Funded position of University Sector Pension Plans - Is there a problem?

University Sector Pension Research Report

February 25, 2014

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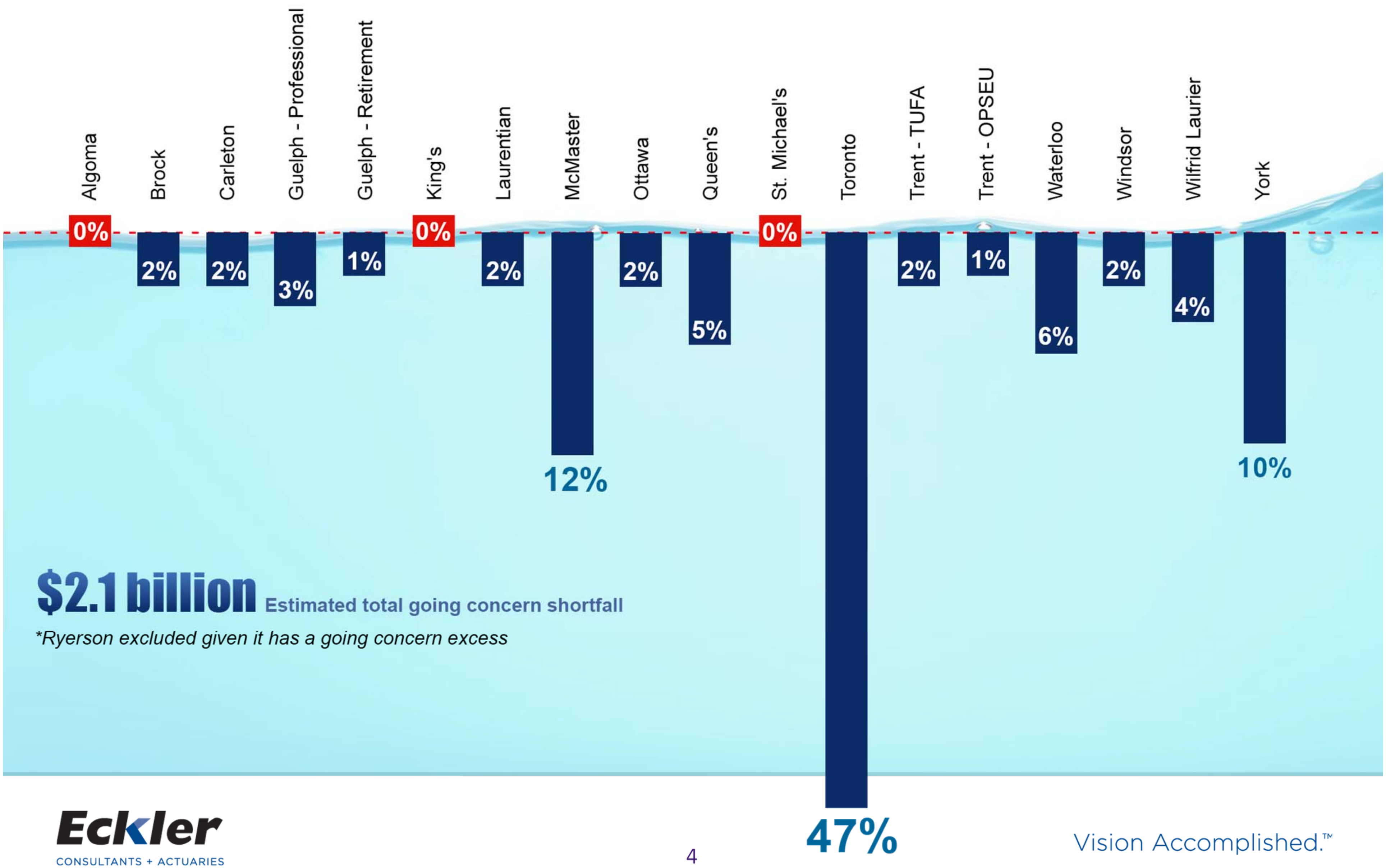
Data

- AonHewitt provided estimated valuation results
- Most recent actuarial valuation reports and available updates provided by OCUFA
  - Eckler estimated updated valuation results
- Hybrid plans have been included, although they have special issues
- Exclusions
  - Toronto (OISE), McMaster (hourly), Guelph (non-professional), Windsor (staff), Trinity & Victoria – not included because small or data not provided
  - Western, UOIT, OCAD, Lakehead, NOSM, Nipissing not included because DC plan

Data

- Most recent valuation updates
  - WLU & York as of December 31, 2012
  - If actual valuation date is after June 30, 2013, then the valuation results used, otherwise results adjusted to be July 1, 2013
- Factors considered
  - Going concern funded position
  - Solvency funded position
  - Contribution requirements
  - Actuarial basis

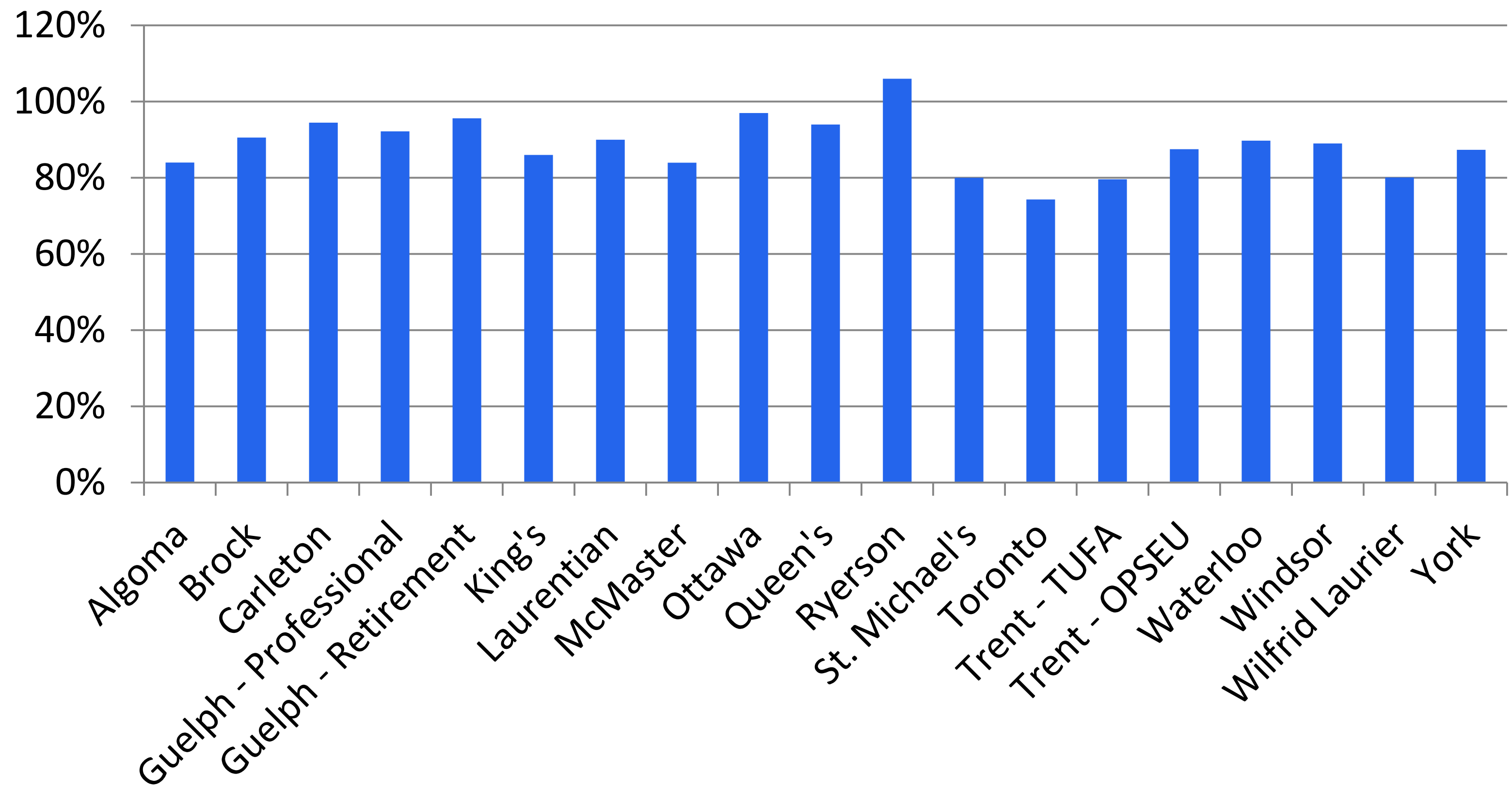
Going Concern Funding Shortfall



$2.1 billion Estimated total going concern shortfall

**Ryerson excluded given it has a going concern excess*

Going Concern Funded Ratio



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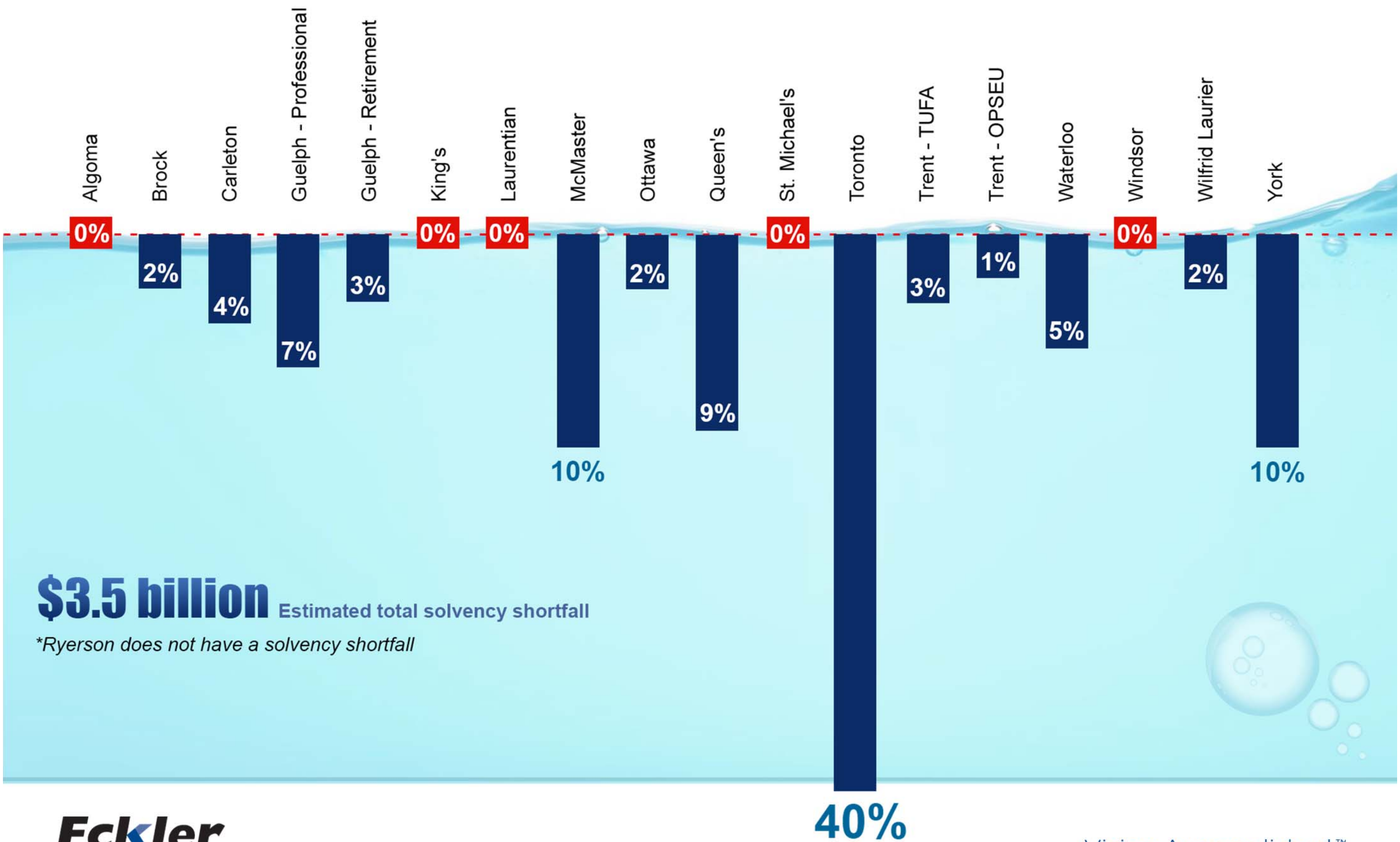
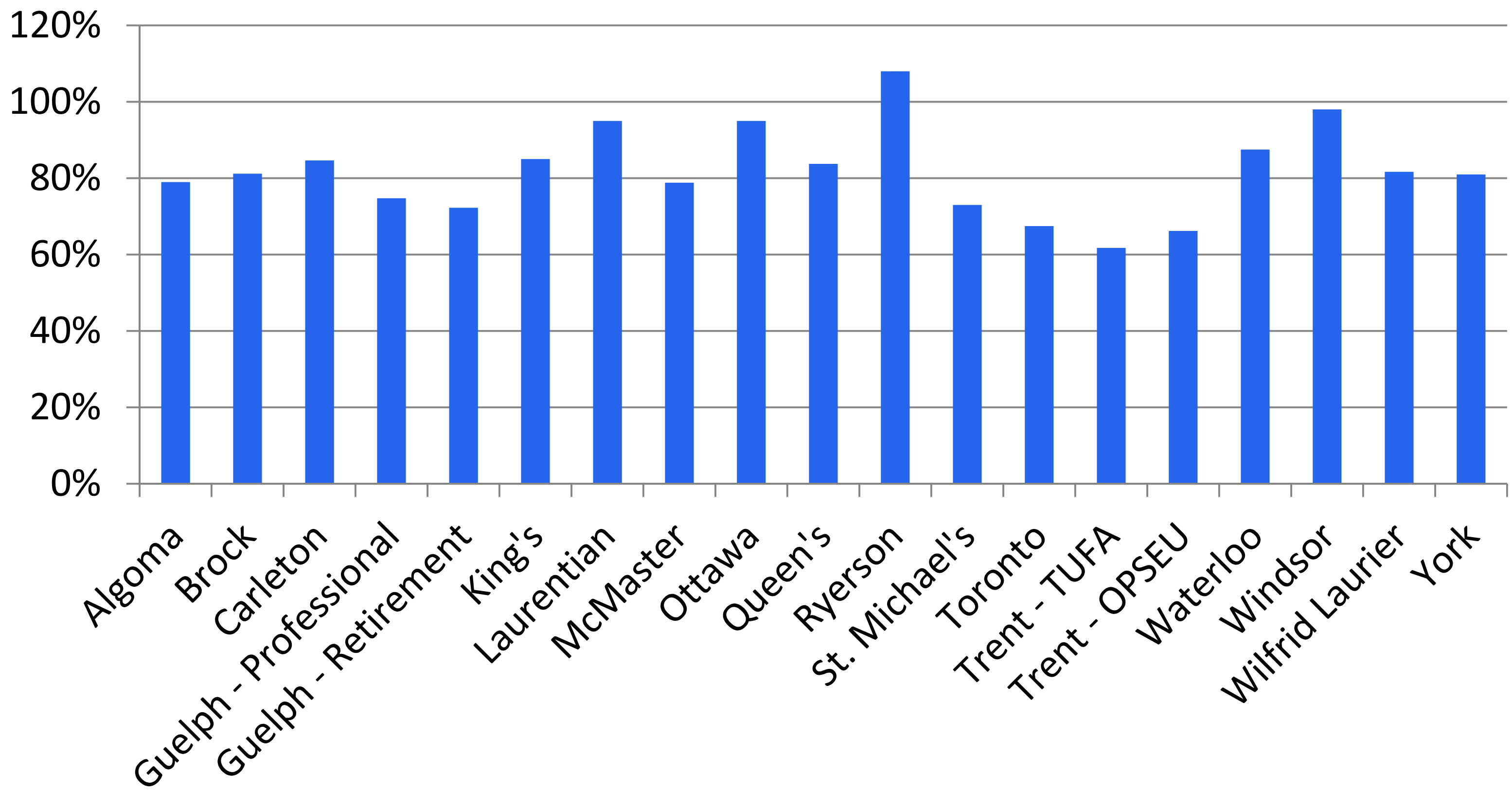
Solvency Shortfall



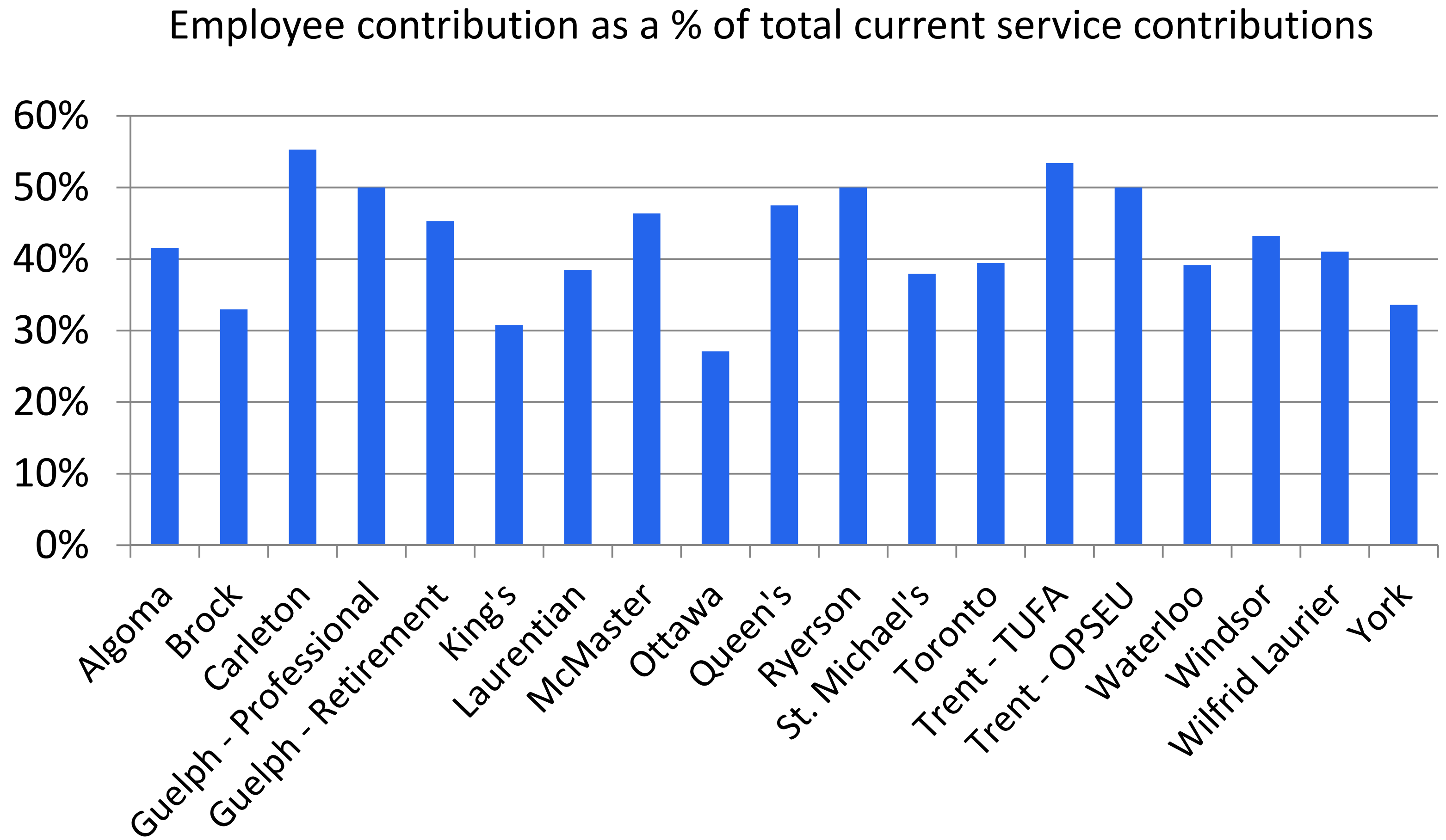
$3.5 billion Estimated total solvency shortfall

**Ryerson does not have a solvency shortfall*

Solvency Funded Ratio



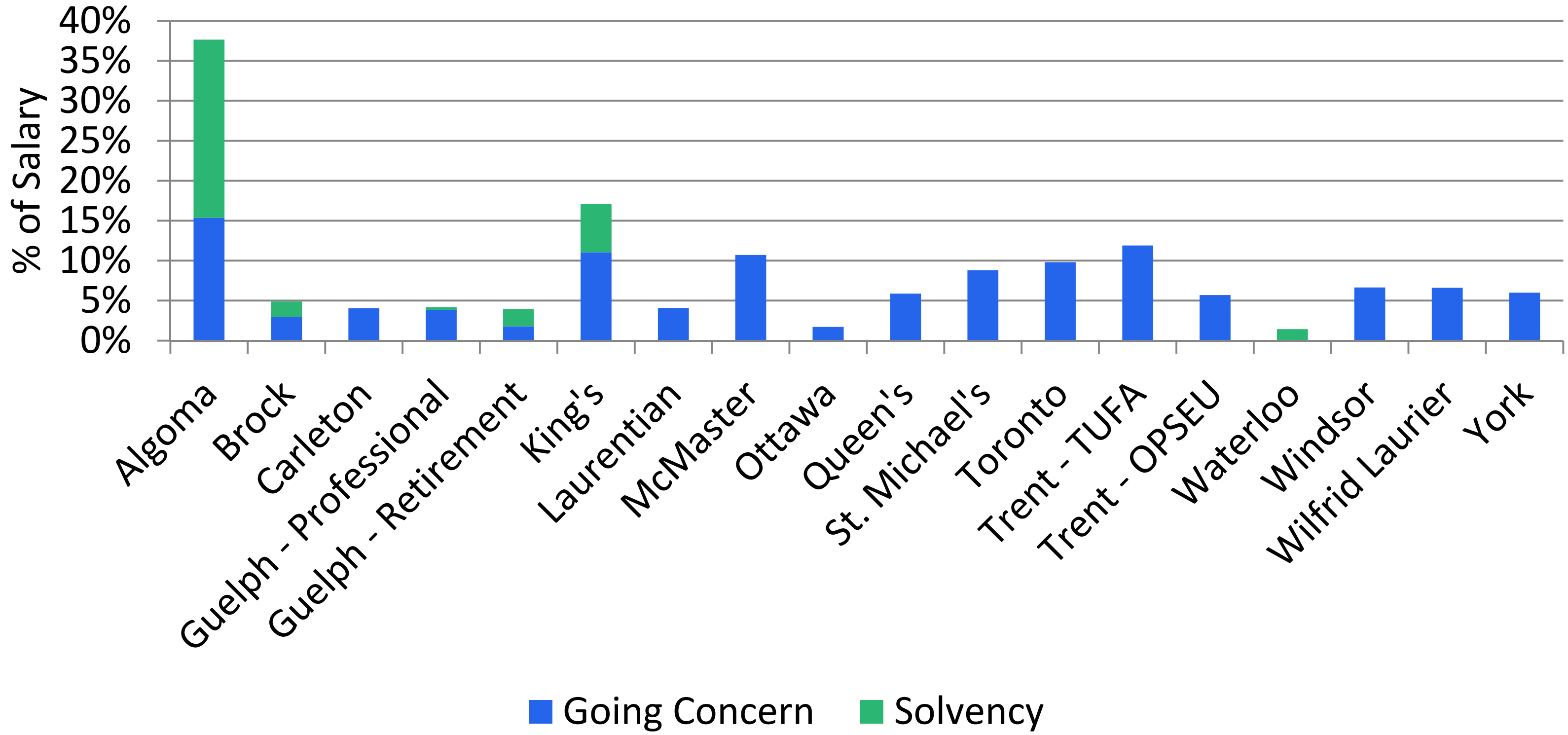
Current Service Contribution Ratio



Carleton, Guelph Professional, Ryerson & both Trent plans are at or in excess of 50%

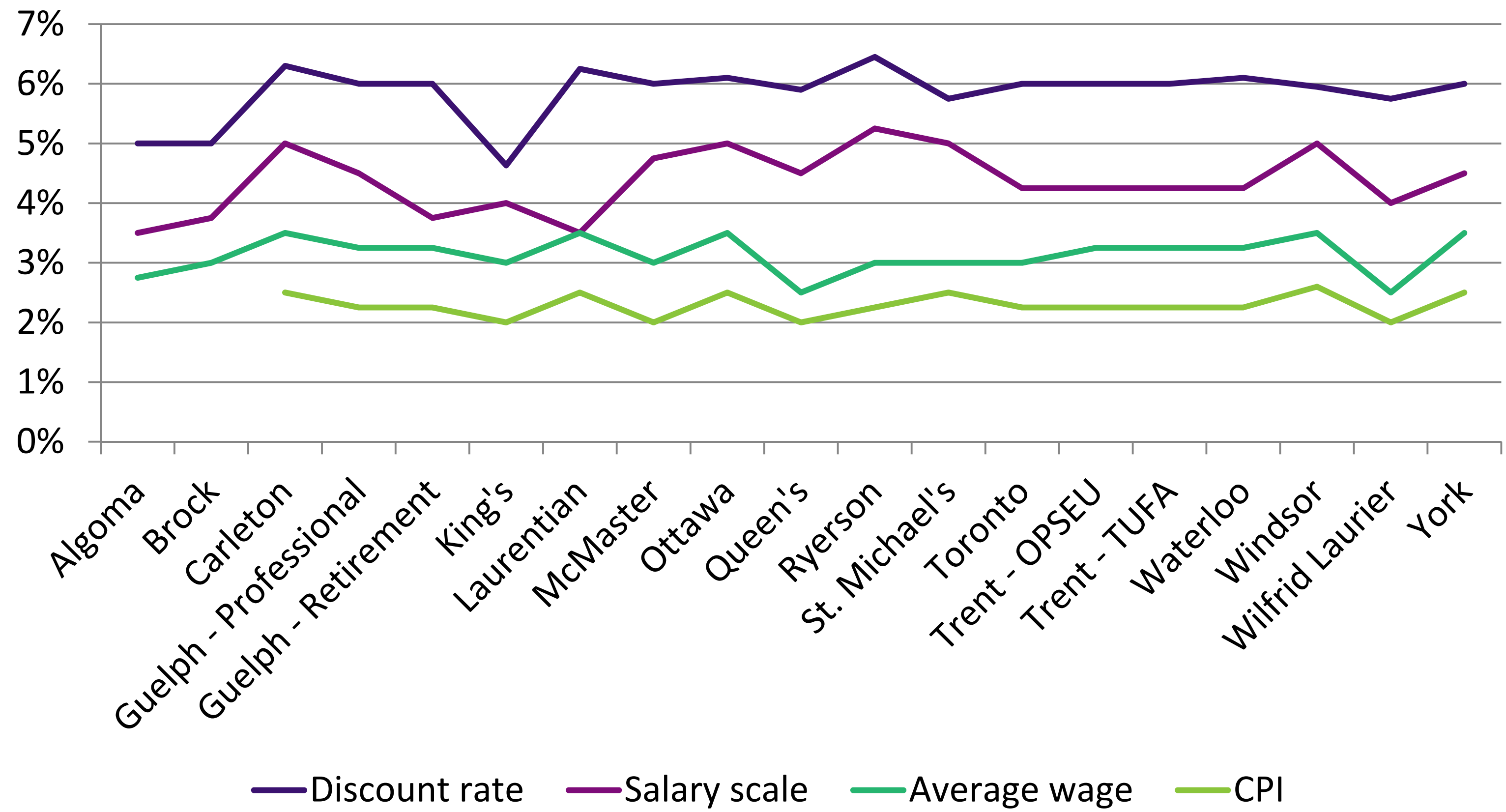
Ottawa and York have negotiated higher employee contribution rates that are not fully reflected

Employer Total Special Payments



Solvency special payments assumed to be Stage 1 Relief (i.e., interest only)
Algoma and King's not Stage 1, so full payments shown
If interest charge not provided, assumed a 3% discount rate
Waterloo employer contribution does not split out special payments from current service

Actuarial Basis – Economic Assumptions

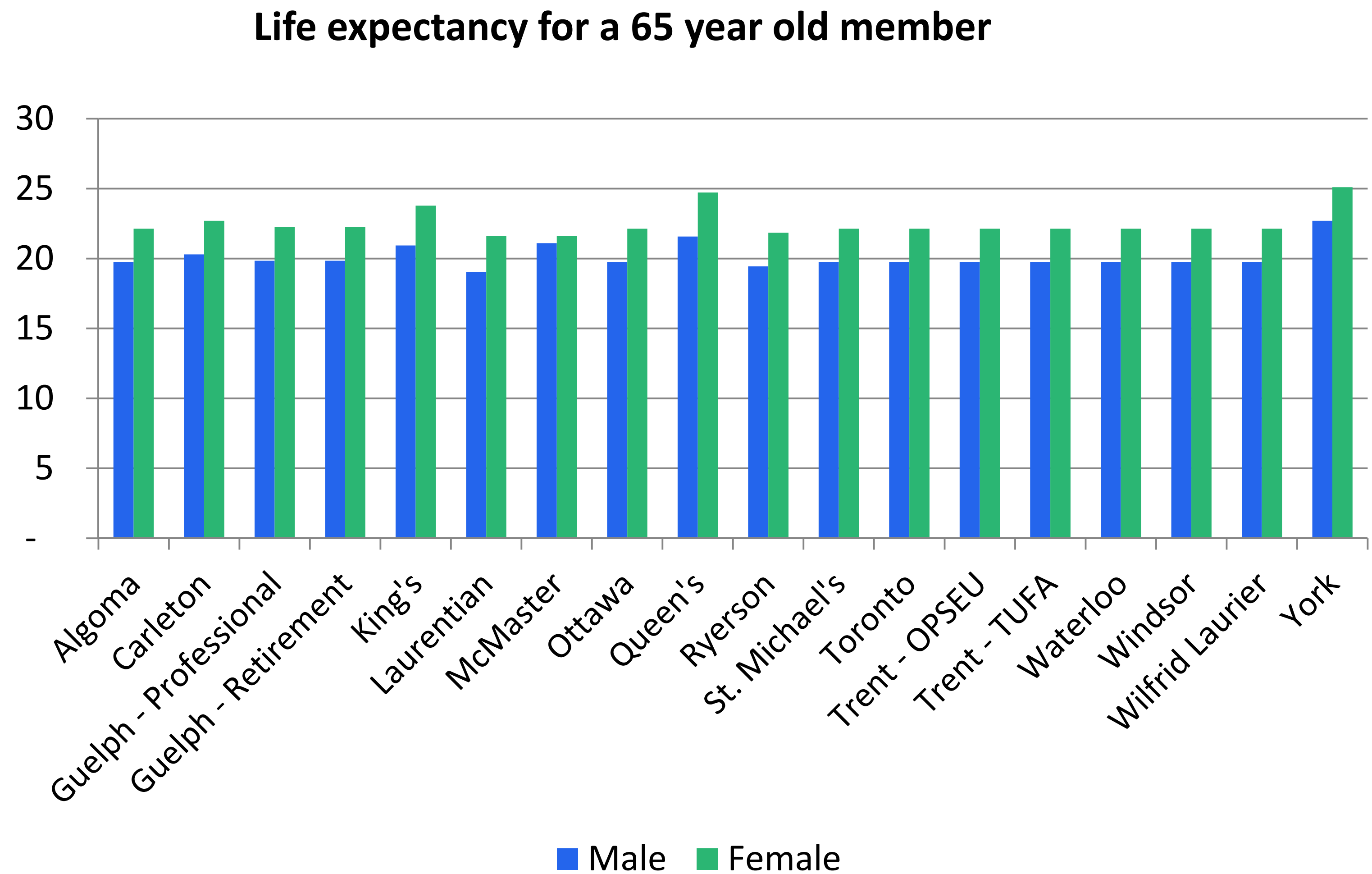


Assumptions taken from valuation summaries may not include all details of assumptions used. For example, salary scale may not reflect merit scales used.

Actuarial Basis – Economic Assumptions

- Important to note the gaps between the lines
  - They are not consistent
- Discount rate reasonably consistent, but
  - Carleton's & Ryerson discount rate is a little higher
  - Algoma's, Brock's & King's discount rate substantially lower
  - No analysis on different investment strategies
- Constant spread between CPI and average wage
  - Except Queen's and WLU
- McMaster, Carleton, Ottawa, Queen's, Ryerson and St. Michael's have much bigger spreads between average wage and salary growth
- Brock, Carleton, King's & St. Michael's have smaller spreads between discount rate and salary growth
- Guelph (Retirement) & Laurentian much greater spreads between discount rate and salary growth

Actuarial Basis – Mortality Table



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Actuarial Basis – Mortality Table

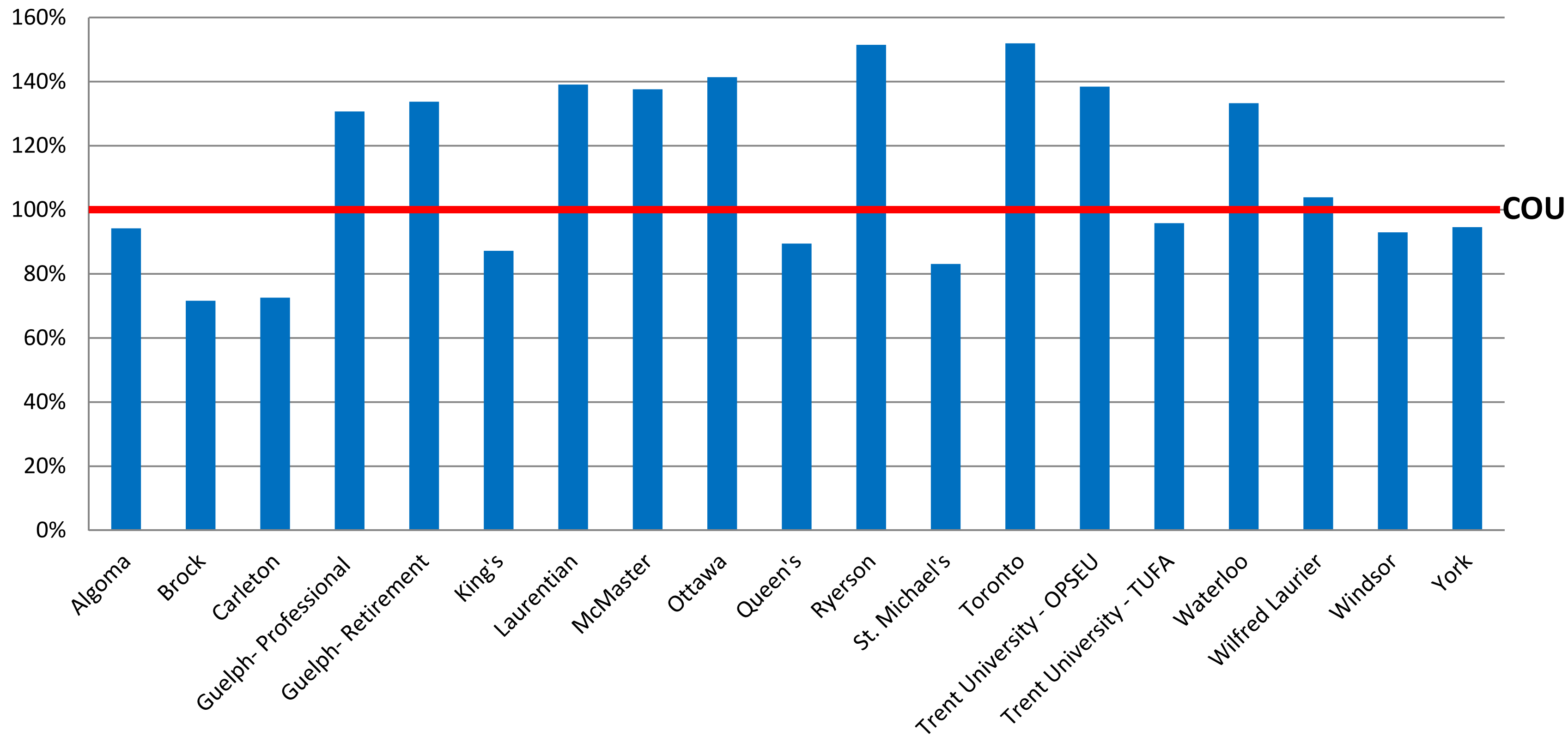
- 8 universities use the same standard mortality table (UP 94 generational mortality table)
- Carleton's assumption provides a moderately longer life expectancy
- Queen's & York's assumptions have noticeably longer life expectancy
- Brock uses a table based on its own experience
  - Details not disclosed in information provided to us

Comparison of benefit value

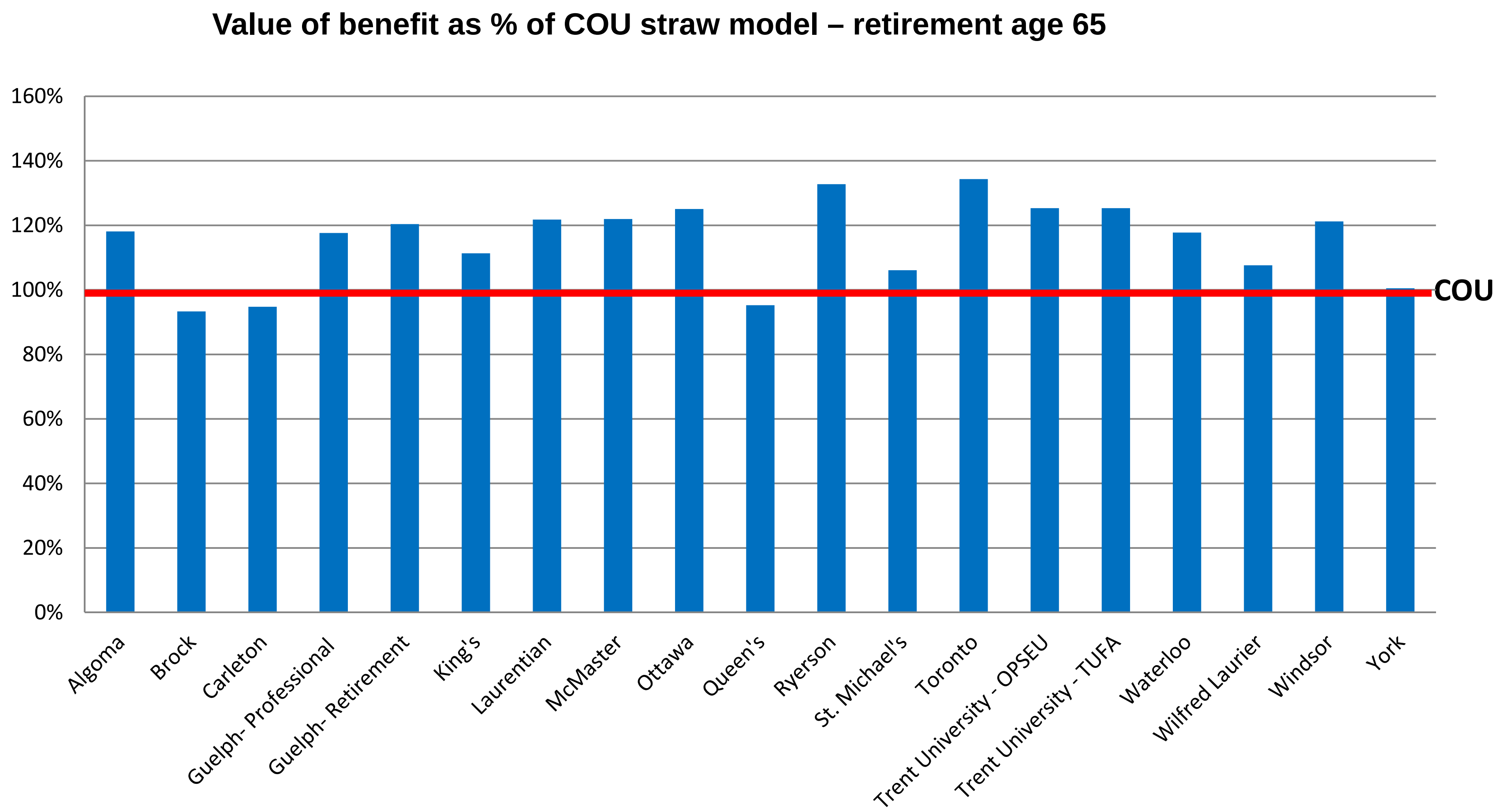
- Compares value of benefit under each university plan assuming retirement at age 60, 65 and 71
- Member entered plan at age 35 (i.e. 25, 30 and 36 years of service at age 60, 65 and 71 respectively)
- Hybrid plans assume no benefit from DC component
- Conditional indexing not reflected
- Assumed final average earnings (FAE) at retirement:
    - 3 year FAE - $120,000
    - 4 year FAE - $118,000
    - 5 year FAE - $116,000
- Actuarial assumptions
    - Discount rate - 6%
    - Salary scale – 4%
    - CPI – 2.5%
    - Mortality – UP 94 with generational projection

Comparison of benefit value

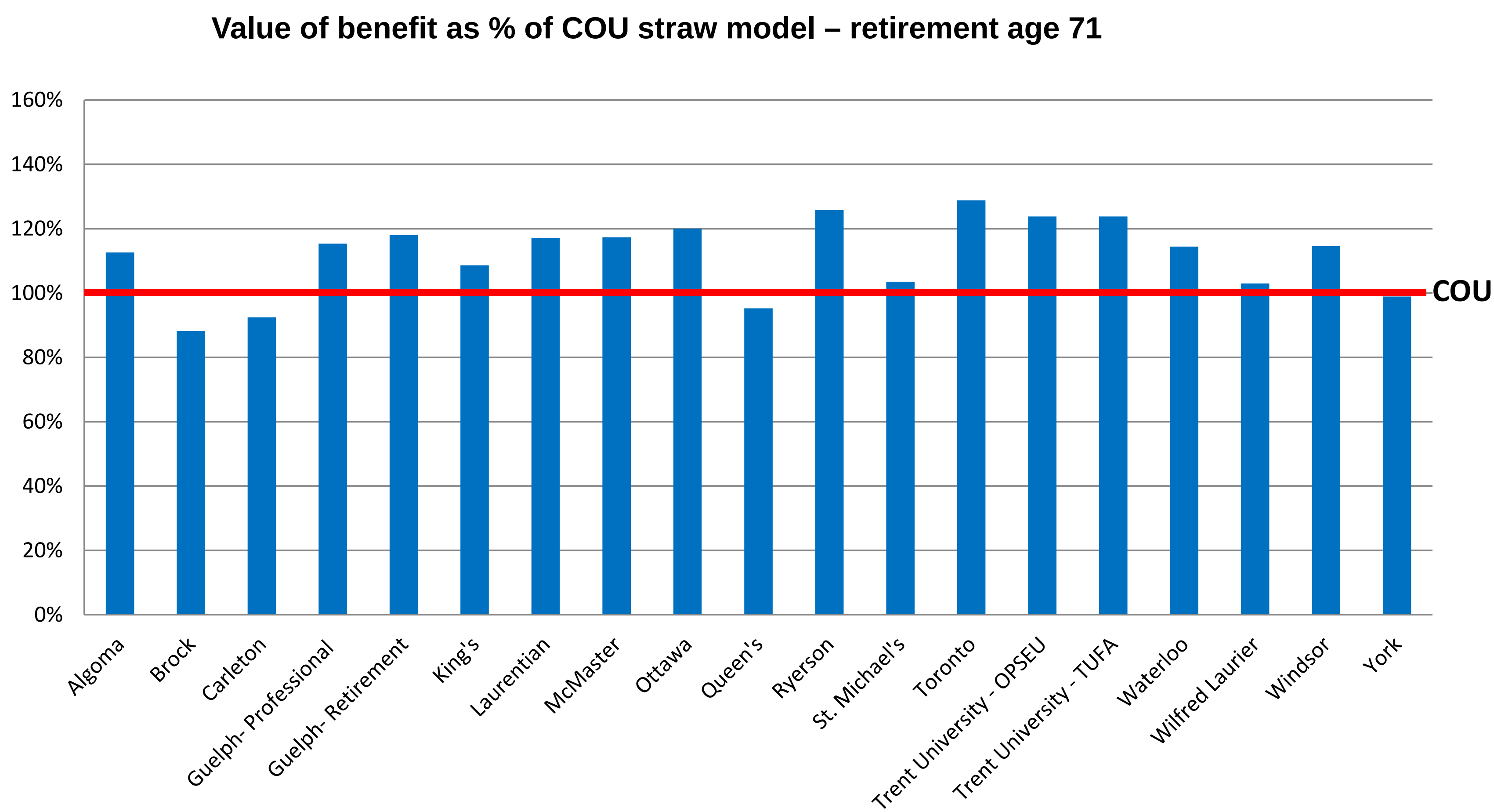
Value of benefit as % of COU straw model – retirement age 60



Comparison of benefit value



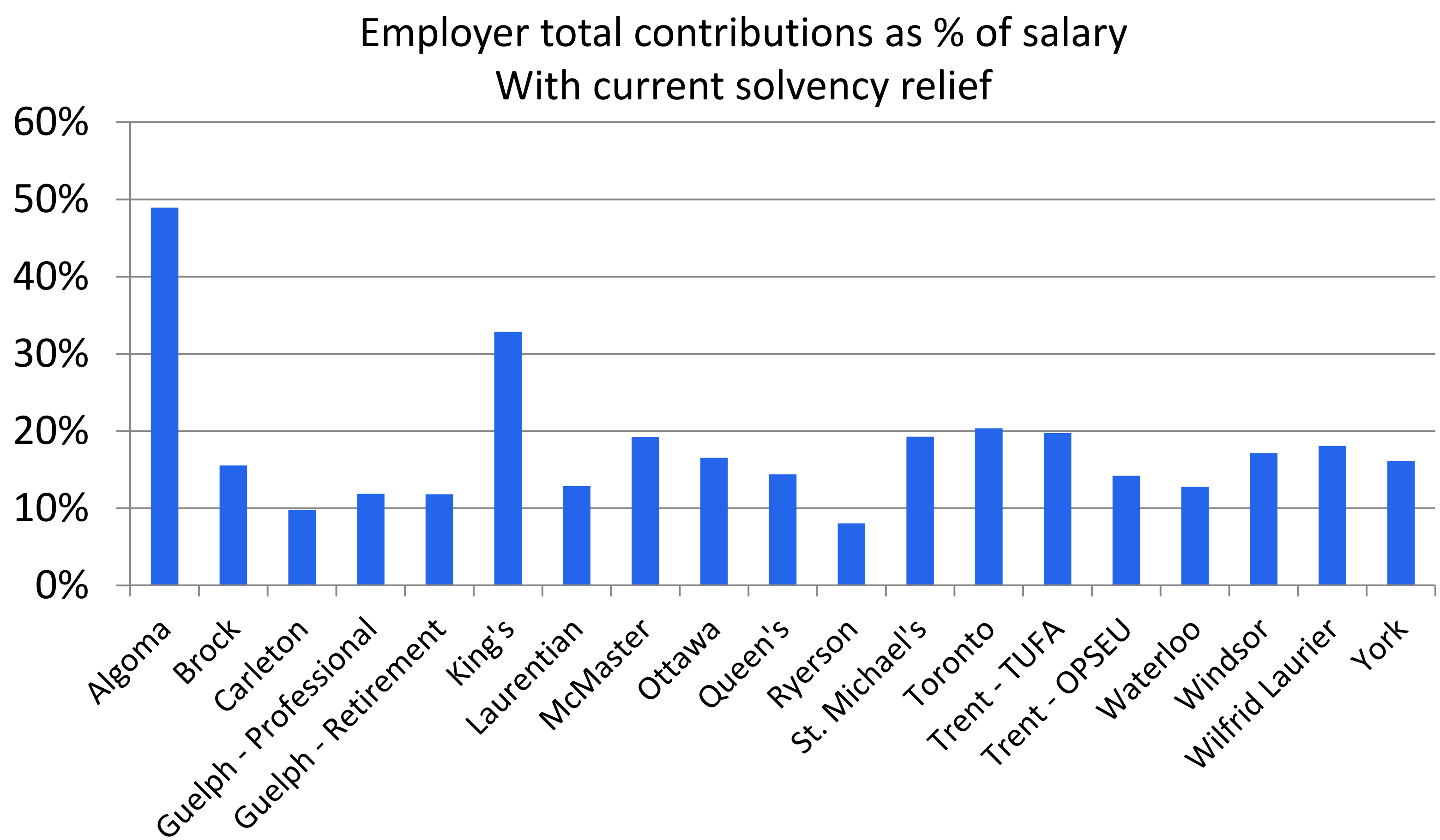
Comparison of benefit value



Is there a sector wide problem?

- Existence of a shortfall doesn’t mean there is a problem
- However, absolute size of shortfalls significant
  - $2.1billion going concern shortfall
  - $3.5 billion solvency shortfall
- Going concern shortfall could be managed through special payments
- Solvency shortfall results from combination of low interest rates and poor investment returns
  - Experience from July 1, 2013 has been positive
  - Future environment unknown

Is there a sector wide problem?

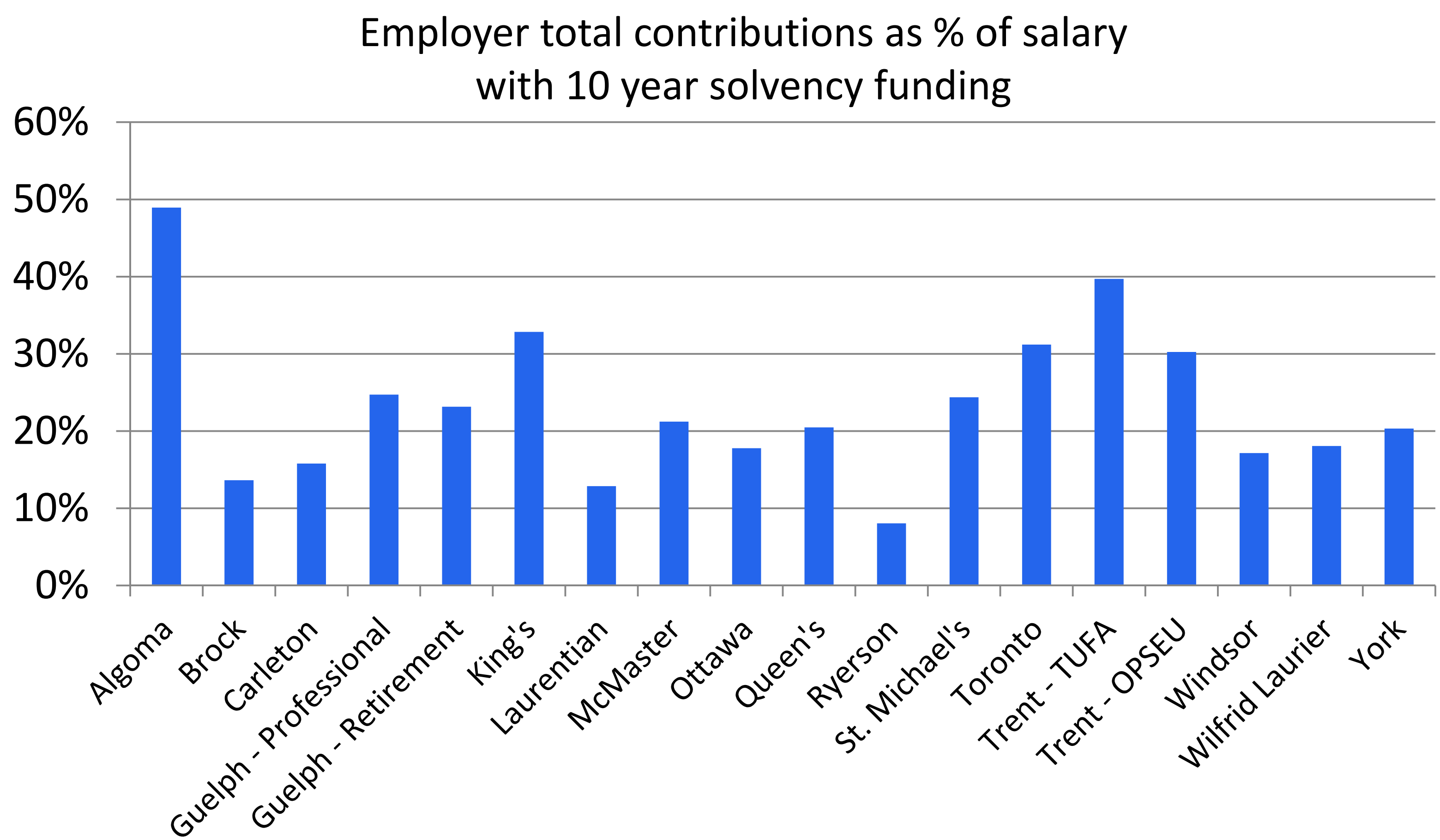


Is there a sector wide problem?

- Algoma and King’s reflect solvency shortfall payments being made

- For all but Algoma and King’s
  - Maximum employer contribution rate is 20% of salary
  - Minimum employer contribution rate is 8% of salary
  - Average employer contribution rate is 15% of salary

Is there a sector wide problem?



Sufficient data was not provided for Waterloo to be able to estimate solvency funding requirements

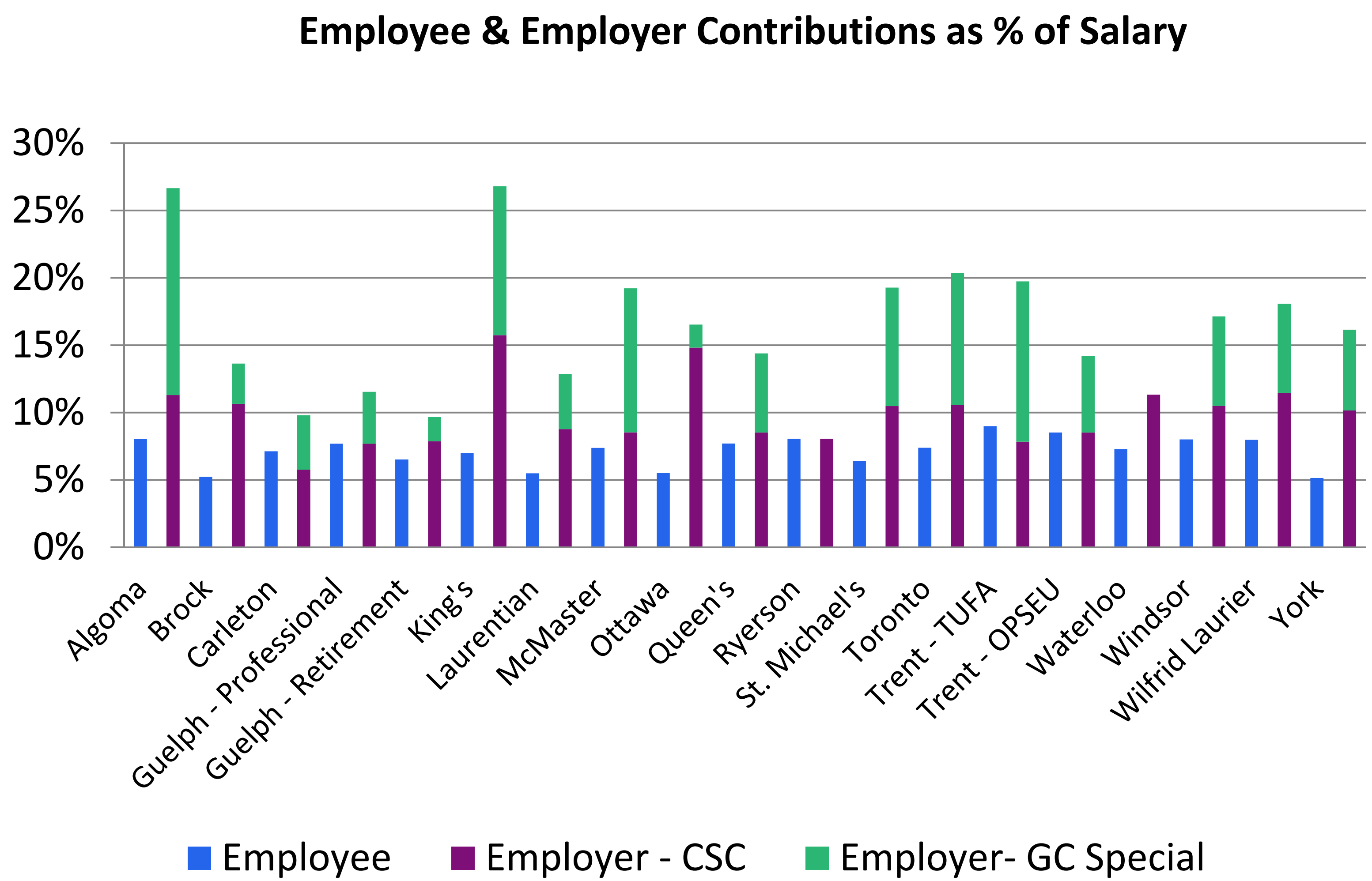
Is there a sector wide problem?

- Solvency funding significantly increases costs

- Maximum employer contribution rate is 49% of salary
- Minimum employer contribution rate is 8% of salary
- Average employer contribution rate is 23% of salary

- Should confirm whether solvency funding is appropriate funding measure

Is there a sector wide problem?



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Is there a sector wide problem?

- At most universities, members currently paying from about 40% to more than 50% of cost of currently accruing benefits

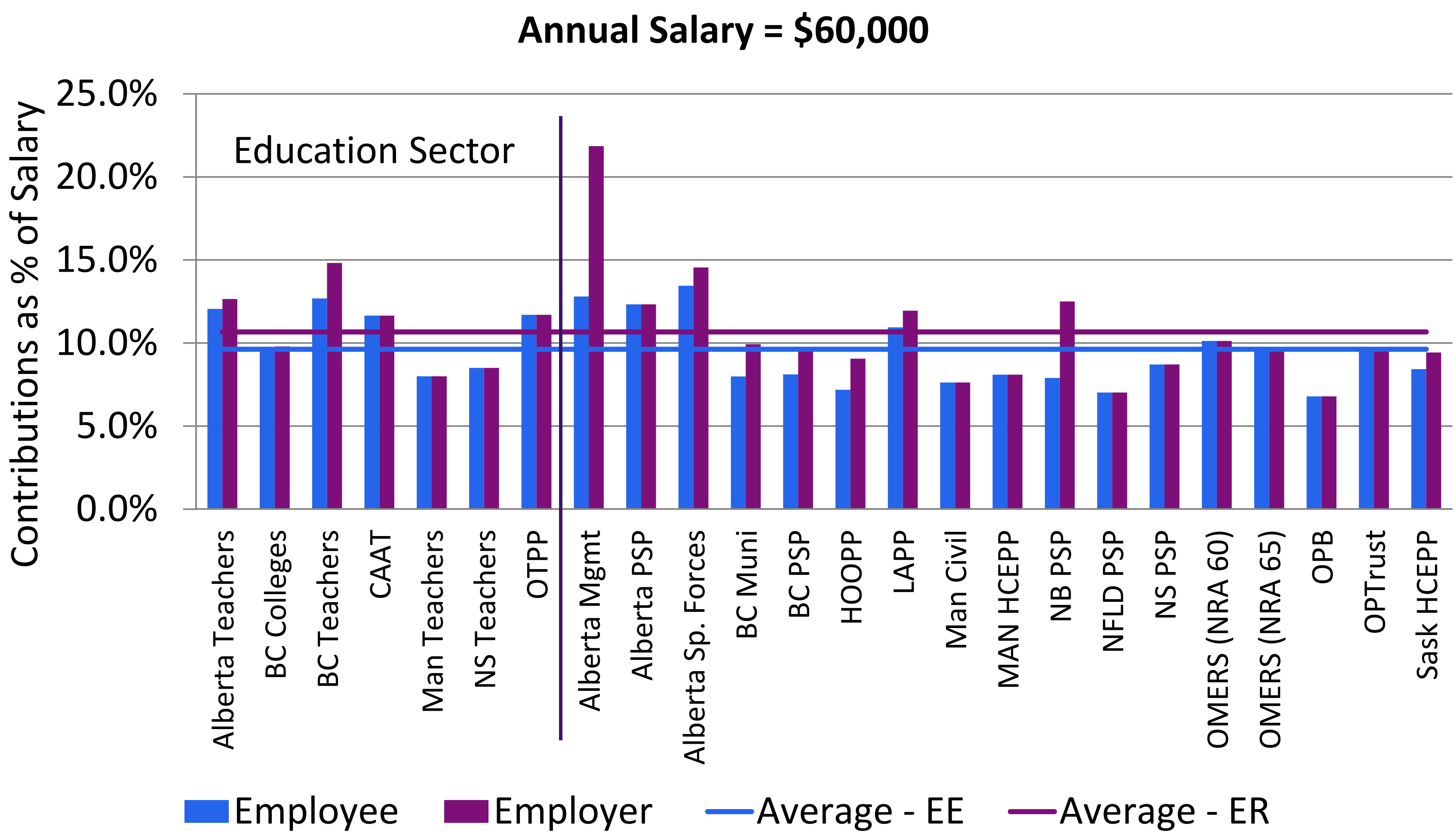
- Special payments depend on past investment experience and contribution history

- When comparing amount paid by employees across universities, also important to compare level of benefits provided

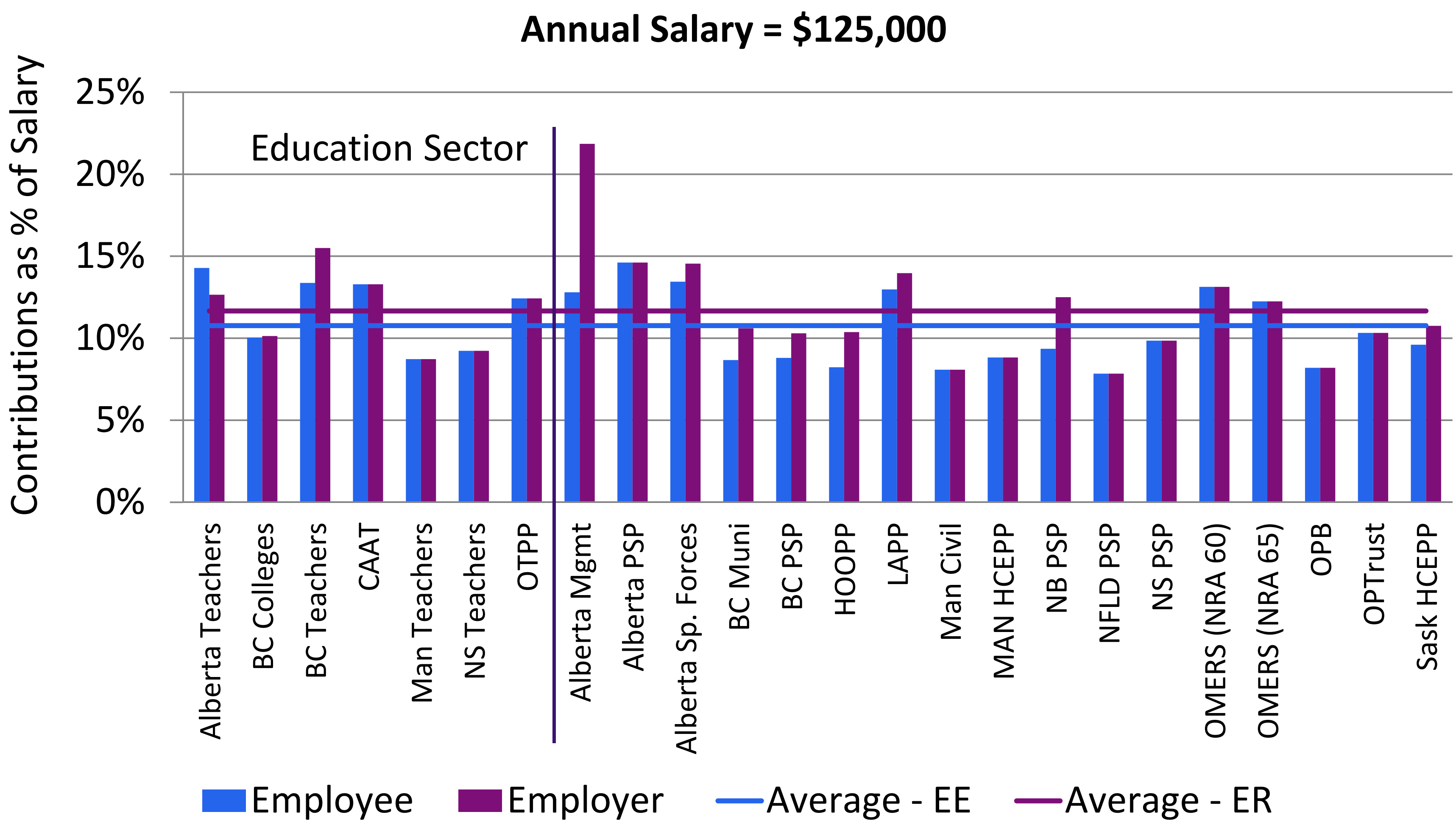
Comparison to other public sector plans

- May be instructive to consider contribution requirements of other public sector plans
- Most other public sector plans:
  - Have similar plan designs
  - Are not subject to solvency funding
  - Have large asset pools
  - Have employers contributing marginally more than employees
- Other public sector plans total contribution rates:
  - Average about 20% of salary
  - Maximum about 35% of salary
  - Are not significantly different from contribution ranges for Ontario universities (going concern only basis)

Comparison to other public sector plans



Comparison to other public sector plans



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Comparison to other public sector plans

- For education sectors across Canada:
  - Average total contribution rate @ $60,000: 21.6%
  - Average total contribution rate @ $125,000: 23.3%

- Average Ontario university going concern total contribution rate: 23.2%

Is there a sector wide problem?

- Key elements of these plans include:
  - Generous benefit accruals
  - Indexing of benefits in pay
  - Subsidized early retirement and death benefits
- As a result,
  - The imposition of solvency funding appears to require substantially high (and volatile) employer contributions
  - On a going concern basis, although there may be ***pockets of concern***, but as a whole, there does not appear to be a problem given the benefits provided

Pockets of concern

- Excluded solvency funding because:
  - Generally, not currently applying to Ontario universities
  - Public sector comparator plans do not solvency fund

- When compared to other education sector plans:
  - Algoma, King's, McMaster, St. Michael's, Toronto, Trent (TUFA), Windsor and WLU have higher going concern funding requirements
  - The balance of universities have lower going concern funding requirements

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