Portfolio. We establish fixed limits for individual counterparties that we monitor regularly. These limits ensure that the portfolios are not overexposed to negative shocks from any single counterparty.

Deeper analytical insights

The Investment Committee and the university administration view these active risk, liquidity and counterparty limits as sufficient to give UTAM the flexibility to achieve our value-added objectives – but not so large that they put the portfolios at undue risk of significant underperformance relative to the Reference Portfolio.

From our perspective, highly disciplined risk management is critical. But it's just one facet of a mandate that's defined by a range of commitments and constraints, from the balance of equities and fixed income in the Reference Portfolio to UTAM's adoption of responsible investing principles. Indeed, as detailed in our Responsible Investing Reports, we now consider ESG risks more systematically in our evaluation of investment managers. Through a mix of analytics, research and consultation, we're able to gain a better understanding of ESG risks across our portfolios.

In every area of risk assessment, as we analyze data on underlying positions and historical returns, we gain deeper insights into our investment managers. It's a constant learning process that starts right from the initial due diligence component of our manager selection process.

UTAM's Active Risk Budget

The amount of risk that UTAM is permitted to use in the actual Pension and Endowment portfolios is constrained by the "traffic light" risk framework shown below. Active risk is defined as the risk in the actual portfolio minus the risk in the Reference Portfolio. For example, the "green zone" extends from taking 0.50% less risk than the Reference Portfolio to 1.50% more risk than the Reference Portfolio.

Active Risk Zone	Active Risk
Green ("Normal")	**-0.50%** ≤ Active Risk ≤ **1.50%**
Orange ("Watch")	**1.50%** < Active Risk ≤ **1.75%**
Red ("Reduce")	Active Risk > **1.75%**

Sound long-term performance

Reflecting the challenging public market investing environment in 2018, the Pension and Endowment portfolios generated a return of -1.6% and -1.5%, respectively (net of all fees and expenses). This was below the university's target return of 6.0% but above the Reference Portfolio benchmark of -2.3%. Taking a longer view, however, actual net returns (annualized) for the past five years were 7.5% for Pension and 7.6% for Endowment, while the same metrics for the past 10 years were 7.8% and 7.9%, respectively. Each of these results exceeded both the university's target return and the Reference Portfolio benchmark return.

Reference Portfolio performance

Capital markets had a difficult year in 2018. Most equity markets finished the year in negative territory, with the US performing better than most (-4.4% in US dollar terms) and emerging markets worse than most (-14.6% in US dollar terms). Fixed income markets also had a difficult year, with Canadian investment-grade corporate credit (Canadian Corporate Bonds) returning -0.4% and Canadian Government Bonds returning 1.5%. The Reference Portfolio, which consists of public equity and fixed income allocations, returned -2.3% for the year. Table 2, below, shows the actual net returns, the Reference Portfolio returns and the university's target returns for the Pension and Endowment investment portfolios in 2018 and over the most recent five- and 10-year periods.

Table 2 – Pension and Endowment Performance

	2018		5-Year Annualized 2014–2018		10-Year Annualized 2009–2018	
	Pension	Endowment	Pension	Endowment	Pension	Endowment
Actual net return	-1.6%	-1.5%	7.5%	7.6%	7.8%	7.9%
Reference Portfolio return*	-2.3%	-2.3%	5.7%	5.7%	6.7%	6.7%
University target return	6.0%	6.0%	5.7%	5.7%	5.7%	5.7%
UTAM value added (%)	0.7%	0.8%	1.8%	1.9%	1.1%	1.2%
UTAM value added ($millions)**	36	23	337	217	403	265

* *The Reference Portfolio was adopted by Endowment in March 2012 and by Pension in May 2012. The Benchmark/Policy Portfolio was used for prior periods.*

** *All dollar-value-added calculations in this table and throughout the report are based on the percentage value added in each year multiplied by the asset level as of the beginning of the year. Multi-year values are the simple sum of single-year values.*

Sound long-term performance cont'd

Pension and Endowment performance by asset class

As shown in Tables 3 and 4, it was a mixed year for active management in equities, with three of five equity portfolios outperforming the benchmark. Canadian equities outperformed by the most, with much of the outperformance coming from private markets. International Developed Markets Equity had another good year and outperformed its benchmark by over 1%. This portfolio has performed particularly well over many years. Rounding out the outperformers was Global Equity, which had positive contributions from both public and private market managers. The biggest negative contributor was Emerging Markets Equity. Our public markets managers in emerging markets had a very difficult year, and this was exacerbated by our overweight to the China A share market, which significantly underperformed the broader emerging markets. US equities also underperformed, but this was entirely due to one systematic public manager that was particularly hard hit due to its exposure to value stocks, which significantly underperformed.

The fixed income portfolios had another very strong year in 2018. The Canadian Corporate Bonds portfolio outperformed by 4.1% in Pension and 4.2% in Endowment, while the Canadian Government Bonds portfolio outperformed by 1.1% in Pension and 1.0% in Endowment.

Looking in more detail at the Canadian Corporate Bonds portfolio, it's important to note that the Pension and Endowment investments in this category include more than just Canadian Corporate Bonds; the portfolio also comprises credit long/short hedge funds, commercial real estate debt, direct lending strategies, non-performing loans and other non-traditional credit-related strategies. For traditional, long-only active credit managers focused on the Canadian investment-grade corporate space, we believe it is difficult to outperform (after fees) a benchmark consisting of 100% corporate credit. For that reason, we only invest with one traditional active manager in this area; the rest of the portfolio is managed passively to match the benchmark or is invested in non-traditional credit strategies such as those previously mentioned.

Table 3 – 2018 Pension Performance by Asset Class

Reference Portfolio Asset Class	Assets ($millions) Dec. 31, 2018	Pension Return	Benchmark Return	Value Added
Equity				
Canadian Equity	508	-6.0%	-8.9%	2.9%
US Equity	990	-4.9%	-4.4%	-0.5%
International Developed Markets Equity	745	-12.5%	-13.8%	1.3%
Emerging Markets Equity	483	-17.2%	-14.6%	-2.6%
Global Equity	245	-8.6%	-9.4%	0.8%
Fixed Income				
Canadian Corporate Bonds	976	3.7%	-0.4%	4.1%
Canadian Government Bonds	975	2.7%	1.5%	1.1%
Total plan	4,922	-1.6%	-2.3%	0.7%

Please refer to the footnote at the bottom of Table 4 on the next page.

“Throughout our strategic partnership, as we’ve worked together on performance attribution and asset liability modelling, the UTAM team has applied an impressive level of rigour and analysis – and that inspires our organization to constantly find new ways of delivering complex insights through efficient, easy-to-use tools.”

PIETER WIJNHOVEN
SENIOR VICE-PRESIDENT, NORTH AMERICA, ORTEC FINANCE

Sound long-term performance
cont’d

Table 4 – 2018 Endowment Performance by Asset Class

Reference Portfolio Asset Class	Assets ($millions) Dec. 31, 2018	Endowment Return	Benchmark Return	Value Added
Equity				
Canadian Equity	296	-6.4%	-8.9%	2.5%
US Equity	577	-4.8%	-4.4%	-0.4%
International Developed Markets Equity	435	-12.2%	-13.8%	1.6%
Emerging Markets Equity	282	-17.4%	-14.6%	-2.8%
Global Equity	144	-7.8%	-9.4%	1.7%
Fixed Income				
Canadian Corporate Bonds	570	3.9%	-0.4%	4.2%
Canadian Government Bonds	562	2.5%	1.5%	1.0%
Total plan	2,867	-1.5%	-2.3%	0.8%

All returns are in local currency except for Emerging Markets Equity and Global Equity, whose returns are in US dollars. Values and returns within the Reference Portfolio reflect the impact of mapping asset classes and strategies not in the Reference Portfolio to the most appropriate asset classes. For example, Canadian Government Bonds includes $397 million of absolute-return hedge fund strategies in the Pension portfolio and $237 million in the Endowment portfolio; their impact is reflected in the reported returns for this asset class.

As with the Canadian investment-grade corporate space, we believe it is difficult for active managers investing solely in Canadian Government Bonds to outperform the benchmark net of fees. We therefore do not use any active traditional managers with Canadian Government Bond mandates. Instead, we invest passively for a significant portion of this portfolio; for the remainder, we invest in a highly customized portfolio of absolute-return hedge fund managers – which, by their nature, are not expected to have material market sensitivity (i.e., beta) to equity markets over time. Over the seven years that we’ve been managing the absolute-return strategy, the realized beta to all five Reference Portfolio equity asset classes has been close to zero.

In 2018, the absolute-return portfolio generated a return of 2.8% in Pension and 2.5% in Endowment; this drove a significant part of the outperformance in the Canadian Government Bonds category.

Sound long-term performance
cont'd

EFIP performance

The objectives of the Expendable Funds Investment Pool (EFIP), as established by the University of Toronto, are to generate a stable and consistently positive return, with minimal risk to capital. While there is no Reference Portfolio for EFIP, the university has set a target return equal to the return of one-year Canadian treasury bills plus an additional 0.5% per annum. Unlike the Pension and Endowment portfolios, EFIP does not have an active risk limit, as the portfolio's strategy of investing in short-term deposits with Canadian financial institutions and highly rated liquid fixed income securities is the primary means of controlling risk.

In a capital markets environment that continues to be characterized by low interest rates and a relatively flat yield curve, the university's target return for EFIP represents a challenging objective. In 2018, the portfolio returned 2.1% (net of all fees and expenses), underperforming its target return by 0.2%. Over the past five years, EFIP returned 1.7% annualized, outperforming the target return by 0.3%. And over the past 10 years, it has generated a 1.7% annualized return, outperforming the target return by 0.1%.

Table 5 – EFIP Performance

	2018	5-Year Annualized 2014–2018	10-Year Annualized 2009–2018
University target return	2.3%	1.4%	1.6%
Actual net return	2.1%	1.7%	0.1%
UTAM value added (%)	-0.2%	0.3%	0.1%
UTAM value added ($millions)	-4	26	22

Table 6 shows EFIP investment exposures at year-end, as well as 2018 returns by investment category and for the overall portfolio. As the table indicates, 79.9% of EFIP was invested in cash and cash equivalents, which mainly consisted of deposits with Canadian financial institutions. The remaining 20.1% of EFIP exposure was allocated to investment-grade short-term bonds and floating-rate notes. During the year, the Cash and Cash Equivalents category slightly underperformed the target return by 0.1%; the Short-Term Bonds category underperformed the target return by 0.5%, driven by the negative impact from interest rate increases during the year; and the Floating-Rate Notes category underperformed by 0.5%, mainly because its yield was lower than the target return.

Table 6 – EFIP Performance by Investment Category

Investment Category	Weight Dec. 31, 2018	2018 Return
Cash and Cash Equivalents	79.9%	2.2%
Short-Term Bonds	10.3%	1.8%
Floating-Rate Notes	9.9%	1.8%
Total	100%	2.1%

"While disappointed with the Pension and Endowment returns in 2018, we remain pleased with the longer term results. We are also gratified to see UTAM's active management approach once again produce added value for the University of Toronto's investment portfolios and their diverse beneficiaries. We continue to believe that we have the right systems, processes, governance and – most importantly – talented people in place to continue delivering results that outperform the Reference Portfolio."

DAREN M. SMITH
PRESIDENT AND CHIEF INVESTMENT OFFICER, UTAM

A solid foundation for the future

This annual report is just one chapter in a longer story. While it's important to measure progress in light of the opportunities and challenges arising in a single year, we also need to look ahead constantly to the next 10 years and beyond. For the University of Toronto and the people who've worked hard to make it one of the world's great centres of learning and research, UTAM's proven systems and processes, and our methodical approach to manager selection, are helping to secure a solid foundation for the future.

AS THE TESTIMONIALS FEATURED THROUGHOUT this report make clear, our work is highly collaborative, drawing on valuable insights from the university's leadership and Investment Committee members, as well as the specialized expertise of our investment managers and systems providers. Their collective input will continue to be a key part of UTAM's investment process going forward.

At the same time, we're constantly enhancing our analysis, work processes and systems in all areas of investment, risk management and operations. We're also gaining new ESG-related insights as we take on a leadership role in the responsible investing space. Underpinning all of our activities is the belief that we have the right disciplined approach, the right governance and, most importantly, the right people to deliver results that will outperform the Reference Portfolio over the long term.

This annual report and its companion publication, the Responsible Investing Report, are part of a broader commitment to timely, transparent communications about all dimensions of the work UTAM does. We encourage an ongoing dialogue with the University of Toronto community and our wider circle of stakeholders, and we invite you to contact us at feedback@utam.utoronto.ca with any questions or comments.

"The groundbreaking research and innovative thinking that make the University of Toronto a global leader are typically focused on seeing the bigger picture, taking the longer view and embracing analytical rigour. Not surprisingly, we bring a similar perspective to how we manage U of T's financial assets. As the university leadership works closely with our UTAM colleagues, we know they have the systems, processes and expertise to continue meeting our investment objectives – not just from year to year, but over the long term."

—

MERIC S. GERTLER
PRESIDENT, UNIVERSITY OF TORONTO

December 31, 2018

Financial statements

Independent Auditor's Report

To the Directors of
UNIVERSITY OF TORONTO ASSET MANAGEMENT CORPORATION

Opinion

We have audited the financial statements of University of Toronto Asset Management Corporation ["UTAM"], which comprise the statements of financial position as at December 31, 2018 and December 31, 2017, and the statements of net income, comprehensive income and changes in net assets and cash flows for the years then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects the financial position of UTAM as at December 31, 2018 and December 31, 2017, and its financial performance and its cash flows for the years then ended in accordance with the financial reporting framework specified in paragraph 3.2(3)(a) of National Instrument 52-107, *Acceptable Accounting Principles and Auditing Standards*, for financial statements delivered by registrants.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of UTAM in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter – basis of accounting and restriction on use

We draw attention to Note 2 to the financial statements, which describes the basis of accounting. The financial statements are prepared to assist UTAM in complying with the requirements of National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. As a result, the financial statements may not be suitable for another purpose. Our report is intended solely for UTAM and the Ontario Securities Commission, and should not be used by parties other than UTAM or the Ontario Securities Commission. Our opinion is not modified in respect of this matter.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the financial reporting framework specified in paragraph 3.2(3)(a) of National Instrument 52-107, *Acceptable Accounting Principles and Auditing Standards*, for financial statements delivered by registrants, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing UTAM's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate UTAM or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing UTAM's financial reporting process.

Independent Auditor's Report
cont'd

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of UTAM's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on UTAM's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause UTAM to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Ernst & Young LLP

Toronto, Canada
March 18, 2019

Chartered Professional Accountants
Licensed Public Accountants

Statements of financial position

As at December 31

	2018	2017
ASSETS		
Current		
Cash	**$ 116,531**	$ 52,264
Due from University of Toronto *[notes 6[a] and [e]]*	**1,102,285**	481,416
Accounts receivable	**—**	23,440
Realty taxes recoverable	**99,041**	44,104
Prepaid expenses	**49,968**	94,594
Total current assets	**1,367,825**	695,817
Capital assets, net [note 4]	**944,397**	1,031,079
	2,312,222	1,726,896
LIABILITIES AND NET ASSETS		
Current		
Accounts payable and accrued liabilities	**813,276**	319,447
Total current liabilities	**813,276**	319,447
Deferred capital contributions *[note 5]*	**944,397**	1,031,079
Deferred incentive bonuses *[note 6[f]]*	**467,673**	290,954
Deferred lease costs	**86,876**	85,416
Total liabilities	**2,312,222**	1,726,896
Net assets	**—**	—

See accompanying notes

On behalf of the Board:

Daren M Smith
Director

Sheila Brown
Director

Statements of net income, comprehensive income and changes in net assets

Years ended December 31

	2018	2017
EXPENSES *[note 6]*		
Staffing	**$ 5,521,332**	$ 5,879,906
Communications and information technology support	**427,614**	361,986
Professional fees	**171,038**	180,888
Occupancy	**271,555**	273,996
Consulting fees	**383,506**	416,460
Travel	**194,990**	183,533
Office supplies and services	**118,153**	78,844
Moving costs	**—**	3,774
Amortization of capital assets	**177,241**	159,032
	7,265,429	7,538,419
Recoveries and other income		
Recoveries from University of Toronto *[note 6]*	**7,088,188**	7,379,387
Amortization of deferred capital contributions *[note 5]*	**177,241**	159,032
	7,265,429	7,538,419
Net income and comprehensive income for the year	**—**	—
Net assets, beginning of year	**—**	—
Net assets, end of year	**—**	—

See accompanying notes

Statements of cash flows

Years ended December 31

	2018	2017
OPERATING ACTIVITIES		
Net income and comprehensive income for the year	**—**	—
Add (deduct) items not involving cash		
Amortization of capital assets	**$ 177,241**	$ 159,032
Amortization of deferred capital contributions	**(177,241)**	(159,032)
Deferred incentive bonuses	**176,719**	290,954
Deferred lease costs	**1,460**	44,450
Net change in non-cash working capital balances related to operations		
Due to/from University of Toronto	**(620,869)**	(561,604)
Accounts receivable	**23,440**	11,402
Realty taxes recoverable	**(54,937)**	(44,104)
Prepaid expenses	**44,626**	36,764
Accounts payable and accrued liabilities	**493,829**	56,024
Cash provided by (used in) operating activities	**64,268**	(166,114)
INVESTING ACTIVITIES		
Purchase of capital assets	**(90,559)**	(43,151)
Cash used in investing activities	**(90,559)**	(43,151)
FINANCING ACTIVITIES		
Deferred capital contributions to fund purchase of capital assets	**90,559**	43,151
Cash provided by financing activities	**90,559**	43,151
Net increase (decrease) in cash during the year	**64,268**	(166,114)
Cash, beginning of year	**52,263**	218,377
Cash, end of year	**116,531**	52,263

See accompanying notes

Notes to financial statements

December 31, 2018 and 2017

1. Relationship with the University of Toronto

University of Toronto Asset Management Corporation ["UTAM"] is a corporation without share capital incorporated on April 25, 2000 by the Governing Council of the University of Toronto [the "Governing Council"] under the Corporations Act (Ontario) in Canada. UTAM is a non-profit organization under the Income Tax Act (Canada) and, as such, is exempt from income taxes. UTAM is registered as a portfolio manager in Ontario. UTAM is domiciled in the Province of Ontario, Canada and its registered office address is at 777 Bay Street, Suite 2502, Toronto, Ontario, Canada.

UTAM was formed by the University of Toronto ["U of T"] to engage in professional investment management activities in order to manage the investment assets of U of T, which currently comprise its Endowment Fund, Expendable Fund and Pension Plan, through a formal delegation of authority and investment management agreement between UTAM and U of T. The pension plan stakeholders of U of T and two other Ontario universities have been working to develop a jointly sponsored pension plan ["JSPP"] that would result in the assets of the U of T Pension Plan being transferred to this new plan. If and when a transfer of pension related assets occurs following the creation of this new JSPP, this may impact UTAM's relationship with U of T in the management of its pension-related assets.

The financial statements of UTAM were authorized for issue by the Board of Directors on March 12, 2019.

2. Basis of accounting

The financial statements have been prepared in accordance with the financial reporting framework specified in paragraph 3.2(3)(a) of National Instrument 52-107, *Acceptable Accounting Principles and Auditing Standards* for financial statements delivered by registrants [the "framework"]. This framework requires the financial statements be prepared in accordance with International Financial Reporting Standards ["IFRS"], except that any investments in subsidiaries, jointly controlled entities and associates must be accounted for as specified for separate financial statements in IAS 27, *Consolidated and Separate Financial Statements*. The financial statements have been prepared by management to meet the requirements of National Instrument 31-103, *Registration Requirements, Exemptions and Ongoing Registrant Obligations*, and as a result, the financial statements may not be suitable for another purpose.

These financial statements present the financial position, financial performance and cash flows of UTAM as a separate legal entity. The securities representing the investments of the funds of U of T are held on behalf of U of T in the names of such trustees or nominees as may be directed by UTAM, but not in the name of UTAM.

UTAM manages U of T's Endowment Fund, Expendable Fund and Pension Plan investments, through a formal delegation of authority and investment management agreement between UTAM and U of T.

The financial statements of UTAM have been prepared on a going concern basis and on the historical cost basis. UTAM's presentation currency is the Canadian dollar, which is also its functional currency.

Notes to financial statements

December 31, 2018 and 2017

3. Summary of significant accounting policies

Accounting changes

[a] In July 2014, the International Accounting Standards Board ["IASB"] issued the final version of IFRS 9, *Financial Instruments*, bringing together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39, *Financial Instruments: Recognition and Measurement* and all previous versions of IFRS 9. IFRS 9 introduces a logical, single classification and measurement approach for financial assets that reflects the business model in which they are managed and their cash flow characteristics. Built upon this is a forward-looking expected credit loss model that will result in more timely recognition of loan losses and is a single model that is applicable to all financial instruments subject to impairment accounting. In addition, IFRS 9 also removes the volatility in profit or loss that was caused by changes in the credit risk of liabilities elected to be measured at fair value, such that gains caused by the deterioration of an entity's own credit risk on such liabilities are no longer recognized in profit or loss. IFRS 9 also includes an improved hedge accounting model to better link the economics of risk management with its accounting treatment. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. In addition, the changes with respect to an entity's own credit risk can be early applied in isolation without otherwise changing the accounting for financial instruments. UTAM has assessed the effect of adopting IFRS 9 and concluded there will be no impact.

[b] In May 2014, the IASB issued IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue*, and IAS 11, *Construction Contracts*, and the related interpretations on revenue recognition. IFRS 15 sets out the requirements for recognizing revenue that applies to all contracts with customers, except for contracts that are within the scope of the standards on leases, insurance contracts and financial instruments. It establishes a single, comprehensive framework for revenue recognition. This new standard is effective for UTAM's financial statements commencing January 1, 2018. UTAM has assessed the effect of adopting IFRS 15 and concluded there will be no impact.

[c] IFRS 16, *Leases*, was issued in January 2016 and will replace the previous lease standard, IAS 17, *Leases*, and related interpretations. The new standard requires lessees to recognize assets and liabilities for most leases. IFRS 16 is effective for annual periods beginning on or after January 1, 2019. UTAM is currently reviewing the new standard to determine the effect on the financial statements and will adopt the new standard when it becomes effective.

Significant accounting policies

The significant accounting policies applied in the preparation of these financial statements are summarized as follows:

Critical accounting estimates and judgments

The preparation of financial statements in conformity with the framework requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of recoveries and expenses during the reporting period. Actual results could differ from those estimates.

UTAM based its assumptions and estimates on parameters available when the financial statements were prepared. However, existing circumstances and assumptions about future developments may change due to market changes or circumstances arising beyond the control of UTAM. Such changes are reflected in the assumptions when they occur.

Notes to financial statements

December 31, 2018 and 2017

Financial instruments
Financial assets and financial liabilities are initially recognized at fair value and their subsequent measurement is dependent on their classification. Their classification depends on the purpose for which the financial instruments were acquired or issued, their characteristics or UTAM's designation of such instruments. UTAM has classified all of its financial assets as loans and receivables, and all of its financial liabilities as other financial liabilities. All of UTAM's financial instruments are carried at either cost or amortized cost and are short-term in nature. Unless otherwise noted, it is management's opinion that UTAM is not exposed to significant risks arising from these financial instruments.

UTAM's management has established a control environment that endeavours to ensure significant operating risks are reviewed regularly and that controls are operating as intended, including assessing and mitigating the various financial risks that could impact UTAM's financial position and financial performance.

[a] Market risk
Market risk is the risk of a financial loss resulting from adverse changes in underlying market factors, such as interest rates, foreign exchanges rates, and equity prices. A description of each component of market risk is described below:

[i] Interest rate risk
Interest rate risk is the risk that changes in interest rates will adversely affect the future cash flows or fair values of financial instruments. As at December 31, 2018 and 2017, UTAM has no significant assets or liabilities subject to interest rate risk.

[ii] Currency risk
Currency risk is the risk that fluctuations in exchange rates will result in losses to the Company on monetary assets and liabilities denominated in foreign currencies. While certain expenses are paid in foreign currencies, these amounts are not significant. As at December 31, 2018 and 2017, UTAM has no significant assets or liabilities denominated in a foreign currency and has no significant exposure to currency risk.

[iii] Other price risk
Other price risk is the risk of gain or loss due to the changes in the price and the volatility of individual equity instruments and equity indices. UTAM is not exposed to other price risk as at December 31, 2018 and 2017.

Notes to financial statements

December 31, 2018 and 2017

[b] Liquidity risk
Liquidity risk is the risk that UTAM will encounter difficulties in meeting obligations associated with financial liabilities. UTAM monitors its current and expected cash flow requirements to ensure it has sufficient cash to meet its liquidity requirements. The operations of UTAM are funded by U of T.

[c] Credit risk
Credit risk is the risk that one party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss. UTAM does not have a significant exposure to any individual counterparty, except for U of T, which funds its operations. Therefore, credit risk is not a significant risk to UTAM as at December 31, 2018 and 2017.

Capital assets
Capital assets are recorded at cost less accumulated amortization. Amortization is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

Leasehold improvements	term of lease
IT infrastructure equipment	5 years
Audio-visual and communications equipment	5 years
Furniture	5 years
Desktops and software	3 years

Revenue recognition
Recoveries from U of T are recorded when expenses are incurred. Recoveries related to the purchase of capital assets are deferred and amortized over the life of the related capital asset.

Employee future benefits
UTAM's contributions to U of T's employee future benefit plans are expensed when due *[see note 6[b]]*.

Foreign currency translation
Transactions in foreign currencies are initially recorded at the functional currency rates prevailing at the date of the transaction. Monetary assets and liabilities in foreign currencies are translated into the functional currency at rates prevailing at the year-end. Gains and losses resulting from foreign currency transactions are included in the statements of net income, comprehensive income and changes in net assets.

Notes to financial statements

December 31, 2018 and 2017

4. Capital assets

Capital assets consist of the following:

	Leasehold improvements	IT infrastructure equipment	Audio-visual and commmunications equipment	Furniture	Desktops and software	Total
Cost						
Balance, January 1, 2017	$ 841,135	$ 295,447	$ 56,805	$ 64,403	$ 98,120	$ 1,355,910
Additions	34,288	—	—	—	8,863	43,151
Balance, December 31, 2017	875,423	295,447	56,805	64,403	106,983	1,399,061
Additions	11,236	—	—	2,624	76,699	90,559
Balance, December 31, 2018	886,659	295,447	56,805	67,027	183,682	1,489,620
Accumulated amortization						
Balance, January 1, 2017	13,324	107,765	1,893	2,147	83,821	208,950
Amortization	84,797	41,597	11,361	12,881	8,396	159,032
Balance, December 31, 2017	98,121	149,362	13,254	15,028	92,217	367,982
Amortization	87,097	41,349	11,361	13,169	24,265	177,241
Balance, December 31, 2018	185,218	190,711	24,615	28,197	116,482	545,223
Net book value						
Balance, December 31, 2017	777,302	146,085	43,551	49,375	14,766	1,031,079
Balance, December 31, 2018	701,441	104,736	32,190	38,830	67,200	944,397

Notes to financial statements

December 31, 2018 and 2017

5. Deferred capital contributions

Deferred capital contributions represent the unamortized amount of recoveries from U of T received in connection with the purchase of capital assets. The amortization of deferred capital contributions is recorded as income in the statements of net income, comprehensive income and changes in net assets.

The continuity of deferred capital contributions is as follows:

	2018	2017
Balance, beginning of year	**$ 1,031,079**	$ 1,146,960
Recoveries received during the year related to capital asset purchases	**90,559**	43,151
Amortization of deferred capital contributions	**(177,241)**	(159,032)
Balance, end of year	**944,397**	1,031,079

6. Related party transactions

UTAM is affiliated with and controlled by U of T.

[a] In accordance with an Investment Management Agreement dated November 26, 2008 between the Governing Council and UTAM [the "Agreement"], U of T will reimburse UTAM for its services an amount which will enable it to recover the appropriate costs to support its operations. As at December 31, 2018, $1,102,285 is due from U of T as a result of the actual cost of operations exceeding reimbursements [2017 – $481,416 due to U of T].

[b] Certain eligible employees of UTAM are members of U of T's pension plan and participate in other employee future benefit plans offered by U of T. U of T's employee future benefit plans are defined benefit plans. In accordance with the Agreement, U of T pays for UTAM's employee benefits. In 2018, contributions of $277,351 [2017 – $255,860] related to these plans have been expensed in UTAM's financial statements.

[c] UTAM obtains certain services from U of T, such as payroll services and some IT services. There is a charge for some of these services, which is reimbursed by U of T in accordance with the Agreement. In 2018, these services totalled $59,741 [2017 – $49,051].

[d] The Governing Council entered into a lease with a term of ten years commencing December 1, 2016 for premises occupied by UTAM. Under this lease, UTAM will incur annual expenses of approximately $169,000 over the term of the lease, which represents the minimum rent component of the lease obligations.

In addition to the above minimum rent payments, there are additional payments in respect of operating costs that are subject to change annually based on market rates and actual usage. These costs totalled $89,757 [2017 – $91,841] in 2018. These expenses are reimbursed by U of T in accordance with the Agreement.

Notes to financial statements

December 31, 2018 and 2017

[e] Transactions with U of T are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration agreed to by the parties. Amounts due to/from U of T are non-interest bearing and due on demand.

[f] Commencing 2017, UTAM implemented a new incentive bonus plan for the senior management team, replacing the previous plan, whereby the majority of the incentive bonus payments continue to be directly related to and, vary with, the actual performance of U of T's investment portfolios compared to passive benchmark portfolios, but now only over a four-year measurement horizon. In addition, a portion of the incentive bonus continues to be subject to mandatory deferral over a service period and paid at specified dates during that service period. The expense for deferred incentive bonus awards is recognized when paid out to employees that remain entitled to receive them and are remeasured at each applicable date as specified under the incentive bonus plan with remeasurement gains or losses recognized in net income. Under this incentive bonus plan, a portion of each year's incentive bonus awards is expensed in that year, with the remaining deferred amounts recorded as an expense in future years. As at December 31, 2018, as much as approximately $209,000, $632,000 and $429,000, plus an adjustment for the performance of U of T's investment portfolios, could be recorded as an expense in 2019, 2020 and 2021, respectively, under this deferred arrangement on a cumulative basis.

Additionally, participants in the incentive bonus plan have the irrevocable option to voluntarily defer receipt of all or part of their immediate awards in order to receive them at the same defined dates as applied to mandatory deferred awards. These voluntary deferrals are remeasured at each applicable date as defined in the incentive bonus plan with remeasurement gains or losses recognized in net income. As these voluntarily deferred awards vest immediately, they are expensed in the year in which they are earned and reflected as liabilities, adjusted by applicable remeasurement gains or losses during the deferral period, until paid. As at December 31, 2018, $467,673 [2017 – $290,654] in incentive bonuses adjusted for remeasurement gains or losses have been deferred under the new incentive plan.

[g] Transactions with key management personnel

Compensation of UTAM's key management personnel during the year ended December 31 is as follows:

	2018	2017
Short-term employee benefits	**$ 3,254,048**	$ 3,585,687
Post-employment benefits	**221,993**	223,763
Other long-term benefits	**13,081**	14,084
	3,489,122	3,823,534

Short-term employee benefits include amounts related to the variable incentive bonus *[see note 6[f]]*.

7. Capital management

In managing capital, UTAM focuses on liquid resources available for operations. U of T provides funds as required to allow UTAM to meet its current obligations. As at December 31, 2018, UTAM has sufficient liquid resources to meet its current obligations.

UTAM staff

UTAM is the investment manager of the University of Toronto's Pension, Endowment and short-term working capital assets. UTAM's Board delegates day-to-day investment management activities to UTAM's experienced and qualified staff. Our team of more than 20 professionals works closely with the Board, the expert Investment Committee, the university administration and various governance bodies in our management of the university's assets. UTAM draws upon the expertise and experience of its dedicated staff, who are all committed to excellence in investments, risk management and operations.

UNIVERSITY OF TORONTO ASSET MANAGEMENT CORPORATION

Daren M. Smith CFA, CAIA, FRM, FCIA, FSA, MA, MSc
President and Chief Investment Officer

Investments

Leon Lu CFA, CAIA, MSc
Head of Fixed Income

Chuck O'Reilly CFA, CAIA
Head of Public Equities

Jean Potter
Head of Private Markets

Dennis Luo MMF
Senior Analyst

Sungbo Shim CFA, CAIA
Senior Analyst

Kenneth Tam MSc, MS
Senior Analyst

Jonathan Yeung CFA, FRM, MFin
Senior Analyst

Risk and Research

Doug Chau CFA, PRM, MSc, PhD
Chief Risk Officer and Head of Research

Ivan Siew CFA, FRM, MFin
Director

Ayako Dortheo
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Payton Liu MA
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Analyst

Robin Warner
Analyst

Operations

Lisa Becker FCA (ICAEW)
Chief Operating Officer
Chief Compliance Officer

Zohair Ahmed CPA, CMA, CFA
Director, Operations

Victoria Paris LLB
Senior Manager, Compliance and Legal

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