2016 Annual Pension Report
Professional Plan (for Plan Year ending September 30, 2016)

In this Report, you’ll find information on:

- Highlights for 2016
- Plan Governance
- Funded Position of the Plan
- Investment Policy
- Investment Performance

Appendix

- Pension Plan Basics
- University of Guelph Plan
- Links and Resources

Words highlighted in blue are defined in the glossary of terms at the back of this report.
Welcome to your 2016 Annual Report
(for Plan Year ending September 30, 2016)

The University of Guelph is committed to keeping you informed about your pension plan. That’s why we share a pension plan report with you each year.

This annual report will help you understand important facts and figures about one of the pension plans sponsored by the University of Guelph — the Professional Plan.

What this Report Is NOT

This report is not intended to be an exhaustive presentation of pension plans in Ontario or to disclose all legislative or actuarial details associated with pension plans. As well, it does not provide advice to individuals on pension or retirement planning. Plan members are advised to speak with a trusted financial advisor as part of their retirement planning strategy. Finally, this report is not a legal document and the official plan documents will govern in all cases.
Highlights from 2016

- Despite strong fund returns since the prior valuation, the new valuation performed as of August 1, 2016 indicated that a significant funding shortfall persists, largely due to declining discount rates.
- In October 2016, additional temporary solvency funding relief was provided.
- An Asset Liability Management study performed in 2016 resulted in an updated investment strategy.
- Fund assets have grown to almost $964 million by the end of the year.
- Strong returns across all financial markets led to total investment return of 9.0% over the year.
- Plan members contributed $13.9 million and the University contributed $32.7 million to the Plan in 2016.
- The Plan disbursed $42 million in pension payments to 1,108 pensioners.

2016 Membership
In the Plan, we have about 2,902 plan beneficiaries — active employees, retirees and former members with deferred benefit entitlements.
Plan Governance

The University of Guelph, as plan sponsor, is responsible for ensuring the Plan functions in accordance with its terms and applicable laws. It is the University’s responsibility to ensure the Plan’s benefit obligations and fiduciary responsibilities are met.

The University’s Board of Governors delegates certain duties and responsibilities to the Pensions Committee, which is composed of Board members and pension plan members.

The Pensions Committee exercises its responsibilities on a day-to-day basis through the Investment Subcommittee and the University Administration.

Two Key governance dates

The University of Guelph has two key dates used to manage major events for the Plan:

- **Plan year end** is **September 30**. This means October 1 to September 30 is the 12-month period for which audited financial statements and other regulatory filings must be prepared each year.

- The **valuation date** is when the most recent valuation was performed. The last valuation date was **August 1, 2016**. Complete valuations are required at least every three years, though they may be done more often.
Funded Position of the Plan

The University of Guelph regularly assesses the level of funding of the pension plan to ensure there is enough funding to pay for the benefits accrued by plan members. Under pension legislation, the University of Guelph must complete a full valuation of the financial position of the Plan at least once every three years. These valuations are filed with the Financial Services Commission of Ontario (FSCO) and the Canada Revenue Agency (CRA). The August 1, 2016 valuation results shown below were filed in April 2017.

Pension law requires an independent actuary to complete an actuarial valuation to measure the financial health of the pension plans in two ways:

1. **Going Concern valuation**
2. **Solvency valuation**

As no one knows what the precise cost of pension benefits will be at the time they are paid out, many assumptions are used in the valuation process when considering future benefit and asset levels. This is especially true for Going Concern valuations.

The charts below summarize the combined results of the five most recently filed actuarial valuation reports:

Note: The next valuation date for the pension plan is August 1, 2019.
Funded Position of the Plan (continued)

Valuations help determine the amount the University of Guelph must contribute to the pension plan each year. When the market value of the plan’s assets is lower than the plan’s liabilities at the date of the valuation, pension legislation requires pension sponsors to make special contributions over a specified period to fully fund the shortfall.

Funding Deficits

Provincial pension regulations require the University to make special contributions to cover any shortfall or deficit as soon as it is reported. Typically, pension regulations provide plan sponsors a 15-year period in which to make up Going Concern funding deficits and a five-year period in which to make up any Solvency funding deficits. Under these regulations, total special contributions for the three years after the August 1, 2016 valuation would have been $151 million.

As of result of changes made to the regulations in October 2016, total special contributions for the three years after the August 1, 2016 valuation have been reduced to $61 million.
Calculating the funded status

The funded status of the Plan is determined by comparing the assets to liabilities. Assets are created from both employer and employee contributions plus the net investment income earned when these assets are invested in the financial markets.

Liabilities are a calculation of the benefits promised to plan members, based on accepted assumptions (e.g., discount rates, future earnings levels, mortality rates, inflation, etc.).

One major assumption used in all valuations is the discount (or interest) rate assumption. This rate is used to convert the value of all future estimated liabilities to today’s dollars (called the discounted net present value). The lower the discount rate, the higher the liabilities and higher funding is needed for future pension commitments.

The impact of discount rates is very significant in pension plan valuations. For example, at our last valuation date, a 1% decrease in the discount rate would have increased total Plan liabilities by about 16% (about $219 million).

This diagram shows a simplified view of that calculation:
Investment Policy

A formal framework guides the University’s investment of the Plan’s assets. It is laid out in a [Statement of Investment Policies and Procedures (SIPP)] and is filed with our [Actuary].

After assessing the liabilities of the Plan through the valuation process, an appropriate asset allocation model is created in order to attempt to match those liabilities. This exercise is called an asset/liability study. Under our guidelines, an asset/liability study must be performed every five years to confirm or adjust the investment framework.

The most recent study was carried out in 2016. As a result of this study, significant investment changes were made, highlighted by a shift from equity investments to both longer term bonds and a more diversified asset mix.

Implementation of changes resulting from the recent asset/liability study will be completed in 2017 and 2018. During the implementation period, the funds are managed within the portfolio using interim target weights, adjusted as new mandates are created and as assets are moved.

The objective of the fund is to achieve, over the long-term, an annualized rate of return, after investment management fees and transaction costs, at least equal to the Going Concern discount rate. A Going Concern discount rate of 5.65% was used for the August 1, 2016 valuation.

The Plan’s assets are held in trust, legally and separately from all other University funds. Pension assets may only be used to meet the benefit obligations of the Plans. They may not be withdrawn for the benefit of the University or any other party.
**Investment Policy**

*(continued)*

**Asset Mix**

In order to achieve the investment policy objectives, the assets are invested in a portfolio of investments containing a diversified mix of *asset classes* (e.g. equities, fixed income). The asset mix is selected to achieve the pension fund’s investment objectives while managing investment risks in a prudent manner. All assets are invested through external managers.

The SIPP sets out a target as a percentage of the total fund for each of the different asset classes. Since the value of the assets in each class may vary over time, the actual percentage of the fund’s assets in each category may vary from the target weighting. The portfolio is rebalanced as necessary, to maintain the asset class weights within the permissible bands.

The table below shows the interim target versus the actual percentage distribution as of September 30, 2016.

<table>
<thead>
<tr>
<th>Pension plan asset mix as of September 30, 2016</th>
<th>Target asset mix versus actual asset allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The portfolio is <strong>rebalanced as necessary</strong> to maintain the asset class weights within the permissible bands.</td>
<td></td>
</tr>
</tbody>
</table>
Investment Performance

Over the long term, the fund's investment performance is assessed on the ability of the Plan to meet its obligations. Over the shorter term, investment performance is also measured against the benchmark return of market indices.

The pension fund benefited from strong returns across all core invested asset classes over the year. While the 2016 annual performance of the fund was slightly under the benchmark, primarily due to returns from the pension fund's U.S. equity managers, the performance of the pension fund over the last year significantly exceeded its longer term policy objective.

The chart below shows the higher annual volatility of the actual markets compared to the policy objective. The five-year annualized results show the fund has effectively achieved its benchmark and is significantly above the long-term policy target.

Net annual returns and Five year annualized return
As at September 30, 2016

For more information regarding the Plan's investments, refer to the Pension Quarterly Investment Reports.
Investment Performance (continued)

Income, Contributions and Expenses

Investment income was significantly higher in 2016, when compared to 2015. Other contributions, benefit payments, and expenses remained similar to past years.

Fund Assets for Years Ended September 30 ($ millions)

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</thead>
<tbody>
<tr>
<td>Beginning of Period</td>
<td>607.2</td>
<td>676.5</td>
<td>765.9</td>
<td>874.7</td>
<td>891.9</td>
</tr>
<tr>
<td>Employer Contributions</td>
<td>25.2</td>
<td>22.6</td>
<td>26.2</td>
<td>32.3</td>
<td>32.7</td>
</tr>
<tr>
<td>Employee Contributions</td>
<td>9.3</td>
<td>14.3</td>
<td>13.6</td>
<td>13.2</td>
<td>14.9</td>
</tr>
<tr>
<td>Investment Income</td>
<td>82.9</td>
<td>108.0</td>
<td>119.1</td>
<td>24.5</td>
<td>86.1</td>
</tr>
<tr>
<td>Total Contributions and Income</td>
<td>117.4</td>
<td>144.9</td>
<td>158.9</td>
<td>70.0</td>
<td>133.7</td>
</tr>
<tr>
<td>Benefit Payments</td>
<td>44.0</td>
<td>50.6</td>
<td>44.5</td>
<td>46.3</td>
<td>55.6</td>
</tr>
<tr>
<td>Plan Expenses</td>
<td>4.1</td>
<td>4.9</td>
<td>5.6</td>
<td>6.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Total Payments and Expenses</td>
<td>48.1</td>
<td>55.5</td>
<td>50.1</td>
<td>52.8</td>
<td>61.8</td>
</tr>
<tr>
<td>End of Period</td>
<td>676.5</td>
<td>765.9</td>
<td>874.7</td>
<td>891.9</td>
<td>963.8</td>
</tr>
</tbody>
</table>

More information about plan expenses

Plan expenses include administrative and consultant services provided by external suppliers, University of Guelph staff (equivalent to the expenses of five University staff), fees paid to external investment fund managers and fees paid to the Plan’s custodian to record investment transactions of the fund and to hold and disburse assets in the form of pensioner benefit payments.

Expenses are charged, as permitted by the terms of the plans and the PBA, and are reviewed by the Pensions Committee annually. In line with previous years, 2016 total plan expenses were equivalent to 0.66% (0.68% in 2015) of the total fund assets.
Pension Plan Basics

Pension plans can vary greatly in terms of their structure and the benefits they provide. Fundamentally, there are two types of pension plans: **Defined Benefit (DB) plans** and **Defined Contribution (DC) plans**, also known as a money purchase plan. Some employers offer a combination of the two types of plans — referred to as hybrid plans.

<table>
<thead>
<tr>
<th></th>
<th>DB Plans</th>
<th>DC Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td>Members of DB plans are provided with annual plan updates through personalized pension statements describing the amount of pension benefit they have earned up to the date of the statement.</td>
<td>Most DC plans are administered by a financial institution, such as Sun Life or Manulife, who typically provide account balance and investment performance information to members.</td>
</tr>
<tr>
<td><strong>Contributions</strong></td>
<td>Employer contributions to a DB plan are determined in accordance with ongoing actuarial valuations performed to ensure that sufficient funds are being set aside to cover pension benefits. Members are often required to contribute a percentage of salary as well.</td>
<td>Employer and member contributions are typically based on a percentage of salary. Often optional and matching contributions are available to increase the level of money being saved each year.</td>
</tr>
<tr>
<td><strong>Investment of assets</strong></td>
<td>Pension fund assets are held in trust separately from all other employer funds. They are generally invested by the pension sponsor according to guidance from an Investment Management Committee.</td>
<td>Most DC plans permit employees to make their own investment choices, while others provide that the employer or committee board be responsible for all investment decisions.</td>
</tr>
<tr>
<td><strong>Pension benefits</strong></td>
<td>Pension benefits are based on a formula. There are three types of DB plan benefit formulas commonly used to determine pension benefits.</td>
<td>At retirement, the accumulated account balance (including investment income) is transferred to a registered pension vehicle (for example, an annuity, or locked-in retirement vehicle) and used to provide the member with retirement income. Ultimately, the pension benefit will depend on the amount of the contributions made to the account and on investment returns. Annuity rates (i.e. long-term interest rates) at the time of retirement are also important if the account balance is annuitized.</td>
</tr>
</tbody>
</table>

Pension Legislation

Registered pension plans in Canada must comply with applicable minimum pension benefit standards legislation as well as satisfy requirements of the **Income Tax Act**. Most pension plans in Ontario are subject to the requirements of the **Ontario Pension Benefits Act (PBA)** which imposes standards on employers regarding eligibility for membership, funding, disclosure of information to plan members, investment of plan assets, etc. For pension plans registered in Ontario, such as the University’s Plan, the **Financial Services Commission of Ontario (FSCO)** is responsible for ensuring the requirements of the PBA are followed.
University of Guelph Plan

The University’s Plan is a DB plan, and pension benefits are based on the highest level of annualized earnings (see callout below) over a 36 month period with the University and on total pension credited service. After retirement, pension benefits are partially adjusted each year to reflect inflation, based on increases in the Consumer Price Index (CPI).

The University’s Plan is contributory. This means both members and the University pay for the benefits provided by the Plan. Members are required to contribute a fixed percentage of their salary and the University’s contributions are determined as the difference between the total cost of benefits that are expected to grow over the year (as determined by actuarial calculations) and what employees contribute to the Plan. If there is any shortfall between the value of assets and liabilities, the University must make additional special payments from its operating budget to fund this shortfall.

See the next page for a summary of when you can retire under the Plan.

Highest level of annualized earnings

With defined benefit plans there are three main types of benefit formulae commonly used to determine a member’s pension:

1. Final or best average earnings formula:
   For each year of service, the formula provides a fixed percentage of your final earnings from employment or the average of your earnings over a fixed period of time (e.g. best 5 years). In other words, your pension adjusts in step with your wages; or

2. Career average earnings formula:
   Your annual pension benefit is a fixed percentage of your annual earnings while a member of the plan. For example, a pension may be determined as 1.2% of your average annual earnings over the member’s career in the plan; or

3. Flat benefit formula:
   Your annual pension benefit is a fixed dollar amount per year of service. For example a pension may be determined as $40 per month per year of service.
University of Guelph Plan

At Retirement — the following summarizes when you can retire under the Plan.

Unreduced retirement pension:
You are eligible for an unreduced pension when you reach age 65 (normal retirement date). You may also be eligible to retire before age 65 with an unreduced pension if your age and credited service equal a certain number (early retirement factor), provided you are at least 55. Actual early retirement provisions are specific to each employee group/union at the University.

Reduced retirement pension:
If you are not eligible for an unreduced pension by the time you wish to retire, you may elect to receive a reduced retirement pension when you are at least 55 years of age. Your retirement pension will be subject to a 3% reduction for each year you retire before age 65, or the date when you would have been eligible for an unreduced pension, whichever is reached sooner.

Working past age 65:
You must begin collecting your pension when you reach the pension age limit, age 69, even if you continue to work. These payments must start by December 1 of the year in which you turn age 69.

Form of payment
How you receive your pension — known as the form of payment — will depend on whether or not you have a Spouse at retirement.

If you do not have an eligible Spouse at retirement, the normal form for your benefit is a pension paid for your lifetime, with a minimum payment period of 5 years. That is, you will receive payments until your death and your beneficiary will receive the balance of any remaining guaranteed payments.

If you have an eligible Spouse at retirement, the normal form for your benefit is a pension paid for your lifetime, with 60% of that amount continuing to your eligible Spouse upon your death.

In addition to the normal forms of payment described above, additional optional forms of payment will be provided to you when you retire.
Links and Resources

Board of Governors:  
https://www.uoguelph.ca/secretariat/office-services/board-governors

Pensions Committee:  
https://www.uoguelph.ca/secretariat/office-services/board-governors/board-standing-committees/pensions-committee

Investment Subcommittee:  
https://www.uoguelph.ca/secretariat/office-services/board-governors/board-standing-committees/investment-subcommittee

Statement of Investment Policies and Procedures (SIPP):  
https://www.uoguelph.ca/finance/report/sipp

Temporary Solvency Relief Application:  
https://www.uoguelph.ca/hr/user/login?destination=staff-faculty-pensions/pension-temporary-solvency-relief  
Note: Access to this information is accessible only to people with a University of Guelph log in.

Professional Plan Text:  
https://www.uoguelph.ca/hr/staff-faculty-pensions/professional-pension-plan

Audited Pension Plan Statement Reports:  
https://www.uoguelph.ca/finance/reports/pension-plan-statements  
Note: Access to this information is accessible only to people with a University of Guelph log in.

Pension Quarterly Investment Reports:  
https://www.uoguelph.ca/finance/node/2620/  
Note: Access to reports prior to September 2014 are accessible only to people with a University of Guelph log in.

Pension Plan Benefits Summary:  
https://www.uoguelph.ca/hr/system/files/UofG_Booklet_Condensed_for_Interim_Purposes_11-27-14_0.pdf

My Retirement Pension Portal:  
https://pensions.uoguelph.ca/  
Note: Access to this information is accessible only to people with a University of Guelph log in.

More information can be found through these links.
Glossary of Terms – Annual Pension Report

**Actuarial valuation**

Pension plan administrators must submit an actuarial valuation to the regulator (FSCO) prepared by an actuary — at least every three years — disclosing the plan’s financial status and the on-going contribution requirements. In Ontario, this report must reflect the financial position of the plan on both a Going Concern and Solvency basis.

**Actuary**

A professional in the pension and insurance fields responsible for assessing risks and contributions/premiums. In Canada, full professional recognition requires Fellowship in the Canadian Institute of Actuaries. The Actuary produces pension plan valuations using actuarial tables and assumptions regarding future conditions such as mortality, investment returns, salary and inflation. Once the valuation is completed, it must be signed by the Actuary and filed with the regulator. Actuarial support is currently provided by Willis Towers Watson.

**Asset classes**

Refers to the various types of investments held by a pension fund, usually expressed as a percentage of total investments held in bonds, stocks, real estate, etc.

**Assumptions**

All of the assumptions used to perform the actuarial valuation reflect accepted actuarial practice and applicable legislation. The assumptions include such items as future salary levels, CPI, mortality rates as well as investment returns expected for many years in the future. Economic and financial market factors are very significant in determining values. These assumptions are used to estimate what should be set aside today to pay defined pension benefits to current and future retired members in the future. These assumptions establish today’s costs for funding future benefits.

**Auditor**

In order to comply with pension legislation, registered pension plans must file annual audited financial statements with FSCO. Audits ensure FSCO receives complete and error-free documentation of the fund’s assets and expenses. Each year, the University completes the previous year’s financial statements, which are then examined by an external auditor licensed to sign audited financial statements and who is a member of a public accounting body conducting an auditing practice. Once the audited financial statements have undergone the auditor’s assessment, they are reviewed by the Audit Committee of the Board of Governors and filed with FSCO. Currently the Auditors for the Plans are Ernst and Young.
Benefit Payments
Benefit payments include regular monthly payments to pensioners as well as commuted value payouts to former plan members.

Custodian
The main role of a pension plan’s custodian is to receive the employer and employee contributions on behalf of the Plan. It is also to maintain the invested assets, keep the accounts for all investment and disbursement activity and provide activity reports to the Plan Administrator. In the case of the University’s Plans, the custodian also makes payments to pensioners on behalf of the Plans. The custodian for the University’s Plans is CIBC Mellon.

Deferred vested members
Refers to terminated employees (former members) who are eligible for a deferred vested pension, payable at Normal Retirement Age.

Discount (or interest) Rate
A discount rate is an interest rate used in present value calculations. It is used to recognize the concept that a dollar in the future has less value in today’s terms due to a number of factors such as how much a dollar today is expected to earn over a future time period.

Funding
Payments into a pension fund which, with investment earnings on these funds, are intended to provide for benefits as they become payable.

Going Concern valuation
This method of calculating the financial condition of a pension plan (valuation) assumes that the plan will be ongoing and that its assets must be sufficient to meet its liabilities (the pension benefits promised) when they come due in the future. If a plan is under-funded on a going concern basis, it has an unfunded liability which must be amortized over 15 years. If a plan is over-funded, it has a surplus.

Investment Subcommittee
Responsible for developing recommendations on investment policy and reporting, for executing investment policy, and for custody of assets.
Glossary of Terms – Annual Pension Report

Market indices

Composite Benchmark = 25% S&P TSX Comp Capped + 20% MSCI EAFE + 20% S&P 500 + 28% DEX Universe + 2% DEX 91-Day T-Bill + 5% IPD Canada Annual Property Index.

Professional Plan

The Professional Plan is for employees in the following groups:
• Faculty (UGFA)
• Professional and Managerial staff (P&M)
• Faculty (UGFA Unit 2)
• Ontario Nurses Association (ONA)
• Executive & Excluded Faculty

Pensions Committee

Duties include: prudent plan investments, member communications, benefit payments, periodic actuarial valuations and audits, and compliance with the Income Tax Act and the Pension Benefits Act (PBA).

Solvency valuation

This method of pension valuation assumes that the plan is about to be wound up so that its assets will have to be used immediately to meet its existing liabilities. If there are more liabilities than assets, the plan has a solvency deficiency which must be paid, with interest, over five years. If a plan has greater assets than liabilities on a solvency basis, it has a surplus.

University Administration

Responsible for processing of entitlements, communications, filings, and monitoring contributions.

University’s Board of Governors

The University has two main roles:
• Legal sponsor: determines benefit terms, sets funding policy (within prescribed boundaries) and remits contributions as required
• Administrator: processes member contributions, undertakes regulatory filings, oversees investments, and safe-keeps plan assets
APPENDIX

Glossary of Terms – Pension Plan Basics

Annuity
Periodic payments (usually monthly) provided based on an agreed-upon time frame, for example five years, ten years or the lifetime of a retiree. An annuity may be a fixed or varying amount, and may continue to be paid for a period after the retiree’s death.

Consumer Price Index (CPI):
The consumer price index measures monthly and yearly changes in the cost of 300 goods and services commonly bought by Canadians. If the combined cost of this basket of items goes up, this indicates inflation. The greater the increase, the higher the inflation rate has become.

Credited service
Length of service used in the plan formula to determine the member’s pension benefit.

DB plan
A pension plan that defines the pension to be provided based on service, average earnings, etc. but not the total contributions. If the plan is contributory, the rate of employee contributions may be specified, with the employer paying the balance of the cost.

DC plan
A plan under which the amount of the employer contribution per plan member and the amount of the employee contribution is specified in advance and the benefits to be received by the pensioner are calculated at the date of retirement based on the accumulated contributions and the return on the investment of the contributions.

Financial Services Commission of Ontario (FSCO)
FSCO is responsible for administering a number of the statutes that regulate the financial sector, including the Ontario Pension Benefits Act (PBA). FSCO is established under the Financial Services Commission of Ontario Act.

Income Tax Act (ITA)
Federal law governing tax collection and related benefit distribution, administered by Canada Revenue Agency (CRA). For pension plans, it provides tax-sheltered mechanisms for individuals saving for retirement and sets maximum standards for the benefits a plan can provide. It also sets contribution limits for plan sponsors where plan surplus exceeds specified levels.

Locked-in Retirement Vehicle
A locked-in retirement vehicle is another plan or contract in which the funds must ultimately be used to provide a regular income during retirement, and cannot be withdrawn as a lump sum. Vehicles include locked-in retirement account (LIRA), life income fund (LIF), or locked-in retirement income fund (LRIF).

PBA (Pension Benefits Act, 1990)
The Ontario Pension Benefits Act, which governs most registered pension plans in Ontario. The University’s pension plans are subject to the PBA.