Municipal Infrastructure Investment & Financial Sustainability

AMO-York Region Joint Research Report
Spring 2018
Outline

1. Principles of Financial Sustainability
2. Conceptual Framework
3. The Municipal Context
4. Infrastructure: A Big Fiscal Challenge
5. Municipal Fiscal Capacity
6. Debt Management
7. Reserve Management
8. Are We There Yet?
9. Achieving Financial Sustainability
10. Conclusions
1. Principles of Financial Sustainability
In this section

1. What is financial sustainability?
2. Beyond the PSAB framework
3. How to determine if a municipality is financially sustainable
4. Challenges to financial sustainability
There are numerous conceptual or principles-based definitions of financial sustainability

“…a government’s ability to manage its finances so it can meet its spending commitments, both now and in the future. It ensures future generations of taxpayers do not face an unmanageable bill for government services provided to the current generation”.

Source: Local Government Association of Australia
The Public Sector Accounting Board defines financial sustainability more narrowly.

**Sustainability**
- Ability to maintain existing programs and services without raising taxes or increasing debt.

**Flexibility**
- Ability to raise taxes or increase debt to meet service needs and obligations.

**Vulnerability**
- Dependence on revenue sources outside its control.
A more pragmatic approach to financial sustainability focuses on capabilities

A municipality is in a financially sustainable position if:

1. It offers a level of service commensurate with willingness to tax and ability to pay
2. It can adjust service levels in response to changes in economic conditions or transfer payments
3. It can keep its infrastructure in a state of good repair
4. It has sufficient reserves and/or debt capacity to replace infrastructure when it needs to be replaced
5. It can adjust its capital stock in response to changes in the rate of growth
What are some key challenges to financial sustainability?

1. The future cost of infrastructure investments
2. A mismatch between level of service decisions and fiscal capacity
3. Unforeseen shocks to revenue or spending
4. Growth that does not materialize as expected
5. Water rates that are set at less than full cost recovery
Financial sustainability is about the stewardship of the long term

- Financial sustainability requires long-term planning; it does not just happen.
- This is mostly about managing two things: service levels and infrastructure.
- Service level and infrastructure decisions both typically have operating and capital dimensions.
- The key to financial sustainability is taking necessary steps to manage both short and long-term risks.
Infrastructure needs pose significant risks to financial sustainability

Risks related to asset management:

- Inadequate spending on infrastructure renewal and replacement, deferring costs to future generations
- Inadequate savings for future, lumpy asset management investments, again deferring costs to future generations
- Uneven geographical distribution of infrastructure needs
- Geographical variation in infrastructure costs
- Externalities arising from municipal boundaries, leading to under-investment
- Water and wastewater rates below full cost recovery
Infrastructure needs pose significant risks to financial sustainability

Risks related to growth:

- Growth does not materialize when expected, even though infrastructure has been built in advance
- Inadequacy of the development charge legislative regime to generate the funds needed for growth-related infrastructure
- Failure to allocate sufficient tax levy funding to growth-related infrastructure, resulting in over-reliance on development charges, a large future tax levy obligation, and degradation of existing infrastructure as funding needed for asset management is used for growth projects
Financial sustainability is inextricably linked to asset management

Financial Sustainability

Asset Management
- Level of service
- Lifecycle management
- Financial management
Key factors that link asset management to financial sustainability

1. **Infrastructure intensity**
   How much infrastructure do you have on a per household basis?

2. **Investment needs**
   How much do you need to invest and when?

3. **Fiscal capacity**
   What is your ability to generate revenue to meet your infrastructure needs, including reserve contributions and debt servicing?

4. **Intergenerational equity**
   What are our obligations to future generations?
2. A Conceptual Framework
The report is built around a couple of key ideas

• Municipalities can be grouped based on a framework involving fiscal capacity, infrastructure intensity, and infrastructure needs

• It is analytically useful to group municipalities according to their rate of population growth
Starting point: assess fiscal capacity and infrastructure intensity

- **Fiscal Capacity** (assessment per household)
  - Low to moderate
  - High

- **Infrastructure Intensity** (infrastructure per household)
  - Low to moderate
  - High

**The fortunate few**
- Fiscal strategy is critical

**The unfortunate zone**
- Fiscal strategy is critical

A Conceptual Framework
Next: look at investment needs and how urgent they are

Fiscal strategy is critical
Low to moderate

Potentially unmanageable
High

Fiscal strategy is critical
Low to moderate

Manageable with regular budgeting
High

Investment Needs (age of assets)

Infrastructure intensity

High

Low to moderate
Past is future - growing municipalities tend to keep growing

Historic and Projected Population Growth
Ontario Census Divisions (2001-2041)

Projected Population Growth – Annualized (2015-2041)


Sources: Projected population growth from Ontario Ministry of Finance; Historic population growth from Statistics Canada
The elements of a fiscal strategy
3. The Municipal Context
Ontario municipalities can be categorized in a variety of ways, depending on the analytical question at hand:

1. Structure
2. Geography
3. Population size
4. Degree of urbanization
Municipal structure in Ontario is complex

Source: AMO and Ontario Ministry of Finance
## Responsibilities differ by structure

<table>
<thead>
<tr>
<th></th>
<th>Single-tier</th>
<th>Upper-tier</th>
<th>Lower-tier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>County</td>
<td>Regional</td>
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<tr>
<td>Arterial roads</td>
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<td>√</td>
<td>√</td>
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<tr>
<td>Local roads</td>
<td>√</td>
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<tr>
<td>Transit</td>
<td>√</td>
<td></td>
<td>√</td>
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<tr>
<td>Water &amp; Wastewater</td>
<td>√</td>
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<td>√</td>
</tr>
<tr>
<td>Waste collection</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste disposal</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Parks and recreation</td>
<td>√</td>
<td></td>
<td></td>
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<tr>
<td>Fire protection</td>
<td>√</td>
<td></td>
<td></td>
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<tr>
<td>Policing</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and social services</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Social housing</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>

**Notes:**
1. There are currently ten District Social Services Administration Boards (DSSABs) in northern Ontario that provide consolidated municipal services.
2. In two-tier municipalities, certain responsibilities may be at the upper tier, the lower tier, or shared (e.g., water and transit).

Source: MMAH
The degree of urbanization has increased rapidly over the last century.

Source: Statistics Canada

Share of Ontario's Population in Urban Centres (%)

Year
1851 1901 1951 2011
Share (%)
14 43 71 86

Source: Statistics Canada
Most of the population lives in 15 large urban areas

Population Distribution in CMAs and CAs

- Large Urban Areas: 81%
- Smaller Urban Areas: 9%
- Remainder: 10%

Large urban area = CMA (Census Metropolitan Area);
Smaller urban area = CA (Census Agglomeration)

Source: Population, 2015, Ontario Ministry of Finance

CMAs:
- Toronto
- Ottawa
- Hamilton
- Kitchener-Cambridge
- London
- St. Catharines-Niagara
- Oshawa
- Windsor
- Barrie
- Greater Sudbury
- Kingston
- Guelph
- Brantford
- Thunder Bay
- Peterborough
But sixty percent of municipalities have a population of less than ten thousand.

**Municipalities by Population (000’s)**

- Less than 5: 42%
- 5-10: 18%
- 10-15: 10%
- 15-25: 9%
- 25-50: 6%
- 50-100: 7%
- Over 100: 8%

*Source: Population, 2015, Ontario Ministry of Finance*
4. Infrastructure: A Big Fiscal Challenge
In this section

1. Municipal capital assets
2. Municipal capital investment
3. Funding sources for capital expenditure
4. Amortization
In the last half century, there has been a dramatic shift in responsibility for infrastructure.

<table>
<thead>
<tr>
<th>Share</th>
<th>1961</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>28%</td>
<td>15%</td>
</tr>
<tr>
<td>Provincial</td>
<td>36%</td>
<td>26%</td>
</tr>
<tr>
<td>Local</td>
<td>36%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Sources: StatsCan, CANSIM Table 031-0005: Flows and stocks of fixed non-residential capital, by industry and asset, Canada, provinces and territories, annual.
Municipalities have a lot of infrastructure – and it is more valuable than you might think.

Municipal Tangible Capital Assets (excl. Land), 2013

$ billion

<table>
<thead>
<tr>
<th></th>
<th>Book Value</th>
<th>Estimated Replacement Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book Value</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Estimated</td>
<td>266</td>
<td></td>
</tr>
</tbody>
</table>

Sources: TCA total cost, 2013, FIR; NRBCPI and CPI, Statistics Canada
Two-thirds of Ontario municipal capital assets consist of roads, water, and wastewater

Gross Book Value Of Ontario Municipal Capital Assets

- Water and Wastewater: 34%
- Roads and bridges: 31%
- Parks and recreation: 9%
- Transit: 7%
- Social Housing: 4%
- Other: 15%

Source: Capital assets, 2013, FIR
Municipal infrastructure investment is picking up

Source: Financial Information Return (FIR)
A key question:

Are municipalities investing enough in asset management?

Answer:

Almost certainly not.

Source: Financial Information Return (FIR)
Municipal capital investment is not even keeping up with amortization

Data sources: FIR and MPAC
The trend towards aging assets is consistent

% of TCA Amortized

Municipal Growth Profile

- Declining: 45% (2009), 47% (2013)
- Stable: 42% (2009), 45% (2013)
- Growing: 42% (2009), 44% (2013)
- Fast-Growing: 39% (2009), 40% (2013)
- Municipal Average: 42% (2009), 44% (2013)
Key findings – capital planning

• Municipalities are responsible for a much larger share of infrastructure than they were in the past

• Most municipalities are not investing enough in asset management

• Municipal investment has increased since the Walkerton crisis, but it is still not keeping up with amortization
5. Applying the framework: Fiscal Capacity and Infrastructure
In this section

1. Fiscal capacity
2. Infrastructure intensity
Growing municipalities tend to have more fiscal capacity

Municipal Growth Profile

Sources: Fiscal capacity = Weighted average assessment per household, 2013, FIR; Household, 2013, MPAC; population, 2009-2013, Ontario Ministry of Finance
Forty-seven percent of Ontario municipalities are in the low fiscal capacity and high infrastructure intensity zone.

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant. Quadrant dividers are Ontario averages.
But twenty-nine per cent of the Ontario population live in municipalities that fall in the unfortunate zone.
Single-tier municipalities tend to have lower-than-average fiscal capacity

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
None of the eight regional municipalities are in the unfortunate zone

Notes:
Percentages in quadrant labels indicate proportion of municipalities in each quadrant
Upper tier regions include the District of Muskoka
A fiscal strategy is critical for 55 percent of the lower-tier municipalities within regions.

Lower Tiers within Regions

Fiscal Capacity

Infrastructure Intensity

Fiscal Strategy is Critical (36%)  Fortunate Few (41%)  Fiscal Strategy is Critical (19%)  Unfortunate Zone (4%)
Counties have lower-than-average fiscal capacity

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant
Most lower tiers within counties have lower-than-average fiscal capacity and half have lower-than-average infrastructure intensity.

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
Most of the municipalities in the GTA have above average fiscal capacity and many also have high infrastructure intensity.

Note: Percentages in quadrant labels indicate proportion of municipalities in each quadrant.
Non-GTA municipalities generally have below average fiscal capacity and widely dispersed infrastructure intensity.
Key findings – municipal fiscal capacity

• The fiscal capacity/infrastructure intensity framework identifies differences based on municipal structure – regions, counties, single tiers, lower tiers within regions and counties, etc.

• Growing municipalities have more fiscal capacity than stable or declining municipalities

• Almost half of Ontario municipalities are in the unfortunate zone – lower-than-average fiscal capacity and higher-than-average infrastructure intensity
6. Debt Management
In this section

1. When is debt needed?
2. Who issues debt?
Debt management

• Hotly debated issue:
  • Proponents argue that debt spreads the cost of assets over a longer portion of their useful lives
  • Opponents argue that debt servicing payments reduce fiscal room, crowd out other spending, and shift costs to future generations

• Easy access and low cost may be encouraging over-reliance on debt

• On the other hand, debt financing may be necessary for infrastructure that has to be built in advance of growth
New municipal debt is constrained by legislation

- In Ontario, the amount of debt that can be authorized by a municipality is restricted by the provincial Annual Repayment Limit (ARL) regulation
  - Councils may not approve financial obligations that will, in total, exceed 25% of a municipality’s own-source revenues
- Long-term financial obligations include
  - Mortgage
  - Debenture financing payments
  - Lease payments
  - Other future commitments/liabilities to third parties (i.e., hospital funding)
Ontario municipalities have $17.3 billion in debt, mostly issued by growing and fast growing municipalities.

### Net Long-term Debt by Growth Profile (2013)
- **Fast-Growing**: 43%
- **Growing**: 44%
- **Stable**: 11%
- **Declining**: 2%

### Household Income by Growth Profile (2016 Census)

<table>
<thead>
<tr>
<th>Growth Profile</th>
<th>Total (000's)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declining</td>
<td>63</td>
</tr>
<tr>
<td>Stable</td>
<td>66</td>
</tr>
<tr>
<td>Growing</td>
<td>70</td>
</tr>
<tr>
<td>Fast-Growing</td>
<td>90</td>
</tr>
</tbody>
</table>

Sources: FIR; Ontario Ministry of Finance; Statistics Canada
Ten municipalities have more than two thirds of the Ontario municipal debt

**Net Long-term Debt (2013, $ million)**

<table>
<thead>
<tr>
<th>Top 10 Borrowers</th>
<th>Debt</th>
<th>Growth Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Toronto</td>
<td>4,475</td>
<td>Growing</td>
</tr>
<tr>
<td>York Region</td>
<td>2,326</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Ottawa</td>
<td>1,988</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>Peel Region</td>
<td>1,559</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>Waterloo Region</td>
<td>428</td>
<td>Growing</td>
</tr>
<tr>
<td>City of London</td>
<td>382</td>
<td>Growing</td>
</tr>
<tr>
<td>City of Hamilton</td>
<td>380</td>
<td>Growing</td>
</tr>
<tr>
<td>Halton Region</td>
<td>313</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Barrie</td>
<td>288</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Kingston</td>
<td>275</td>
<td>Growing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,413</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Debt, 2013, FIR
More than three quarters of debt is for water, wastewater, transportation and housing

Net Long-term Debt by Infrastructure Type

- Water & Wastewater: 39%
- Transportation: 28%
- Social housing: 15%
- Other: 18%

Source: Debt, 2013, FIR
Municipal debt per capital is rising

Debt per Household
(Weighted Municipal Average)

2009: $2,000
2010: $2,500
2011: $3,000
2012: $3,500
2013: $4,000
Fast-growing municipalities have high and rising debt per household

Debt per Household Weighted by Population Growth (2009-2013)
Per capita debt servicing costs rise with household income and then fall in high-income municipalities

Debt Charge* Per Household (2009-2013 Average)

* Note: Debt charge is defined as interest and principal payments
Declining municipalities tend to keep their debt costs low as a share of operating expenses.
Debt per capita tends to rise with infrastructure intensity in urban areas

Sources: Debt and Tangible Capital Assets, 2013, FIR
Population, 2013, Ontario Ministry of Finance
Debt per capita tends to rise with infrastructure intensity in large upper and single-tier municipalities

**Regions and Large Single-tier Municipalities**

*This graph includes both upper-tier and lower tier municipalities in the 8 regions as well as the top 5 single-tier municipalities with population over 200,000.

Sources: Debt and Tangible Capital Assets, 2013, FIR
Population, 2013, Ontario Ministry of Finance
Smaller municipalities are less willing or able to take on debt regardless of infrastructure intensity

Sources: Debt and Tangible Capital Assets, 2013, FIR
Population, 2013, Ontario Ministry of Finance
Key findings – debt management

- Municipalities use debt:
  - To finance infrastructure in advance of growth
  - To finance asset management spending when they have large amounts of old, high needs infrastructure
  - When they need infrastructure to comply with regulations
  - When they need to match federal or provincial grants
- Growing and fast growing municipalities tend to have more debt
- Debt per household rises with the rate of population growth
7. Reserve Management

The Virtue of Saving
In this section

1. Benefits of good reserve management
2. Who saves the most?
3. How much should municipalities be saving?
Good reserve management is key to achieving financial sustainability

Long-term financial sustainability requires:

• Saving for future capital asset replacement and life cycle costs
• Using reserves to manage debt levels

Benefits of reserves include:

• Reduced need for debt
• Increased liquidity, a positive factor for credit rating agencies
• Smoothing the impact of uneven capital expenditures on the tax levy and rates
• Protection against long-term liabilities and unexpected expenditures
Those who can save, do – a total of $19 billion

Average Reserves per Household (Non-DC Reserves and Reserve Funds, 2013)

Growth Profile

Sources: Reserves, 2013, FIR; Population estimates, 2001-2041, Ontario Ministry of Finance
Declining and stable municipalities have minimal development charge reserves because they are not growing.

**Average DC Reserves per Household**

(DC Reserve Funds, 2013)

<table>
<thead>
<tr>
<th>Growth Profile</th>
<th>DC Reserve Funds, 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declining</td>
<td>0</td>
</tr>
<tr>
<td>Stable</td>
<td>50</td>
</tr>
<tr>
<td>Growing</td>
<td>150</td>
</tr>
<tr>
<td>Fast-Growing</td>
<td>450</td>
</tr>
</tbody>
</table>

Sources: Reserves, 2013, FIR; Population estimates, 2001-2041, Ontario Ministry of Finance
Per capita reserves are increasing

Non-DC Reserves per Household (Weighted*, 2013)

*Weighted by proportion of total Ontario reserve balance and total Ontario households
Ten municipalities account for more than half of the reserves held by Ontario municipalities

Reserves (2013, $ million)

<table>
<thead>
<tr>
<th>Reserves</th>
<th>Growth Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>York Region</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Toronto</td>
<td>Growing</td>
</tr>
<tr>
<td>Peel Region</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>Durham Region</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Hamilton</td>
<td>Growing</td>
</tr>
<tr>
<td>Halton Region</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Mississauga</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of Ottawa</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td>City of London</td>
<td>Growing</td>
</tr>
<tr>
<td>City of Brampton</td>
<td>Fast-Growing</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,063</strong></td>
</tr>
</tbody>
</table>

Sources: Reserves, 2013, FIR; Population estimates, 2001-2041, Ontario Ministry of Finance
How much should a municipality be saving?

Depends on:

• The investment needs and timing identified in asset management plans, including desired service levels and acceptable levels of risk

• Preferences with respect to pay-as-you-go capital versus funding from reserves

• The preferred trade-off between reserve funding and debt financing
Reserves per capita tend to rise with infrastructure intensity in urban areas

Data sources: Tangible capital assets and reserves, 2013, FIR
Population, 2013, Ontario Ministry of Finance
However, reserves per capita are not well correlated with infrastructure intensity in small municipalities.

Data sources: Tangible capital assets and reserves, 2013, FIR
Population, 2013, Ontario Ministry of Finance
Key findings – reserve management

• Overall, municipalities have increased their savings, with fast growing municipalities saving the most
• Many municipalities, especially smaller ones, appear to have difficulty setting money aside
• Reserves per capita are not well correlated with infrastructure intensity in small municipalities, but they do tend to be correlated in large urban areas
The Need for Intergenerational Equity
Intergenerational equity

- Good fiscal planning means that the generation of people who benefit from an asset is also the one paying for it

- However, several sources suggest that the children of baby boomers will be the first to have lower lifetime income than their parents

- So… we may need to save more today to be able to pay for future asset management needs
Currently, income gains are going to the older generations

**Average Real Income per Capita**

**Canada, 1976-2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Under 25</th>
<th>25-34</th>
<th>55-64</th>
<th>65 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1981</td>
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<td>1986</td>
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<td>2006</td>
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<tr>
<td>2011</td>
<td></td>
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</tr>
</tbody>
</table>

**Average Annual Change**

- Under 25: -0.3%
- 25-34: 0.1%
- 55-64: 1.2%
- 65 and over: 0.6%

*Source: Calculations based on Statistics Canada’s Survey of Labour Income Dynamics (SLID) – Cansim Table # 2020404*
Family formation is being delayed

Age-Specific Fertility Rates in Ontario

Number of Live Births per 1000 Women

Source: Statistics Canada
An example of an intergenerational equity issue: failure to achieve full cost recovery for water and wastewater

Water and Wastewater Cost Recovery, 2013

Notes:
1. Recovery rate = Revenue / Adjusted Operating Expenses
2. Adjusted operating expense is reported operating expenses with amortization adjusted to reflect replacement cost using Non-Residential Building Construction Price Index (NRBCPI)

Sources: Water and wastewater revenue and expenses, 2013, FIR; NRBCPI, Statistics Canada
Key findings – intergenerational equity

• Sharing the cost burden equitably between generations is a key principle of financial sustainability

• Income gains are going to older generations, and family formation is being delayed

• Tax and rate increases at or below the rate of inflation are shifting the burden of asset management investment to future generations
8. Are We There Yet?
In this section

1. Have Ontario municipalities achieved financial sustainability?

Results by municipal growth profile:

• Declining municipalities
• Stable municipalities
• Growing municipalities
• Fast-growing municipalities
Declining Municipalities
Southern Ontario Municipalities with declining population (2001-2041)
Many Northern Ontario Municipalities have declining populations (2001-2041)
Municipalities with declining populations tend to be smaller.

Average 2015 Population by Census Subdivision and Growth Profile

- Declining
- Stable
- Growing
- Fast-Growing
Declining municipalities are more reliant on transfer payments.

**Transfer payments as Percentage of Total Revenue**
(2009 – 2013 Municipal Average)
Declining municipalities often face the added challenge of managing aging assets.

### Percentage of Tangible Capital Assets Amortized

- **Declining**
  - 2009 Municipal Average: 45%
  - 2013 Municipal Average: 47%
- **Stable**
  - 2009 Municipal Average: 42%
  - 2013 Municipal Average: 45%
- **Growing**
  - 2009 Municipal Average: 42%
  - 2013 Municipal Average: 44%
- **Fast-Growing**
  - 2009 Municipal Average: 39%
  - 2013 Municipal Average: 40%
Almost 90 per cent of declining municipalities have below average fiscal capacity and 60 per cent have above average infrastructure intensity.

Fiscal Capacity vs. Infrastructure Intensity

- **Fortunate Zone (4%)**
- **Ontario Average**
- **Fiscal Strategy is Critical (9%)**
- **Fiscal Strategy is Critical (36%)**
- **Unfortunate Zone (51%)**

Fiscal Capacity ($'000) vs. Infrastructure Intensity ($'000)
Almost one-third of declining municipalities have large amounts of older infrastructure
About 80% of declining municipalities have deteriorating infrastructure

Percentage of Declining Municipalities

- 82% Capital expenditures below adjusted amortization
- 18% Capital expenditures above adjusted amortization

Sources: Population estimates, 2001-2041, Ontario Ministry of Finance; Capital expenditures and amortization, 2013, FIR
Most declining municipalities avoid debt, but some have taken on debt to deal with their infrastructure needs.
Declining municipalities are less able to use reserves for capital investment.

Percentage of Capital Expenditure Funded by Non-DC Reserves (2009-2013 Average)

- Declining: 12%
- Stable: 22%
- Growing: 24%
- Fast-Growing: 23%
Yet they tend to save more

Non-DC Reserves per Household (2013)

- Declining
- Stable
- Growing
- Fast-Growing
- Municipal Average

Municipal Growth Profile
- Single tiers
- Two tiers
Declining municipalities are much more reliant on grants for capital investment

**Funding Sources for Capital Expenditures**

**Municipalities with Declining Population**
- Grants: 31%
- Other: 55%
- Gas Tax: 14%

**All Other Municipalities**
- Grants: 13%
- Other: 79%
- Gas Tax: 8%

Sources: Financing sources, 2013, FIR; Population estimates, 2001-2041, Ontario Ministry of Finance
Key findings

• Municipalities with declining populations are likely to have deteriorating infrastructure

• Many declining municipalities have no debt because they know they cannot afford the carrying costs, even though they have compelling investment needs

• Declining municipalities that cannot afford to save or issue debt are forced to wait for infrastructure grant programs
Stable Municipalities
Most stable municipalities have below average fiscal capacity, but most also have below average infrastructure intensity.
Stable municipalities tend to have below average infrastructure intensity and their infrastructure is noticeably newer than declining municipalities.

**Infrastructure Intensity vs. Investment Needs**

- **Lots of relatively new infrastructure (26%)**
- **Ontario Average**
- **Lots of old infrastructure (11%)**

**Newer infrastructure, but less of it (31%)**

**Old infrastructure, but less of it (32%)**

**Investment Needs**

**Infrastructure Intensity ($ '000)**

- 0
- 20
- 40
- 60
- 80
- 100

**Ontario Average**
The vast majority of stable municipalities have below average municipal debt.
Key findings

• Municipalities with stable populations tend to have below average fiscal capacity and below average infrastructure intensity

• They have newer infrastructure than declining municipalities

• Stable municipalities tend to have lower-than-average debt, and rely relatively more on transfer payments
Growing Municipalities
The tax burden is highest in growing and fast-growing regional municipalities

![Property Tax per Household to Average Household Income (2009-2013 Average)]
The majority of growing municipalities have above average fiscal capacity, and the majority surprisingly have below average infrastructure intensity.
Almost 60% have newer-than-average infrastructure, and about 60% have less infrastructure than average.
Growing municipalities with higher infrastructure intensity are more likely to take on debt.
Key findings

• Growing municipalities are twice as likely as stable municipalities to be in the fortunate zone – high fiscal capacity and low infrastructure intensity

• Close to 60 per cent have newer-than-average infrastructure, about the same as stable municipalities

• Growing municipalities tend to take on more debt as their infrastructure intensity rises
Fast-Growing Municipalities
The municipal capital asset base has been growing at a fairly consistent pace, but fast-growing municipalities have a much larger asset base.

Tangible Capital Assets per Household

- Declining
- Stable
- Growing
- Fast-Growing

Municipal Growth Profile
Fast-growing municipalities put more of their resources into capital investment.

Capital Expenditure to Operating Expenditure (2009-2013 Average)
Fast-growing single-tier municipalities spend relatively more on pay-as-you-go capital.

Percentage of Capital Expenditure Funded by Property Tax (2009-2013 average, excluding reserve draws)
The debt-to-tax ratio is much higher in fast-growing municipalities.

**Debt to Property Tax Ratio (2013)**

- Declining: 64%
- Stable: 63%
- Growing: 62%
- Fast-Growing: 73%
Fast-growing municipalities have strong fiscal capacity

**Fiscal Capacity vs. Infrastructure Intensity**

- **Fortunate Zone (47%)**
- **Ontario Average**
- **Fiscal Strategy is Critical (43%)**
- **Unfortunate Zone (5%)**

**Fiscal Capacity (\$’000)**
- 0
- 100
- 200
- 300
- 400
- 500
- 600

**Infrastructure Intensity (\$’000)**
- 0
- 20
- 40
- 60
- 80

**Ontario Average**
Most have relatively new infrastructure
Debt tends to rise with infrastructure intensity for fast-growing municipalities.
Fast-growing municipalities use more debt in financing capital assets

**Percentage of Capital Expenditure Financed by Debt (2009-2013 Average)**
Development charges are an important funding source in growing and fast-growing municipalities.

**Percentage of Capital Expenditure Funded by Development Charges (2009 - 2013 Average)**
But fast-growing municipalities face three great challenges

• A potential disconnect between actual growth and Growth Plan targets

• Heavy reliance on development charges to fund infrastructure

• The future cost of asset management for a large and aging asset base
Infrastructure is being built for the Growth Plan population

Growth Plan

Official Plans and Master Plans

Capital Plan

Mandates growth targets

Official Plans must conform to the Growth Plan
Infrastructure master plans fall in line

Implements the Master Plans
But some have been growing more slowly than expected

Annual Population Growth (000’s)

- **Toronto**: Blue bar - 2011 to 2016 Growth Plan forecast, Green bar - 2011 to 2015 Actual
- **York**: Blue bar - 2011 to 2016 Growth Plan forecast, Green bar - 2011 to 2015 Actual
- **Peel**: Blue bar - 2011 to 2016 Growth Plan forecast, Green bar - 2011 to 2015 Actual
- **Durham**: Blue bar - 2011 to 2016 Growth Plan forecast, Green bar - 2011 to 2015 Actual
- **Halton**: Blue bar - 2011 to 2016 Growth Plan forecast, Green bar - 2011 to 2015 Actual
People of prime working age are less keen to leave the Toronto core.

Source: Statistics Canada
Slower than expected growth means lower than expected development charges

DC Revenue Forecast vs. DC Collections (2012-2014)

- York
- Peel
- Halton
- Durham
- Simcoe

Average Expected DC Revenue
Average DC Collections

$ million
If development charges are below expectations, that means more debt and more risk

• There is a risk of temporary (or permanently) stranded infrastructure and/or stranded debt

• Or it means that capital spending will need to be reduced, which would put capital plans out of step with Growth Plan population targets
Sixty percent of the growing municipalities are not investing enough in asset management.

Percentage of Growing and Fast Growing Municipalities

- 60%: Capital expenditures below adjusted amortization
- 40%: Capital expenditures above adjusted amortization

Sources: Population estimates, 2001-2041, Ontario Ministry of Finance; Capital expenditures and amortization, 2013, FIR
New revenue sources will ultimately be needed to meet future infrastructure needs

- The operating cost of large amounts of new infrastructure and rising asset management costs cannot be sustained with an appetite for property tax increase in the 2-3% per year range
- Development charge does not cover the cost of infrastructure needed for growth, creating a significant tax levy pressure
Key findings

• Fast-growing municipalities have financial sustainability challenges, but different ones from other municipalities

• They face a risk of stranded infrastructure and/or stranded debt

• They also face looming asset management challenges, especially those with high infrastructure intensity

• Substantial new revenue sources ultimately will be needed for fast-growing municipalities to achieve long-term financial sustainability
9. Achieving Financial Sustainability:

Developing a Fiscal Strategy
Achieving financial sustainability

1. Preparing and adopting a fiscal strategy
2. Preparing asset management plans
3. Preparing capital plans that cover the next 10 years at a minimum
Fiscal strategy, fiscal plan, long-term financial plan and the like are conceptually similar terms.
A good fiscal strategy has a number of elements

- A long-term capital plan (ten years or more)
- An asset management plan
- A comprehensive full funding plan for capital
- Recognition of the operating cost of capital in a multi-year budget
- Full cost recovery for water and wastewater
- A reserve management plan (contributions and draws)
...continued

- A debt management plan that interacts appropriately with the reserve management plan
- Adequate contributions to pay-as-you-go/state-of-good repair capital (separate from life cycle and replacement costs)
- A plan for the use of capital transfers and subsidies from other levels of government (part of the funding plan for capital)
- A forecast of development charge revenue, where appropriate (part of the funding plan for capital)
Indicators can be helpful in developing a fiscal strategy

- Growth Management Index (GMI)
- Asset Sustainability Ratio (ASR)
- Infrastructure Backlog Ratio
- Projected Real Cost of Capital per Capita
One way to align capital investments with population growth is to use a Growth Management Index (GMI)

\[
\text{GMI} = \frac{\text{Growth in Asset Base} \, (\%) }{\text{Population Growth} \, (\%)}
\]

Where asset base is the estimated replacement value of all tangible capital assets

- A GMI of 1 indicates that growth in the asset base is proportional to growth in the population base
- A GMI over/under 1 for a prolonged period would indicate that the asset base is increasing or decreasing on a per capita basis
- While the index will fluctuate over time, it is reasonable to expect a long-term average close to 1
- If a municipality decides either to increase or decrease service levels, the index may be above or below one for a prolonged period
An infrastructure backlog ratio can inform capital prioritization

**Indicator:** Infrastructure Backlog Ratio

\[
\text{Estimated cost to bring assets to a satisfactory condition} = \frac{\text{Estimated cost to bring assets to a satisfactory condition}}{\text{Total Infrastructure Assets}}
\]

*Where total infrastructure assets is denoted by the estimated replacement value of infrastructure assets*

- This ratio provides an estimate of which asset classes have had a significant amount of deferred maintenance. Those that pose health and safety risks should be given greater priority
Intergenerational equity means capital costs accrue to those who use the assets

**Indicator:** Projected real cost of capital per capita

\[
\text{Projected real cost of capital per capita} = \frac{\text{Annual Principal and Interest} + \text{Annual Reserve Contributions}}{\text{Projected Population}}
\]

- Residents who directly benefit from the assets should pay for them
- If the real cost of capital per capita is projected to fluctuate over time, it should be justified by changing service levels
Contributions to reserves should be based on asset replacement values and useful lives

**Indicator:** Asset Sustainability Ratio (ASR)

\[
\text{ASR} = \frac{\text{Capital Contributions to Asset Renewal}}{\text{Asset Consumption Costs}}
\]

Where:

- **Capital contributions to asset renewal** = Contributions to replacement reserves + principal debt payments* + interest earned*
- **Asset consumption costs** = Replacement value of assets / Expected life of assets

- Annual contributions to replacement reserves should not fluctuate significantly year over year
- The ASR should average above 1 over the long run and trends in the ratio should be well-understood

*For the purpose of asset renewal. This may vary by municipality
Municipal policies should have an eye towards financial sustainability

- Debt policies, where applicable, should consider items such as the debt profile, including peak debt as well as the desired credit rating for the municipality
- Reserve policies should include contribution levels required to meet reserve targets
- The capital plan should take a long-term view (10 years at a minimum) and consideration should be given to lifecycle costs and the potential impact to the operating budget
10. Conclusions
Conclusions

I. Financial sustainability is about the stewardship of the long-term

II. The path to financial sustainability is highly dependent on a municipality's rate of growth

III. A useful conceptual framework involves:
   - Grouping municipalities according to their rate of population growth (declining, stable, growing, fast-growing)
   - Fiscal capacity versus infrastructure intensity
   - Infrastructure intensity versus investment needs

IV. To achieve financial sustainability, most municipalities will need a fiscal strategy that articulates the long-term relationships between the capital plan, reserve management and debt management

V. Intergenerational equity is a critical part of real financial sustainability
Conclusions

V. Fiscal capacity, infrastructure intensity and investment needs all have a major impact on how easy or difficult it is to achieve financial sustainability

VI. Asset management is simultaneously one of the greatest challenges to financial sustainability and essential to achieving it

VII. The time to act is now – while financial sustainability is within reach

VIII. The path to financial sustainability will look different in different places, which means that the provincial and federal governments will need differentiated approaches to financial support for the municipal sector