

MIND THE GAP

Finding the Money to Upgrade
Canada's Aging Public Infrastructure



May 2004

 **Bank Financial Group**

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Executive Summary

A quarter century of under-investment has left Canada's public infrastructure – which includes transit systems, roads, highways, bridges, water and water works, educational facilities, and hospitals – in a weakened state. Yet, after four to five years of renewed government capital spending, momentum to address this problem is already losing steam. Finance ministers are currently facing a tightening fiscal noose, as revealed in the 2004 round of budgets. And, with no end in sight to the continual upward pressure on health care costs, competition for scarce public resources is unlikely to let up in the years ahead. In such an environment, infrastructure tends to lose out to other areas of government funding. Meanwhile, Canada's infrastructure pothole continues to deepen.

Although the negative impacts of inadequate public infrastructure are only starting to mount – and become visible to Canadians on a day-to-day basis – we believe that ongoing neglect of the nation's capital stock presents one of the greatest risks to the country's overall quality of life. With the state of a region's infrastructure weighing more heavily on location decisions of highly-mobile businesses and individuals, a deteriorating capital stock will increasingly cut into gains in productivity and living standards. The economy is only part of the picture, however. Without an excellent system of public assets, it will be become difficult to ensure that the health, safety and security of the region's residents will be protected.

How did Canada fall behind?

Much of Canada's existing public infrastructure was put in place in the 1950s, 1960s and 1970s. And, given the fact that the useful life of most of the country's physical structures only extends up to four to five decades, a significant share of assets would be already ripe for replacement or rapidly approaching the end of their cycle. However, there have been a number of developments on both the supply and demand sides of the equation that have acted to accelerate the amount of wear and tear on many

public assets over the past few decades:

First, apart from brief periods of recession in the early 1980s and early 1990s, the Canadian economy has grown steadily, placing added strains on the nation's public infrastructure. This has been no more apparent than in the largest urban centres, which have accounted for the bulk of the gains in economic activity, new immigrants, and overall population in recent decades.

Second, the growth in supply of infrastructure was greatly curtailed in the 1980s and the first half of the 1990s when the federal and provincial governments ran into deficit problems. Not only were cuts to government capital spending more politically palatable than those made to operations, but the "big ticket" nature of large infrastructure projects meant that the immediate savings that could be realized from reductions on that side were substantial.

Third, notwithstanding the fiscal woes of the federal and provincial governments, the largest obstacle in the way of satisfying increasing infrastructure demands has been at the local level. Notably, Canadian local governments were asked to take on added responsibilities at the same time as municipal grants were being scaled back. Furthermore, owing to restrictive provincial legislation, municipalities have remained heavily reliant on funding these growing needs through the use of the property tax – a revenue instrument that does not tend to grow over time at the same pace as the cost of service delivery.

Fourth, a number of ill-thought-out policy approaches have contributed to the public infrastructure challenge. For one, in many instances, a less-than-stellar job has been done maintaining and rehabilitating public assets on schedule, which has acted to shorten the useful life of infrastructure. What's more, a number of government policies – including setting the level of property taxes, development charges and user fees below the cost of delivering a service – have fuelled urban sprawl, and hence raised the average cost of infrastructure provision.

As much as \$125 billion investment shortfall

The new amounts injected into infrastructure by all levels of government over the past few years has been welcome news, but have only managed to put a dent in a problem that has accumulated over a period of a few decades. This raises the question of how much work is still left to be done to clear away the backlog of deferred maintenance, rehabilitation and replacement of public assets – the so-called “infrastructure gap”. Another way of looking at the public infrastructure gap is the accumulated annual deficit between the amount *needed* to properly maintain or replace existing public assets as well as to support growth with the amount actually spent.

Measuring the size of the gap is certainly no easy task, since the meanings placed on “public infrastructure” and “needs” will range across individuals. Still, that has not stopped Canadian researchers from taking a stab at it. For Canada as a whole, estimates of the gap range from a low of about \$50 billion to a high of \$125 billion. Moreover, sector-specific estimates show that infrastructure deficiencies are widespread across areas of public service and that the problem is more likely than not to rise further down the road.

Finding the Money

While the exact cost required to bring Canada’s infrastructure up to scratch and to support future growth is hotly debated, one thing is for sure – the figure exceeds what most governments could viably foot under the status-quo. As such, in order to combat the enormous infrastructure challenge, governments will need to open the door more widely to approaches that will both relieve pressures on the public treasury and maintain the high quality of public services. We recommend a four-part strategy:

Strategy 1 – further tilt towards user pay model needed

While Canada stands in the middle of the pack internationally in terms of tax competitiveness, we rely more heavily on raising government revenues through income taxes at the federal and provincial levels and property taxes at the local level than most industrialized countries. On the flip side, Canada’s reliance on consumption-based taxes and levies is relatively low compared to our international competitors other than Mexico and the United States.

Although there is a good case to be made that income and property taxes must remain a fundamental part of the funding equation in Canada, we support a re-balancing of

the revenue mix toward greater use of consumption-based levies, such as user fees. Often in Canada, there is little effort put to aligning the price of services toward the full marginal cost of delivery (including capital replacement and environmental impacts). Although consumption-based levies are the most efficient revenue generator, they are also regressive. Nonetheless, there is significant potential to increase their usage in areas where there are no overriding equity concerns and where consumption can be accurately measured. Water, sewers, electricity and garbage collection all satisfy this requirement. Above all – in stark contrast to trends sweeping the globe – Canada has taken little advantage of utilizing tolls for the purposes of funding roads, highways and bridges.

Strategy 2 – Give cities the right equipment for the job

The challenges facing municipalities on the infrastructure front have been exacerbated by inefficient use of their existing – albeit limited – tools and powers. Reforming property tax systems, pricing services more in line with the cost of service provision, better application of land-planning strategies to reduce sprawl, stronger coordination of services across municipalities in order to enjoy economies of scale, and improved management of the billions of dollars of public assets are all on the “to do” list. And, perhaps most importantly, many municipalities – particularly smaller ones – have not made optimal use of debt financing, with many opting to fund infrastructure almost exclusively from non-borrowed sources. Maintaining a very low debt-load may be a laudable goal, but if it comes at a cost of foregoing or delaying capital projects because non-debt sources of financing aren’t available, then a low-debt strategy is counter-productive. Besides, a healthy level of borrowing passes the test of equity, since benefits, which are normally consumed over the life of several decades, are matched with the costs.

In any event, better use of debt and other funding vehicles currently at the disposal of municipalities will only go so far in providing them with adequate resources to effectively take on their challenges. As we argued in the April 2002 report *A Choice Between Investing in Canada’s Cities or Disinvesting in Canada’s Future*, municipalities require increased administrative flexibility and access to additional sources of taxation above and beyond the property tax. For example, a change in provincial legislation that would offer local governments the power to levy a gasoline tax over a commuter area on the same base as the province – and where the municipality would set

the rate – passes the tests of administrative efficiency and accountability.

South of the border, municipalities not only have access to a larger number of tax sources, but a number of other types of innovative instruments that support debt-financing and the re-development of poverty-stricken and/or contaminated areas. These vehicles – which include tax-exempt bonds, revenue bonds, tax-increment financing, infrastructure banks and enterprise zones – are reviewed in Part II of the report. In short, some of these arrangements deserve far more consideration than others do, while none represent a magic bullet. But, apart from tax-exempt bonds – which should be left on the shelf given their inherent flaws – these approaches to financing infrastructure may prove useful on a case by case basis. Thus, Canadian municipal governments should at least be given the authority to decide when their specific situations warrant them.

Strategy 3 – bring the private sector on board

With the demand for public infrastructure outstripping governments' ability to finance and maintain capital projects, there is an increasing need to bring the private sector on board in assisting in the country's infrastructure challenge. Partnering with the private sector – and in particular, contracting out maintenance services – is not a new concept in Canada. However, commissioning a private-sector group to design, build, finance and operate public infrastructure is in its relative infancy in this country, especially when stacked up against the United Kingdom, continental Europe and Australia. It is this country's relative inexperience with P3s and the resulting lack of public understanding of them that remains the number one roadblock of more widespread use of this model.

There are two common misperceptions about P3s that are often bandied about, and which have held back their growth in popularity:

- i) *P3s are little different from privatization.* P3s and privatization are two distinct concepts. Privatization refers to the outright selling of a public asset or service to the private sector. In contrast, in a P3 arrangement, the government retains ownership of the asset and continues to establish the ground rules. Thus, there is little loss of public control.
- ii) *P3s are more expensive than traditional public procurement.* This argument stems from the fact that governments can borrow at a cheaper rate and that the pri-

mate sector must be appropriately compensated for taking on the risk of a project. The concerns are valid, but they over-simplify the issue. Few analyses take into account the opportunity cost involved – such as higher taxes, debt, and potentially missed investment opportunities – when governments tie up significant resources to a particular cause. But, more importantly, it is not cost, but *net benefit*, which is the most relevant benchmark in considering the way to go. And, on this count, P3s could provide significant bang for the buck by allowing projects to be carried out more quickly and with greater overall benefits to the taxpayer.

Still, we acknowledge that P3s can be a risky game to the taxpayer if not executed correctly. As is the case with any business relationship, there must be synergies in working closely together. And, to the extent that the private and public sector parties have different cultures and attitudes, there may be leakage in the potential rewards of a P3. Above all, for P3s to provide value to taxpayers, the risks and rewards have to be properly aligned. Unfortunately, the public sector has a tendency to underweight or improperly evaluate risk, which can result in excessive private returns.

Canada's difficulties in allowing P3s to get off the ground is in good part due to a piece-meal approach on government policy, with little federal involvement and provincial practices that vary across jurisdictions. In fact, a major reason why the U.K. has achieved success on the P3 front – and why other countries around the world have followed its lead – is that the central government took action early to create a more competitive market and bolster private and public confidence. In particular:

- The U.K. government established a standardized process to assist public sector employees in comparing risks and returns across all public and private sector options.
- The U.K. National Audit Office was given a mandate to review and evaluate the performance of P3s. In fact, many of its recommendations have been incorporated into the government's P3 legislation.
- In order to help public-sector employees identify opportunities for P3s and to help bridge the gap in expertise between the public and private sectors, the central government established Partnerships UK.

In addition to changing the legislative framework to make the ground in Canada more fertile for the P3 market to develop, governments should concentrate their efforts

in areas that more easily accommodate P3s. Projects that fall under this umbrella tend to be large in scale, capital-intensive, have an identifiable revenue stream (i.e., user fee), and have measurable results – all of which would raise commercial viability and make it relatively straightforward to assess the potential risks and rewards. Roads, bridges, highways and water and wastewater facilities could all be considered good candidates in this regard.

Strategy 4 – a bigger role by the federal government

Over the past decade, the federal government has implemented a number of policies in the infrastructure domain. Chief among them is the roughly \$12 billion in total set aside in a string of infrastructure programs, the bulk of which was directed at municipal capital projects. And, while some observers have voiced disappointment over the fact that the amount of federal infrastructure funding has slipped in annual average terms over the past two federal budgets, the Prime Minister promised last month that a share of the federal gasoline excise tax or “equivalent” would be forthcoming to municipalities by year-end as a further downpayment toward “A New Deal for Communities.” This latest announcement has kept hopes alive that infrastructure will soon make it back on the government’s list of top priorities.

We argue that given the enormity of this nation-wide challenge, infrastructure needs to become a centrepiece in the federal government’s agenda. The good news is that such a focus would not require much of a strategic shift for the federal government. Consider the major priorities laid out in the federal government’s 2004 budget – health, learning (i.e., post-secondary education and innovation), communities, and Canada’s relationship with the United States and position in the world. The need to upgrade infrastructure – from health facilities, to sewers to educational institutions and border crossings – spans all of these areas.

a) Address issues in federal jurisdiction as a first step

The federal government can go a long way in strengthening infrastructure by getting its own house in order. Although infrastructure largely falls under the jurisdiction of the local and provincial governments, greater federal attention heeded to issues in its own backyard – such as research, innovation, immigration and social security – would play a major role in boosting the number of skilled graduates, lifting prosperity and ultimately relieving fiscal pressures in the nation’s municipalities. There is un-

finished work in the following areas of federal jurisdiction:

- Both the nation’s standard of living and security are closely tied to a smooth-running Canada-U.S. border, which falls under federal jurisdiction. Yet, the infrastructure at border crossings is inadequate, as evidenced by long queues and delays.
- A better job needs to be done to match immigrant settlement funds to the areas where the costs are being incurred.
- The large increase in funding for research and assistance for students in recent federal budgets has been positive, but there remains a patchwork of programs across the federal and provincial levels that should be better integrated.
- Finally, while many of the government’s enrichments of social programs in recent years have been paved with good intentions, they have also come with some unfortunate side-effects. Notably, in light of the rapid rate at which benefits are taxed back as income rises, marginal personal income tax rates often exceed 60 per cent for low and modest income individuals. This needs to be addressed.

b) Improve the design of federal infrastructure programs

The Prime Minister’s recent pledge on the gasoline tax or “equivalent” suggests that more direct assistance is in the pipeline for municipalities, although the specific form of how the money will be provided remains uncertain. As we discuss in Part IV of the study, we are not in support of a gasoline tax transfer as a vehicle to fund infrastructure, and thus, were pleased to see that he has left the door open to other alternatives. Regardless, any additional assistance needs to be spent as efficiently as possible. In order to achieve this, new funding should satisfy two major criteria:

- *Minimize interference in local operational issues* – it is important that the federal government not follow a one-size-fits all approach, nor allow its priorities to trump local priorities in allocating funding.
- *Don’t substitute taxpayer funds in cases where user-pay works*. Federal funding should not be used to in effect subsidize projects that are good candidates for full-cost pricing.

Happily, the federal department that administers infra-

structure funds – Infrastructure Canada – appears to be doing a better job adhering to these requirements recently. As such, we believe that it would be more efficient for the federal government to take action to strengthen the current process rather than set up a new vehicle, such as one to administer the sharing of the gasoline excise tax. The federal government should consider the following changes to the way its manages infrastructure programs:

- *Set up an advisory board* – although the federal government would still call the ultimate shots for the sake of accountability, an independent board should be established to provide advice to the government on what type of infrastructure should be financed and how. We envision a board similar to that of the National Roundtable of the Environment and Economy (NRTEE) that would play a lead role in setting standards and principles on which infrastructure should be cost-recovered, which require general tax-financed funding and which are good candidates for private-sector involvement. In order to ensure local priorities are heard the board should have a strong local and provincial government representation. The private sector should also have a seat at the table, so that the governments can better capitalize on opportunities for P3s.
- *Education should be made eligible* – over the past few years, infrastructure funds have largely focused on municipal transportation and environmental projects, which we support. However, one area that we believe should be pushed up in the pecking order is the all-important area of education. Put simply, inadequate capacity and huge deferred maintenance will threaten the ability to educate the next generation of Canadians, thus presenting a major risk to Canada’s ability to compete down the road.
- *Create an infrastructure bank with private-sector involvement* – Federal infrastructure assistance could extend to a newly-established vehicle that would be aimed at helping municipalities to finance projects similar to those commonly used in the United States. This revolving lending facility could be created by a federal grant, and used to leverage contributions from the provincial government and the private sector. Advice on lending

decisions could be made by the same public-private advisory board as that above to ensure the money is well spent.

c) Increase role in combating the most severe urban challenges

Many of Canada’s larger urban areas face problems that are so enormous in scope that local governments cannot handle them alone. Affordable housing and brownfield sites are two shining examples of large impediments that are driven largely by market failure. As such, while both areas are eligible for funding under existing infrastructure programs, the severity of these problems indicates that not only additional federal financial assistance is required, but also its creativity and leadership. The good news is that the federal government has begun to raise its profile in both areas over the past few years, with the establishment of the federal-provincial Affordable Housing Framework and the National Roundtable on the Environment and Economy. We hope efforts on both of these fronts continue to be well supported.

The federal government could also spearhead the development of tripartite agreements – or formal deals between all levels of government that are designed to accomplish a specific set of goals. In fact, there have been precedents in Canada for this type of arrangement in Winnipeg and Vancouver. The federal government – along with its provincial and local counterparts – can apply the lessons learned from these experiences to improve the usefulness of the tripartite model in the future.

Come together (right now) over infrastructure

Closing the infrastructure gap will require public- and private-sector participation, a higher degree of cooperation across the various actors involved, and the federal government to step into the role as quarterback. But, above all, success in repairing Canada’s growing infrastructure pothole will require an open-mindedness among Canadians to support less-traditional and bolder ways of doing business.

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TD Economics

Special Report

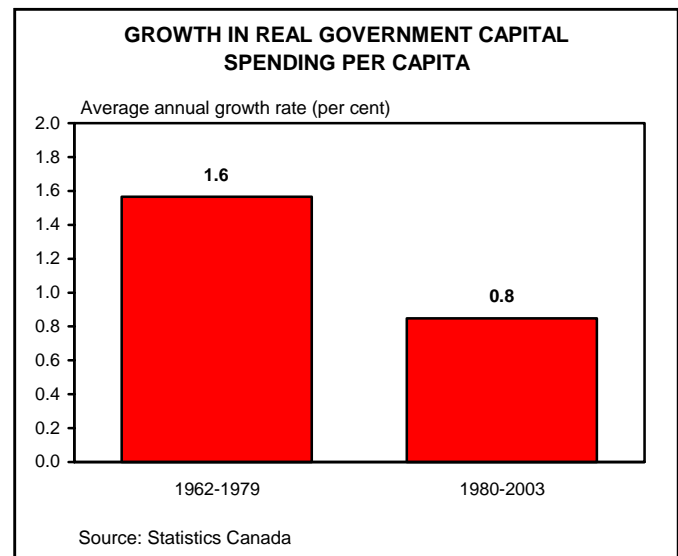
May 20, 2004

MIND THE GAP

Finding the Money to Upgrade Canada's Aging Public Infrastructure

After a quarter century of under-investment, Canada's system of public infrastructure is in need of major repair and upgrade. But, while this fact has been well recognized by policymakers across the country over the past few years, and reflected in a corresponding rebound in capital outlays since the late 1990s, momentum to take action already appears to be losing muscle. Notably, after a few better years on the fiscal front, governments are once again facing a tightening financial noose. And, in this competitive environment, infrastructure almost certainly loses out to other areas of government funding. Meanwhile, Canada's infrastructure pothole continues to deepen.

The jury remains out on whether the current setback will prove to be temporary or something longer lasting. On the plus side, tough measures to reduce deficits taken this year by provincial and territorial governments – who are important players in the provision of infrastructure – will certainly help to enhance their medium-term fiscal flexibility. At the same time, however, there is a real risk that Canada will ultimately fall further behind in address-



ing its infrastructure challenges. A 20-year track record on deferring and delaying capital investment is one good cause for concern. Even more importantly, with no end in sight to the continual upward pressure on health-care costs, the battle for scarce public resources is unlikely to let up.

Although the negative impacts of a deficient infrastructure are only starting to mount – and become visible to Canadians on a day-to-day basis – we believe that an ongoing neglect of the nation's stock of public capital represents one of the greatest risks to the country's overall quality of life. Notably, with the state of a region's infrastructure weighing more heavily on location decisions of highly-mobile businesses and individuals, a deteriorating capital stock will increasingly cut into gains in productivity and living standards. But, the potential impacts do not stop

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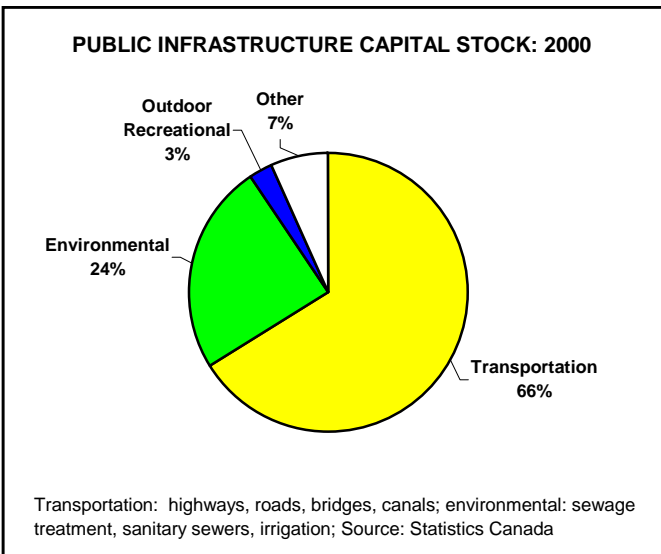
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there. Without an excellent system of public assets such as transit systems, water and sewer systems and hospitals, it will become more difficult to ensure that the health, safety, and security of the region’s residents will be protected.

While the cost required to bring Canada’s infrastructure up to scratch and to support future growth will be hotly debated, one thing is for sure – the figure exceeds what most governments could viably foot under the status-quo. As such, a shift in the overall approach to infrastructure provision will be necessary, with strategies more heavily grounded in raising efficiency, equity and accountability within the system. As we spell out in Part II of this report, not only will this entail an increased tilt towards a user-pay model – where appropriate – but a better match between revenue-raising flexibility and responsibilities at the municipal level of government. Lastly, while much of the infrastructure provision falls on the plates of the local and provincial governments, we see the need for both the private sector and federal government to take on increased roles.

What do we mean by public infrastructure?

There is no widely accepted definition of what constitutes “public infrastructure”. For the purposes of this study, we are focused not on all physical structures but only the subset that *delivers collective benefits to society*. This includes public transit and transportation facilities, wastewater and water works, educational facilities, hospitals, recreation, electric power and shelter housing. Some researchers fail to distinguish between these two notions.



STRUCTURE OF OVERALL PUBLIC INVESTMENT: PUBLIC ADMINISTRATION				
	\$ Billions		1961\$ Billions	
	1961	2002	1961	2002
Total	1.3	17.7	1.3	2.8
Building Construction	0.3	3.4	0.3	0.5
Engineering Construction	0.9	8.6	0.9	1.4
Machinery & Equipment	0.1	5.7	0.1	0.9

Source: Statistics Canada

Furthermore, some extend their definition of infrastructure to include, for example, human and software capital or other non-tangible assets, which we do not.

Governments hold more than \$150 billion in public infrastructure

Estimates of the value of infrastructure in Canada provide a good sense as to the enormous cost involved in replacing public assets. In its most recent survey, Statistics Canada pegs the value of the nation’s total public capital stock at \$227.5 billion, or about 20 per cent of GDP. Of that amount, \$157.3 billion is what the government statistical agency deems to be *public infrastructure*.¹ Among the broad categories of public infrastructure, transportation facilities make up the largest share of the total, at 60 per cent, while environmental infrastructure, which includes sewers, sewage treatment and water supply, stands at about 30 per cent. Other assets – which range widely from outdoor recreational facilities to historic sites – comprise the remaining 10 per cent.

Since infrastructure is not defined in any one way, it is open to debate whether Statistic Canada’s notion of infrastructure is the “right” one. For one, the measure only includes engineering works of public administrations, which means that buildings, land and assets of government enterprises are all excluded from the count. Hence, the \$157-billion figure can be considered a conservative one. Although other nation-wide estimates of the value of public infrastructure are hard to track down, the Ontario government – applying a much broader definition – has estimated the replacement worth of public assets in the province to be \$240 billion, which would imply a national value in the \$500-\$600 billion range.²

Local governments number one infrastructure provider

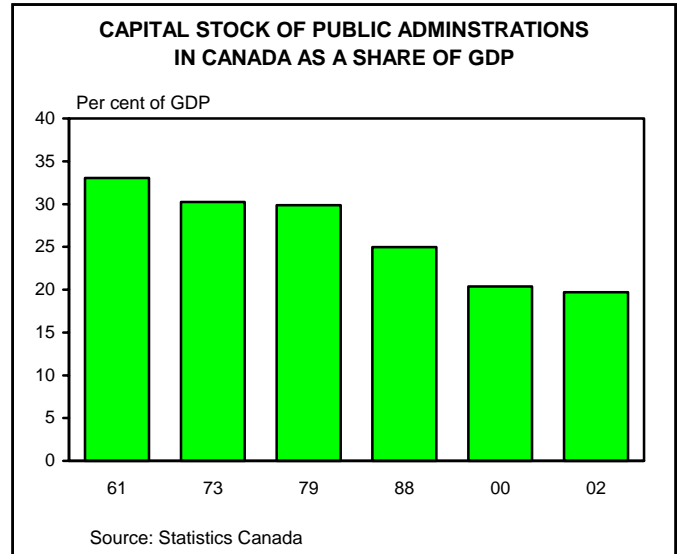
Regardless, the Statistics Canada figures are useful. Not

only does their definition encompass most of the assets that we're interested in, but the data are rich in detail. Sifting through the figures, a number of interesting facts leap off the page:

- Local governments are the largest stakeholder on the public-infrastructure landscape, holding more than half of the total assets, followed by the provinces and territories, at two-fifths. Although the federal government holds 17 per cent of all public capital stock, this largely reflects a major stake in buildings and machinery and equipment. In contrast, the federal share of public infrastructure is about 7 per cent.
- At both the provincial and local levels, transportation infrastructure leads the way in terms of importance. More specifically, provinces have responsibility for highways, while the local governments have jurisdiction over local streets and rural roads, which represent about 90 per cent of Canada's 1.4-million-kilometre combined road and highway network.³

Moreover, a look back over history also provides some eye-opening results:

- In aggregate, the growth in value of public infrastructure assets in Canada has been significantly lagging behind the economy as a whole. In fact, after rising to 23 per cent in the mid-1970s, public infrastructure as a share of GDP slumped to 16 per cent by 2001.
- Nor has public investment kept up with private investment. Over the past three decades, the ratio of public infrastructure capital has slipped in Canada relative to the overall capital stock from 8.1 per cent to 5.5 per

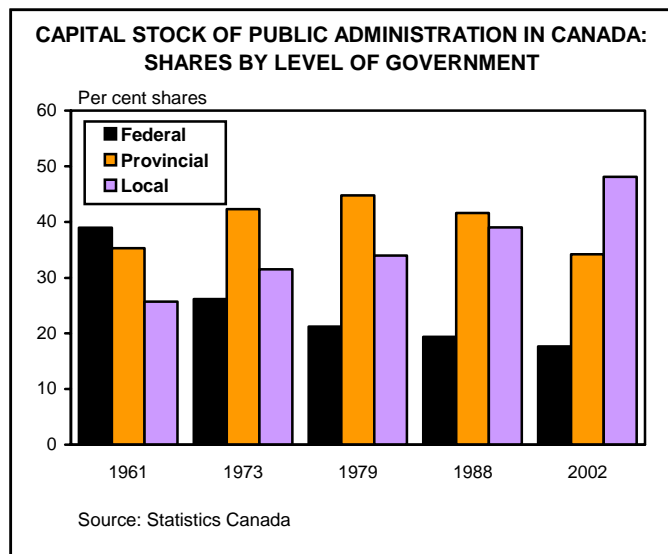


cent in 2001, while business sector capital stock has remained steady at 38 per cent.

- At a mere 0.6 per cent in the 1990s, the rate of productivity growth of public infrastructure capital was roughly half the pace recorded in both the 1970s and 1980s.
- Across jurisdictions, local governments have become relatively more important in the provision of infrastructure. Notably, local infrastructure as a share of the total has increased from 35 per cent to 52 per cent over the past three decades, while the federal and provincial shares have dropped by 8 and 9 percentage points, respectively. In fact, local governments are the only jurisdiction to have held their infrastructure shares of both GDP and private investment capital relatively steady since the early 1970s.

How big is the infrastructure gap?

No matter how you slice it, the stock of public infrastructure capital has been in a state of decline over the past few decades. It is not that Canadian governments have been reducing the level of cash outlays for public infrastructure. In fact, total annual public capital spending, which includes amounts earmarked for buildings and machinery and equipment, has been ramped up from \$1.3 billion in the early 1960s to \$18 billion in 2002 (\$3 billion in 1961\$), while outlays for civil engineering works have risen over the same period from about \$1 billion per year in the early 1960s to about \$9 billion (\$1.4 billion in 1961\$). It is that these amounts have not been enough to



offset the effects of wear and tear as well as growth in the economy and population.

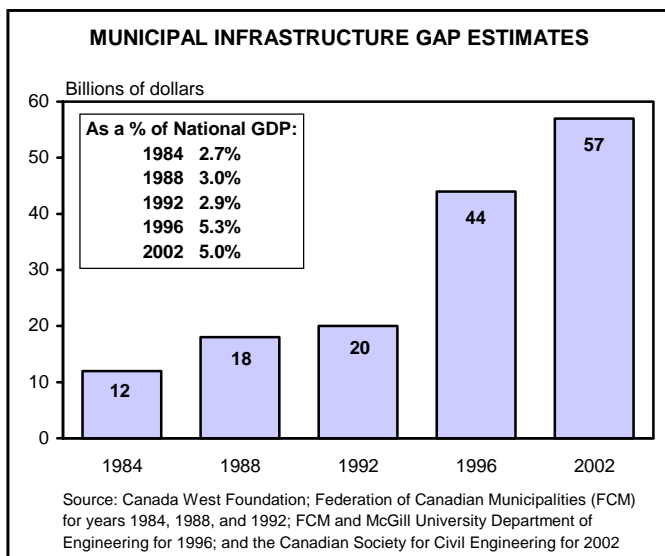
Less clear, however, is the extent of the shortfall – or so-called “infrastructure gap” – which represents the backlog of deferred maintenance, rehabilitation and replacement of public assets. Another way of looking at the infrastructure gap is the accumulated annual deficit between the amount *needed* to properly maintain or replace existing infrastructure as well as to support growth with the amount actually spent.⁴

Over the past few years, there have been a number of attempts at estimating the size of the infrastructure gap in Canada. When reviewing these estimates, however, certain caveats should be kept in mind. For one, attaching an amount to “needs” is a highly subjective exercise. Yet, most are developed mechanically – either through surveys or through historical spending behaviour – without incorporating issues such as technological innovation and changing government regulations and standards, which would ultimately alter the needed investments substantially. Moreover, the estimates of needs do not factor in the tradeoffs involved, such as higher taxes, user fees or alternative use of the money. Another word of caution is that some of these estimates are sector-specific, while others consider the gap at the municipal level only. Lastly, some look in the rear-view mirror, while others include estimates of future needs. As such, it is hardly surprising that estimates are all over the map:

- The most widely cited estimate of the infrastructure gap has come from the surveys undertaken by the Federation of Canadian Municipalities (FCM) in conjunc-

tion with the Canadian Society of Civil Engineering. Since 1984, surveys have revealed a gap that has increased from \$12 billion in 1984 to \$57 billion in 2002. Moreover, the Society forecasts an increase in the accumulated shortfall to \$110 billion by 2027.⁵

- In an October 2003 report, the Canada West Foundation used a number of methodologies to estimate the total gap in Canada at \$44 billion-\$125 billion.⁶
- In 2003, Saeed Mirza and Murtaza Haider of McGill University estimated the existing infrastructure gap of all levels of government at \$125 billion – a figure they say could reach as high as \$400 billion by 2020.⁷
- A study sponsored by CMHC and the Canadian Water and Wastewater Association revealed that the gap for water and sewer would grow to \$88.5 billion by 2012.⁸
- In 1997, the Council of Ministers Responsible for Transportation and Highway Safety estimated that the infrastructure gap for Canada’s highways was \$17.4 billion.⁹
- The Public Policy Forum estimated a backlog of deferred maintenance at \$83.1 billion across highways, colleges and universities, and defense.¹⁰
- The Canadian Association of University Business Officers estimated that the accumulated deferred maintenance incurred nationally by universities amounted to approximately \$3.6 billion in fiscal 2000-01. When all three types of capital costs (accumulated deferred maintenance, ongoing maintenance and expansion of physical plant) are considered, universities will likely face, over the next 10 years, additional annual expenditures ranging between \$1.4 billion and \$1.9 billion to accommodate projected growth.¹¹
- The Canadian Urban Transit Association estimates that the infrastructure requirements for the country’s conventional urban transit systems is around \$13.6 billion.¹²
- The Conference Board of Canada estimates that the infrastructure gap for sewers, aqueducts, and road systems for Quebec municipalities is between \$15.0 billion and \$17.9 billion.¹³
- In a recent speech, Ontario’s Minister of Public Infrastructure estimated the province’s infrastructure gap at \$100 billion.¹⁴
- If the value of public infrastructure had stayed at 23 per cent of GDP instead of falling to 16 per cent, \$85 billion more in capital spending would have been required.



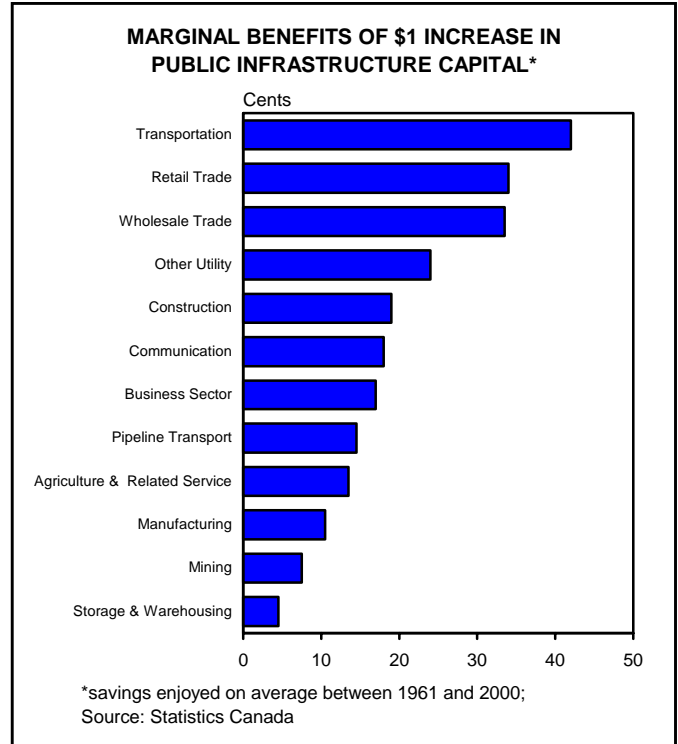
- If the value of public infrastructure had remained at 8.1 per cent of total capital stock instead of declining to 5.5 per cent, \$65 billion more in capital spending would have been needed.

In sum, despite the challenges in measuring the infrastructure gap, the consensus is that the gap is massive – as high as \$125 billion or 6-10 times annual investment flows – broadly-based across sectors and levels of government, and likely to head even higher down the road.

What is the economic cost of the gap?

Although Canada continues to be ranked in the middle of the pack in international surveys, the deficiencies on the infrastructure front are clearly starting to take a toll on the nation’s economy. For example, inadequate highways, border infrastructure and public transit have led to increased congestion and considerable lost time to the private sector. In the Greater Toronto Area alone, the annual loss from congestion and delays of goods shipping has been estimated at \$2 billion. But, in contrast to the forecasts of the infrastructure gap that have flowed out steadily in recent years, there are no projections on what Canada’s infrastructure gap means in terms of total foregone economic activity.

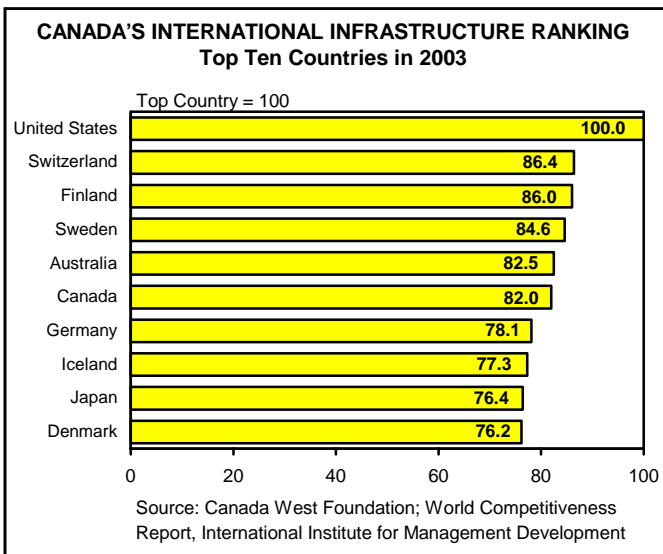
In a study released by Statistics Canada last year, an attempt was made to quantify the marginal benefit of public capital in terms of the cost savings to the private sector from an additional unit invested in new infrastructure.¹⁵ It concludes that a one-dollar increase in the net public capital stock generates approximately 17 cents in average private-sector cost savings. Thus, in a scenario where invest-



ment had been maintained at a level that would have prevented the \$100-billion-odd infrastructure gap from opening in the first place, at least \$17 billion (\$0.17 times \$100 billion) in total private-sector savings would have been enjoyed. As the chart shows, these savings vary from sector to sector depending on the reliance on the public capital stock in the production process. The transportation industry is projected to save more than 40 cents for each dollar of public capital investment.

Keep in mind that these estimates do not take into account the enormous, albeit hard-to-measure, benefits that would be reaped on both the social and environmental fronts from greater investment – lower pollution and fewer safety hazards to name a few. And, there are also intergenerational considerations. Investing in public assets today will yield both assets, and accompanying benefits, that can be carried forward to the next generation.

It is important not to ignore the other side of the ledger, however, since public infrastructure does not come without a price tag. If we assume that the infrastructure gap had not been allowed to open in the first place, an additional \$100 billion or more in spending would have been required, of which a large share would have likely been financed. For argument purposes, if we assume that the whole amount was borrowed at a financing cost of 6 per



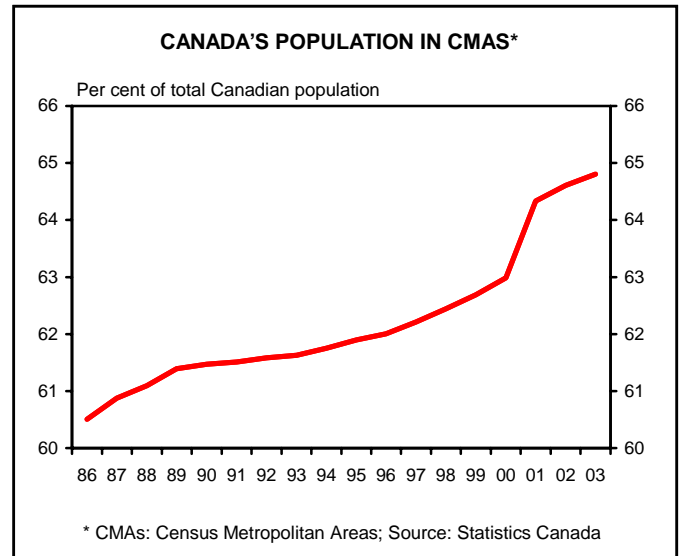
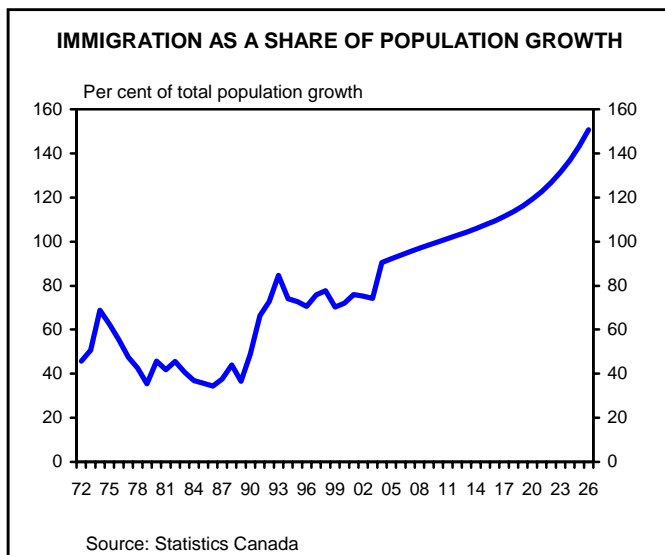
cent, that would yield about \$6-\$9 billion in higher annual debt-service payments – still well below the \$17 billion in lower private-sector costs. Under a scenario where offsetting savings could not be found in other areas of government budgets, the increased financing costs would have been funded through higher taxes and user fees, which would also have had some negative economic repercussions. Moreover, there could be other negative effects, such as a decrease in government debt ratings or the crowding out of private investment, which would both place upward pressure on interest rates. Lastly, along with considering the intergenerational benefits, it would be necessary to consider the related debt burden that would be transferred to the next generation of Canadians.

Why is there an infrastructure gap?

Much of Canada's existing infrastructure was constructed during the 1950s, 1960s and 1970s. And, given the fact that the useful life of many of the country's physical structures runs up to only four or five decades, a significant share of assets would be already ripe for replacement or rapidly approaching the end of their cycle. However, there have been a number of developments on both the supply and demand sides of the equation that have acted to accelerate the amount of wear and tear on many public assets over the past few decades.

(1) Growth of cities places big strain on infrastructure

Apart from brief periods of recession in the early 1980s and early 1990s, the Canadian economy has grown steadily, placing added strain on the nation's infrastructure. And,



this has been no more apparent than in Canada's largest cities, which have accounted for the bulk of the gains in economic activity and population. In fact, between 1971 and 2001, the share of the total population residing in Canada's census metropolitan areas (CMAs) surged from 56 per cent to 63 per cent. What's more, this trend is unlikely to cool off in the years ahead. Notably, with the new immigrants likely to make up 100 per cent of Canada's population growth by the end of the next decade – and with almost 80 per cent of annual immigrants historically flocking to the three largest CMA's – urbanization is poised to continue apace.

(2) Fiscal constraints weigh on supply of public capital

In addition to growth pressures, weak fiscal positions have been a major culprit in holding back government investment in infrastructure over the past few decades. Although Canada's federal government began to run deficits in the 1970s, it was not until the 1980s that the provinces would start to encounter significant budgetary problems. By the early 1990s, the combined shortfall at the federal and provincial level (i.e., local governments are not permitted to run deficits) had swelled to a whopping \$65 billion, or 9 per cent of GDP. Facing a dire predicament, the federal and provincial governments then began to wage war on their deficits, although the fiscal turnaround would take the better part of five years.

During the period of rising deficits in the 1980s, and especially in the era of restraint in the 1990s, the federal and provincial governments found it more politically pal-

CANADIAN IMMIGRATION: Per Cent of Total by Destination*	
Toronto	46.6
Montreal	13.9
Vancouver	13.9
Calgary	3.6
Ottawa-Gatineau	3.2
Edmonton	2.1
Other Areas	16.7
* average of 2001-02 and 2002-03 Based on the 2001 census boundaries Source: Statistics Canada	

able to pare back spending on capital rather than operations for a number of reasons. First, the impact of capital cuts was less noticeable than operating cuts in the short run. Second, governments accounted for the purchase of capital projects on a cash-basis, which is a method whereby the full cost of the asset is booked in the same year the cash left the door, rather than gradually over its useful life (i.e., accrual method). As a result, immediate and significant savings could be achieved by slashing capital expenditures. And, lastly, the development of new infrastructure tends to be accompanied by higher operating costs, as additional staff would have to be hired, et cetera. Thus, cost reductions from reducing capital spending also extend to the operating side.

(3) Municipalities hit from on all sides

Notwithstanding the fiscal woes of the federal and provincial governments in the 1980s and 1990s, the largest roadblock in the way of providing an adequate supply of infrastructure over the past decade has been at the local government level. Given that municipal governments have no independent status of their own, their power to spend and raise revenues is limited to what is granted to them in provincial legislation. And, while cities have been given more room to wiggle in recent years, provinces still keep a tight rein on municipal legislative and taxing powers. Even in the few areas where cities do enjoy some authority, such as in levying property taxes, development charges and user fees, provincial governments have the right to impose restrictions on what goods and services can be taxed and at what rate. Furthermore, unlike their federal and provincial counterparts, they are not permitted to run operating deficits – even pro-cyclically.

The 1990s were a particularly difficult decade for Cana-

da's municipalities. As part of their plans to cut back spending broadly, the federal and provincial governments passed some of the pain down the line in the form of reductions in grants. Unfortunately, for local governments, there was nobody left to pass the buck to, so they endured the largest negative impact. If that wasn't enough, municipalities were asked to take on added responsibilities, both directly through downloading, and indirectly, through other governments vacating certain service areas. On the infrastructure front, municipalities found themselves with jurisdiction over municipal airports, local ports, local harbours, ferries, transit, and, social housing. And, while there are good arguments for de-centralizing decision-making authority to the government nearest the taxpayer, many of these services were not handed over with increased access to funding and/or greater flexibility in service delivery.

Reductions in grants and limited fiscal and administrative flexibility have not been the only headaches for local governments. Own-source revenues were also held back by municipalities' heavy reliance on the property tax. Indeed, the property tax boasts some positive features, notably its relative stability and predictability. However, there is a good argument that it is regressive in nature, as the tax is not closely linked to ability to pay. And, property taxes are not only tied to a revenue source (i.e., real estate), that tends to respond more slowly to annual changes in economic activity than does incomes, but market driven increases in property taxes do not translate into increased

DISTRIBUTION OF MUNICIPAL EXPENDITURES, CANADA		
	Percentage of total spending	
	1988	2001
General administration	9.9	11.0
Protection	14.8	15.9
Transportation	22.3	19.8
Health	2.0	2.0
Social Services	7.4	12.6
Education	0.4	0.4
Resource conservation	2.1	2.0
Environment	14.6	14.0
Recreation/culture	11.6	11.1
Housing	1.8	2.6
Regional planning	2.1	2.2
Debt charges	9.5	5.9
Other	1.6	0.5
Total	100.0	100.0
Source: Kitchen, Harry M. and Enid Slack, Canadian Tax Journal (2003), vol. 51, no. 6, 2221; Statistics Canada		

revenues unless there is “true” increases in new assessments or the tax rate is increased. Hence, the yield for property taxes is often inadequate to meet the growing spending requirements of municipal governments.

The accompanying exhibits provide a good snapshot of local governments revenue woes in recent years. Federal and provincial governments – who benefit from a much larger array of revenue-raising tools – enjoyed a near 70-per-cent gain in revenues since 1990 compared to about 45 per cent at the local level. But, despite the weakness of property tax assessments in the early-to-mid 1990s, the property tax now accounts for a whopping 52 per cent of total local revenues, up 4 percentage points from 1988.¹⁶ In contrast, the share of total grants in municipal revenues fell from 23 per cent to 17 per cent over the period.¹⁷ As municipalities’ revenue mix changed, so too did their

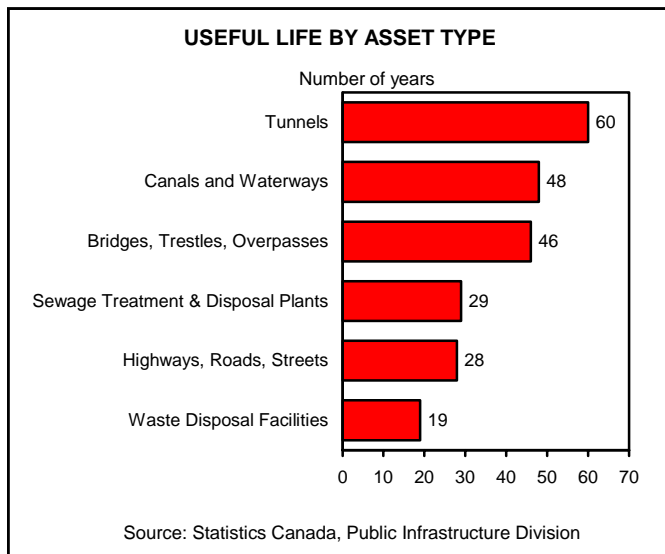
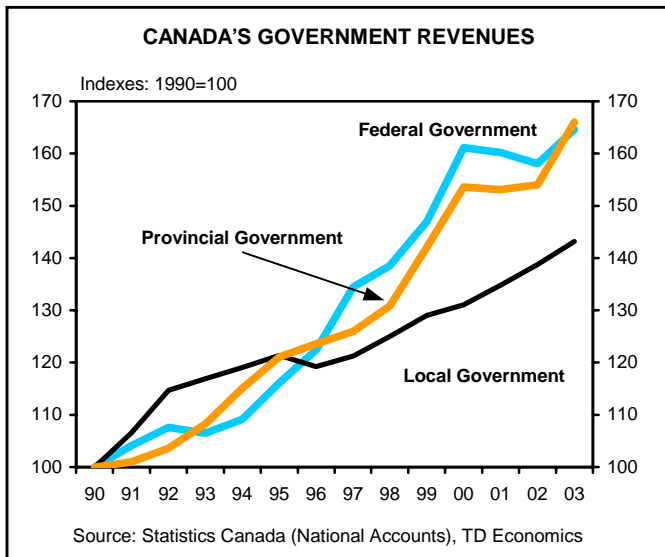
DISTRIBUTION OF MUNICIPAL REVENUE SOURCES, CANADA		
	Percentage of total revenue	
	1988	2001
Own source		
Property taxes	48.6	52.2
Other taxes	1.4	1.3
User fees	20.0	23.0
Investment income	6.0	4.9
Other	1.1	1.6
Total own-source revenue	77.1	83.0
Grants		
Unconditional grants	5.8	2.4
Conditional grants	17.1	14.6
Federal	0.7	0.4
Provincial	16.4	14.2
Total grants	22.9	17.0
Total revenue	100.0	100.0

Source: Kitchen, Harry M. and Enid Slack, Canadian Tax Journal (2003), vol. 51, no. 6, 2221; Statistics Canada.

spending distribution. In particular, a greater share of each municipal revenue dollar was directed to social services and housing – largely reflecting provincial downloading of these services in Ontario – general administration and protection.

(4) Policy choices exacerbate infrastructure problem

Thus far, the reader may have the impression that a large part of the existing infrastructure gap is due to factors outside the control of governments, such as growth pressures, and the need to combat deficits that were racked up under previous leadership. However, there is little doubt that ill-thought-out policies have aggravated the situation. For one, the **quality of management of public assets** has been wanting. The useful life of “big ticket” assets – which, as noted earlier, can extend up to 40-50 years or perhaps longer – will be greatly shortened if proper maintenance and rehabilitation are not carried out on schedule. And, while the shortage of available funding has been a barrier to rehabilitating and maintaining existing infrastructure, it is also the case that governments have not made the best use of what little resources they had. Put another way, incremental funding has been heavily geared towards the construction of new assets at the expense of properly caring for existing assets. For example, it has been estimated, albeit not without controversy, that as much as four-fifths of total infrastructure investment in the 1980s was directed



FUNDING MODELS

- Greater **Vancouver's** Transportation Authority: partially funded by an 11-cent-per-litre gas tax and a parking sales tax. (Tax rates set by province.)
- **Victoria**: a 2.5-cent-per litre gas tax is collected for transit.
- **Calgary and Edmonton**: receive 5 cents per litre of province's fuel tax.
- **Manitoba**: allocates revenues worth two percentage points of personal income tax and one percentage point of corporate income tax to its cities in form of per capita grant.
- **Montreal's** Agence Métropolitaine de Transport (AMT): partially funded by a 1.5-cent-per-litre gas tax and a \$30-per-car registration fee.
- Municipalities in **Nova Scotia** and **Quebec**: have authority to levy a land transfer tax on the value of transferred property.
- **Ontario** municipalities: to receive 1 cent of the province's gas tax in Oct. 2004, which will rise to 1.5 cents in 2005 and 2 cents in 2006.

at *new* capital projects.¹⁸ This problem of ineffective asset management within government is partly rooted in a lack of knowledge and monitoring of the inventory of public assets. As a result, it is hardly surprising that few governments – particularly at the local level – are able to provide a good estimate of the replacement value of their assets.

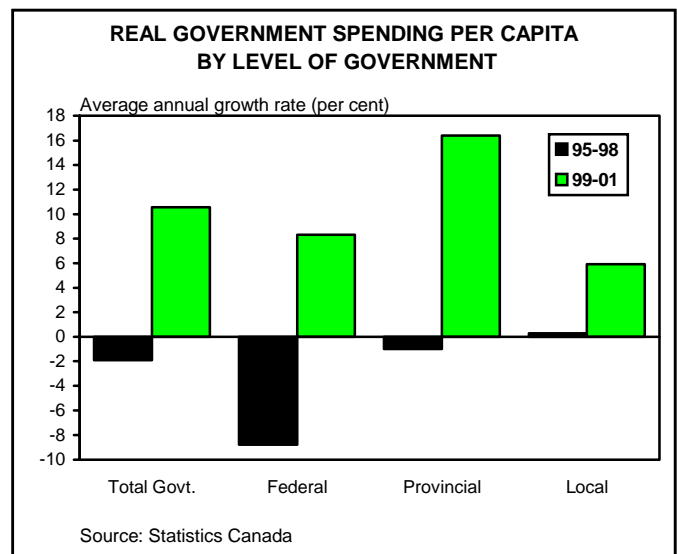
Urban sprawl has not only raised the cost of infrastructure by spreading out provision over a broader area, but it has contributed to increased congestion and pollution, since public transit is not cost-effective in lower-density suburban areas. Although it is natural that the population of downtown areas would grow more slowly than those of the suburbs in light of land availability, the extent of movement has been accentuated by policy choices, particularly at the municipal level. Most importantly, municipalities have subsidized sprawl by not better aligning property taxes, development charges and user fees with the cost of delivering and servicing infrastructure. It is not uncommon to see higher property tax levies on commercial properties relative to residential properties, on high-density residential properties relative to low-density suburban properties, and on downtown commercial proper-

ties relative to suburban commercial properties. Undoubtedly, part of the problem of urban sprawl rests with land-planning strategies, which have often been poorly developed, or have not been effectively implemented.

A turn since the late 1990s...

On a high note, as government fiscal positions moved into surplus in the late 1990s, Canadian governments began to inject significant new money into infrastructure. As a result, after slipping in nominal terms between 1992 and 1999, public investment in fixed capital has since surged by about 10 per cent per year.¹⁹ Among the jurisdictions, provincial governments led the way, ramping up annual spending to the tune of 16 per cent. Nonetheless, the federal government and municipalities were not far behind, with gains of 7 per cent and 5 per cent, respectively. Across the country, a number of governments jumped on the infrastructure bandwagon. Beginning in the mid-1990s, among other initiatives, the federal government announced a number of infrastructure programs, which were geared largely at assisting municipalities to undertake projects. Moreover, a number of provinces either established capital funds (Alberta and Ontario) or provided municipalities with a share of the gasoline tax or other new revenue-sharing arrangement (see text box).

While brimming revenue coffers proved to be the key sparkplug in setting the infrastructure engine in motion, capital spending also received support from the decision by the federal and most provincial governments to move to an accrual accounting approach for booking infrastructure expenditures – consistent with the approach recom-

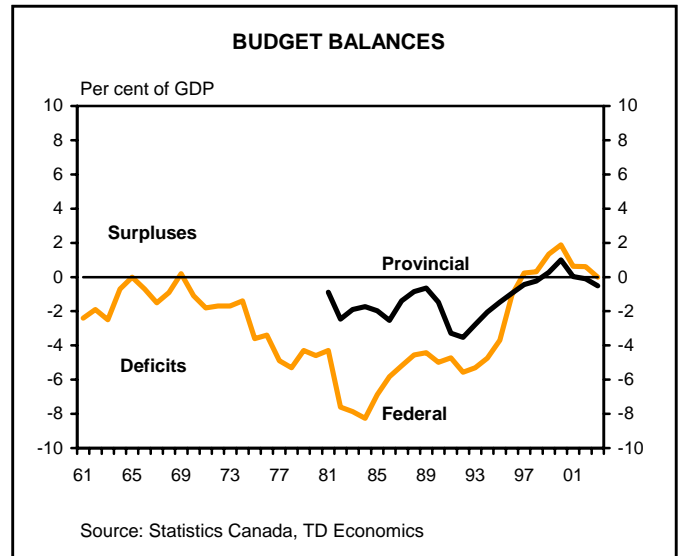


mended by the Public Sector Accounting Board (PSAB). This allowed spending to be charged gradually over an asset's useful life rather than in the year of purchase, lessening the near-term hit on the books.

...but already losing steam

While welcome news, the recent five-year spike in capital has not put much of a dent in the overall public infrastructure challenge. Renewed investment has brought real per-capita spending in 2003 back above its late-1980s level. What's more, the wave of investment witnessed over the past half decade is likely to have done little more than arrest the rate of increase in the infrastructure gap. In order to make real headway in addressing a problem that has emerged over such an extended period an all-out effort would need to be sustained well into the future.

Unfortunately, the wheel appears to be falling off the infrastructure bandwagon, just as it was beginning to round the first bend. In particular, the current round of budgets served up another reminder of the vulnerability of infrastructure spending during tough fiscal times. With fiscal positions turning sour in most provincial governments over the past year, the area facing the chopping block in the 2004 budgets was not health or education operations, but capital spending. In fact, TD Economics estimates that capital outlays will fall in the majority of provinces in fiscal 2004-05, with only a few governments – notably Ontario, Alberta and B.C. – likely to buck the trend. Meanwhile, at the federal level, the government announced that it would exempt municipalities from paying GST – freeing up an additional \$700 million per year in local-gov-

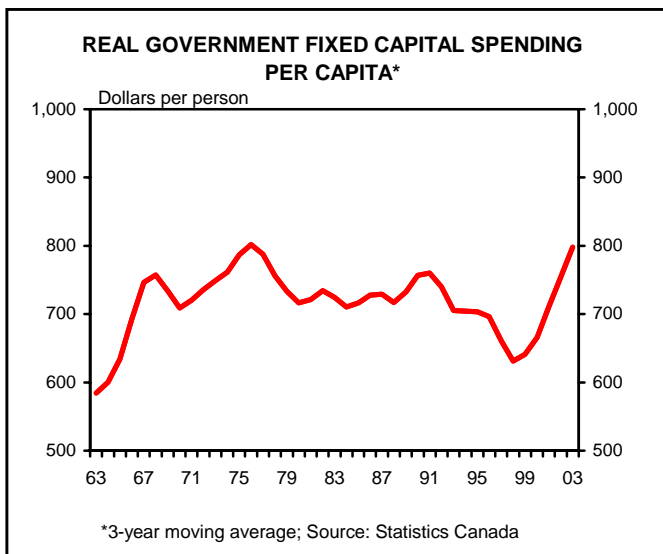


ernment cash flow. However, this commitment was only enough to heal the wound inflicted in last year's budget. At that time, the federal government announced a 10-year commitment on infrastructure. That was the good news. The bad news was that the annual spending of \$300 million per year fell about \$700 million short of the \$1 billion average annual outlay recorded ex-post between 1993 and 2002. *In sum, while this year may prove to be just a temporary setback, the bigger risk is that the most recent upswing in government capital spending will be the exception rather than the rule.*

PART II – FINDING THE MONEY

The fact of the matter is that the status-quo is not doing the job. But, while there have been many signs of late that governments across the country are starting to follow a new tack, a greater shift will be needed to address the massive needs on the infrastructure front – a shortfall that currently stands in the order of 6-10 times annual investment flows and counting. In view of the lack of resources and a multitude of priorities facing governments, it is undeniable that there will be a need to look outside the conventional fiscal box in order to achieve greater efficiencies. Certainly, public infrastructure – which is one of their most expensive and daunting challenges at the moment – needs to be at the forefront of this new wave.

At the same time, however, it is becoming increasingly evident that sustainable solutions to the infrastructure challenge will be out of reach unless measures are first taken to bring annual increases in health-care costs closer to earth. According to the Canadian Institute of Health Informa-

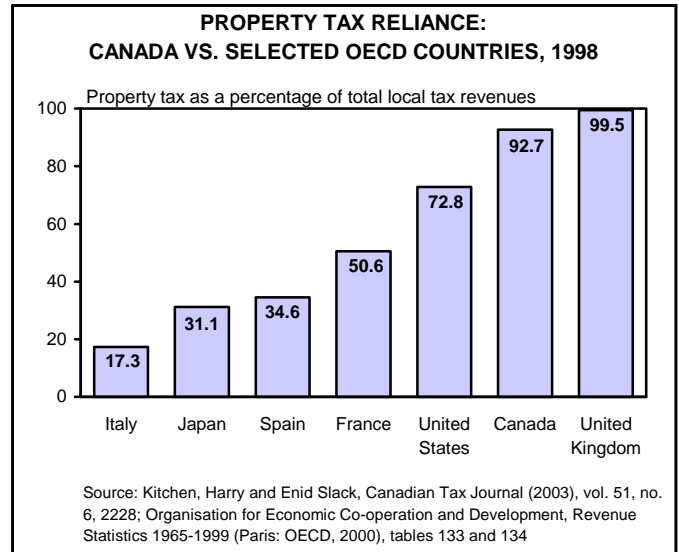
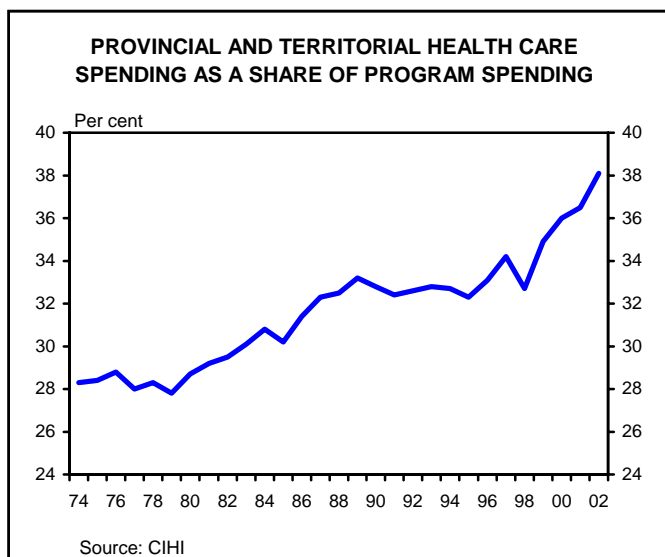


tion (CIHI), health-care spending increased 7 per cent per year in 2002 and 2003.²⁰ And, early indications are that little slowdown in this rate will take place in 2004, despite most provinces recording deficits. Encouragingly, in addition to several federal and provincial finance ministers arguing that a new way of doing business is required across the public sector, the Prime Minister has indicated that both sustainability and health-care reforms will be at the top of the list of discussion at a First Ministers Meeting to be held this summer.

As just noted, any funding and financing strategies for infrastructure on the table have to be deeply rooted in the goal of enhancing efficiency, or getting the best bang for the taxpayer buck. There are also a number of other key principles that must be at the heart of any infrastructure approach.

- **Accountability** – is the government responsible for administering the spending also responsible for raising the revenue?
- **Transparency** – is it clear who is ultimately bearing the burden?
- **Equity** – is the revenue source fair, either by matching beneficiaries with those bearing the burden or by levying taxes based on the ability to pay?

Applying these principles, and drawing on some international experiences, we now lay out some guiding principles of how governments can find the money to upgrade Canada's aging public infrastructure.



Further tilt towards user-pay model

Historically, Canada has relied heavily on raising government revenues through income taxes at the federal and provincial levels and property taxes at the local level. In most respects, their widespread use is warranted. Income taxes remain the best tool to redistribute income from the “haves” to the “have-nots”, while property taxes are a stable and accountable revenue source for funding many local services, such as garbage collection and street repairs. At the same time, however, they have their drawbacks. Income taxes, along with capital taxes, create a disincentive to work and saving, and as such, are among the most damaging to economic growth. In contrast, as we indicated on page 7, property taxes are highly regressive, and don't tend to grow in line with the cost of service delivery over time.

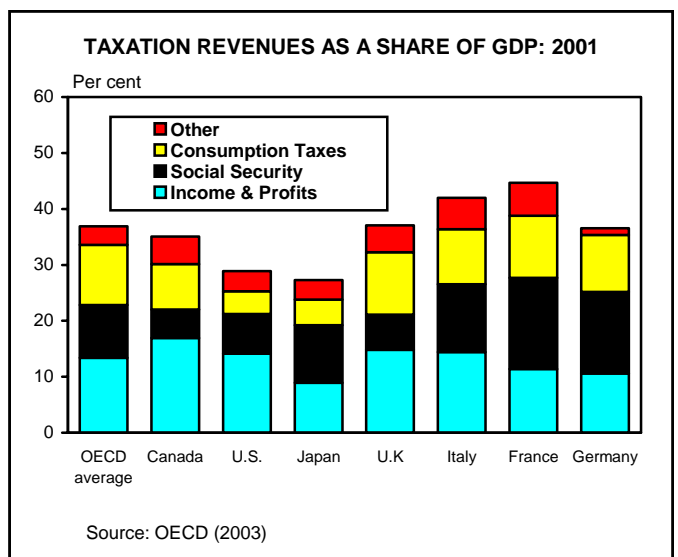
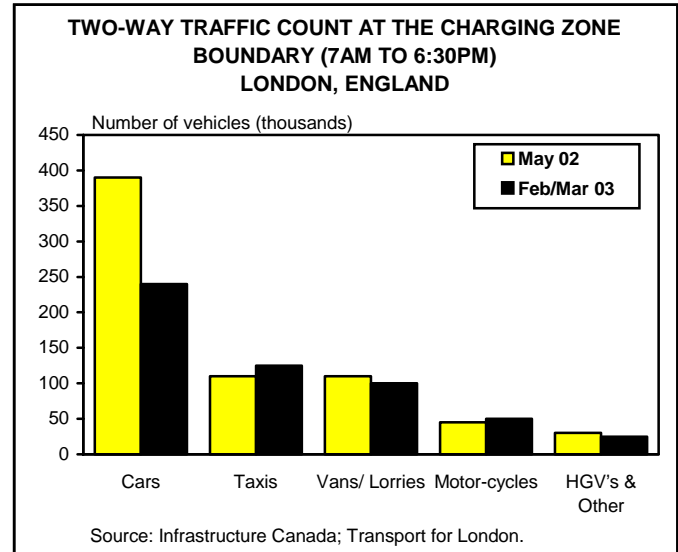
While we would argue that both taxes must always remain a fundamental part of the tax-raising equation in Canada, too much of anything is rarely optimal. And, undeniably, Canada has among the highest income and property tax burdens in the world. On the flip side, Canada has a relatively low consumption-tax burden compared to our international competitors other than the United States and Mexico. Thus, a re-balancing in the tax mix would not only make Canada more competitive, but bring us closer into line with most other countries.

Charging for a service based on consumption offers many advantages. Since by design, user-pay leads to less waste, it is the most efficient approach to revenue raising. This is particularly the case when the level of the rate is

set at the full marginal cost of delivering a service including the amounts for both replacement and impact on the environment. In addition, they pass the tests of accountability, transparency, and horizontal equity. Lastly, given the direct impact of these types of consumption levies on behaviour, they can be very useful to governments in achieving their public policy goals. Case in point is the congestion charge implemented last year in London, England's downtown, where traffic flows subsequently fell by a larger-than-expected 15 per cent compared to before the levy was implemented.²¹ To be sure, this outcome would not have materialized had the government not invested heavily in public transit before the launch and effectively integrated its transportation and economic development strategies. Nonetheless, it lays out a good example of how a user fee played a major role in achieving an end.

User fees are already widely applied in Canada. And, their relative importance has been rising since the late 1990s, especially since the federal and most provincial governments delivered cuts to income taxes in the late 1990s and early 2000s. Still, it remains the case that many governments are failing to put much effort into aligning the price of a service with the marginal cost of delivery. In simple terms, user fees work the best on those services where consumption can be closely measured (i.e., such as water, sewers, electricity and garbage collection). Other areas may be off limits. For example, imposing user fees in areas such as health care or where use is heavily-concentrated among low-income individuals is unlikely to fly. And, for those services where consumption can not be readily measured (i.e., parks, street lighting, and police protection), funding should come through the tax system.

Above all, an area in which user fees have been particularly under-utilized in Canada is in non-public transit. With the exception of a few cases – such as highway 407 in Ontario and the fixed-link bridge in P.E.I. – roads and bridges bear no charges at all, despite congestion ranking high among the concerns of citizens. Around the globe, governments are using new technologies to impose tolls on highways and traffic in downtown city cores. Canada has been slow to exploit these opportunities. Although road tolls are not viable in many cases – for instance, a certain scale is needed to justify the cost of setting up and administering the toll – technological innovations are helping to knock down the barriers related to cost. In fact, the



U.K. government expects that the emergence of satellite-tolling technology in vehicles will allow it to charge all private automobiles (in both urban and rural areas) within the next decade.²² There are also other forces at play. For example, the use of road tolls in many cases would be made more manageable if there is an alternative route available for the public with no charge or if the levy is being applied to a newly-constructed road or bridge rather than an existing one.

Charging private automobile users for the full cost of travel would result in considerable benefits for government coffers. The main argument for subsidizing public transit – which is still the practice in most large cities – is to make it cheaper for individuals than private automobile use. But, with more complete costing of private transit

use, there would be less of a case for subsidizing public transit on an ongoing basis once initial investments are made to enhance its attractiveness as an alternative. Government coffers would reap a double benefit, freeing up funds for, say, other infrastructure.

Finally, some Canadians might condemn toll and other user fees as an additional tax on residents. However, the old adage “there is no such thing as a free lunch” applies. There are only two ways in which the government can pay for any new development or up-keep. It can either tax all the residents of the area, whether they use the particular infrastructure system equally or not or the government can impose targeted user fees, thereby creating more transparency in usage and cost. Regardless, the public must pay, and if given the choice, most would probably opt to control their expenditures through user fees rather than a more hidden structure embedded in property or income taxes.

MORE INNOVATIVE USES OF EXISTING MUNICIPAL TOOLS

- Earmark property tax increases, with funds dedicated to infrastructure projects that have strong and wide-spread support.
- Institute special area taxes or cascading charges to reduce urban sprawl. For example, levies could rise gradually in tandem with distance from the downtown core.
- Implement additional development levies for “offsite” costs and future maintenance to capture the full cost of infrastructure in the area.
- Application of front-end development charges to allow infrastructure to proceed in advance of development.
- Charge differential development fees based on the density.
- Charging differential fees for non-residents where users can be easily identified.
- Creation of new self-financing utilities out of tax-based services to free up room in general tax base for other purposes.

Source: Canada West Foundation: “No Time to be Timid”, February 2004.

Local governments need more control over their own destinies

As has already been discussed, many of Canada’s municipalities are not making optimal use of their existing, albeit limited, tools and powers. Reforming tax systems, pricing services more in line with their cost of provision, better application of land-planning strategies to reduce sprawl, coordinating services across municipalities in order to enjoy economies of scale, and improved management of their billions of dollars of asset inventories are all on the “to do” list. Furthermore, there may be other creative ways that municipalities could make better application of their current arsenal. In the Canada West Foundation Report, *No Time to be Timid*, a number of different and innovative ways that existing revenue tools can be applied are discussed, some of which are shown in the accompanying text box.²³

In our view, better and more creative use of the funding vehicles currently at their disposal will only go so far in providing municipalities with the flexibility to tackle their massive infrastructure challenges. Over the past few years, TD Economics has issued a number of reports that have touched on the need for a new revenue deal for municipalities. Notably, our April 22, 2002 Report, *A Choice Between Investing in Canada’s Cities or Disinvesting in Canada’s Future*, compares and contrasts a number of potential arrangements. In short, the arrangement needs to:

- Provide long-term reliable funding;
- Provide more fiscal flexibility, including increased tools;
- Raise accountability, be transparent and administratively efficient

The report looked at a number of revenue options. The first option, increasing grants, could play a valuable role in helping cities cope with their near-term infrastructure needs. But, they fail in other areas. First, they are weak in reliability, since they leave local governments at the whim of shifting priorities and fiscal fortunes at the federal and provincial level. And, second, they are poor in terms of accountability, since funds are raised by one government and spent by another. At the same time, *revenue-sharing arrangements*, whereby a portion of a tax collected in a broader area is distributed to the region’s governments, are for all intents and purposes, grants. Once again, the link between spending and revenue-raising is broken, in-

creasing the probability that the funds will not be put to the best use.

We believe that it is better to provide municipalities with a revenue arrangement that provides greater flexibility, specifically more power to levy taxes, and in which local governments have control of the rate setting. From a purely administrative perspective, the tax should piggy-back off an existing federal and provincial tax base. And, given the problems inherent in administering an income tax at the city level, a consumption-based levy would be preferable, such as a gasoline tax levied within a commuter area. And, while the optimal way to guard against an increase in the overall tax burden would be for the federal or provincial governments to free up the room by cutting their respective taxes, it must be recognized that in order to prevent federal and provincial budget balances from deteriorating, the revenues would need to be made up through another tax increase or spending cut.

A report released by Harry Kitchen and Enid Slack last year, entitled *Special Study: New Finance Options for Municipal Governments* estimates increased revenues by municipality in Canada under a number of finance options. These are shown in the accompanying chart. In particular, note that a 1 cent per litre gasoline tax established on the existing provincial base in 2000 would yield about \$40 million, \$30 million, and \$20 million in Toronto, Montreal and Vancouver, respectively.²⁴

A standard objection to providing cities with more tax and administrative powers is that they are simply not up to the job. While municipal governments may still lack

ESTIMATED MUNICIPAL TAX REVENUE FROM A ONE CENT PER LITRE TAX ON FUEL, 2000 Millions of Dollars	
City	Yield from the tax
Halifax	6.5
Montreal	29.6
Ottawa	14.3
Toronto	38.9
Winnipeg	12.2
Regina	5.4
Calgary	17.0
Edmonton	13.0
Vancouver	20.0

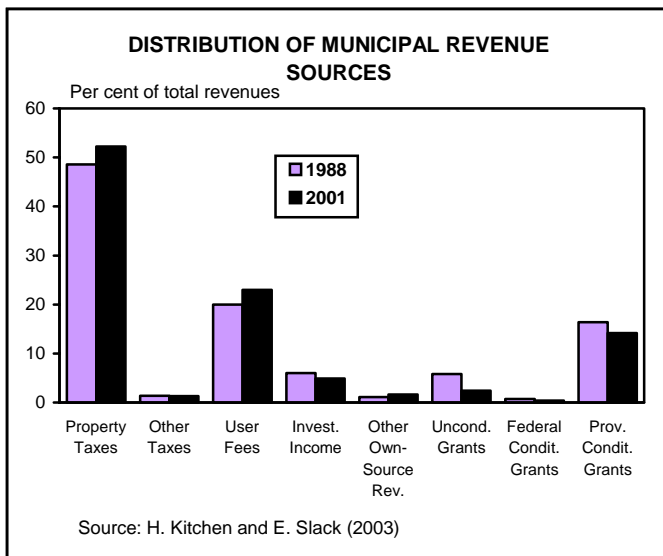
Source: Kitchen, Harry and Enid Slack, Canadian Tax Journal (2003), vol. 51, no. 6, 2246; Statistics Canada.

the expertise and institutional resources that other governments have in certain cases, we see this as a “chicken and the egg” problem. More specifically, as local governments take on added responsibilities, they will soon develop the sophistication to carry out their tasks effectively.

The need to provide cities with a new deal has lost some momentum over the past few budgets in tandem with the urgency to address the infrastructure gap. Still, any lingering chatter has remained focused on revenue sharing, and especially providing cities with a slice of the federal and provincial gasoline tax take. To be sure, any new funds will provide cities with help to meet their most immediate needs. But, the view that revenue sharing is the best way to guard against an increase in the overall tax burden is not well grounded. Regardless of which pocket it comes from, if one level spends more, other levels have to spend less, or the one taxpayer will end up paying more in taxes. And, with grants or revenue sharing, cities remain inextricably linked to changing fiscal fortunes and political considerations of other levels of government.

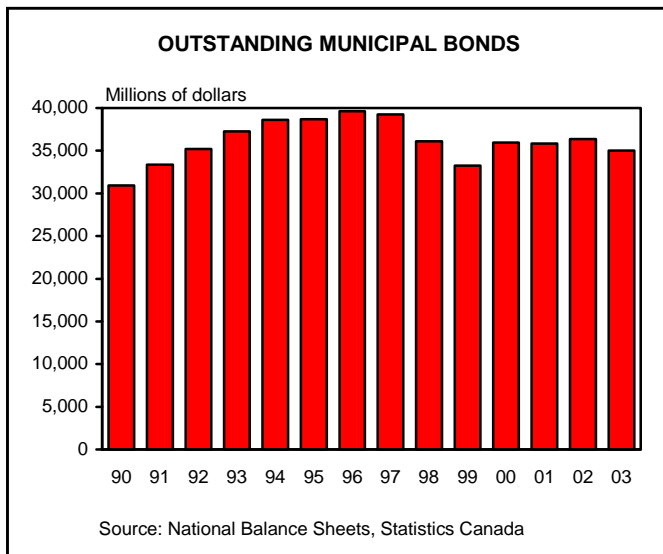
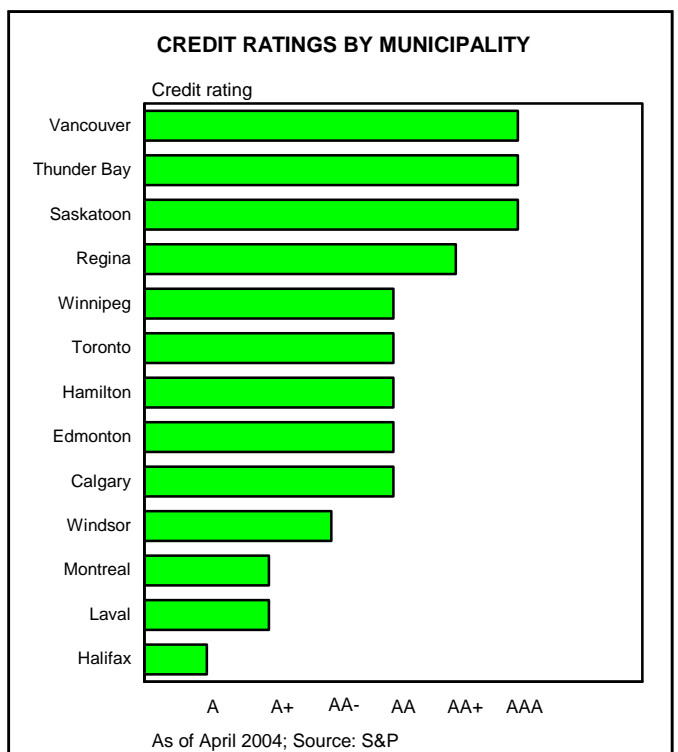
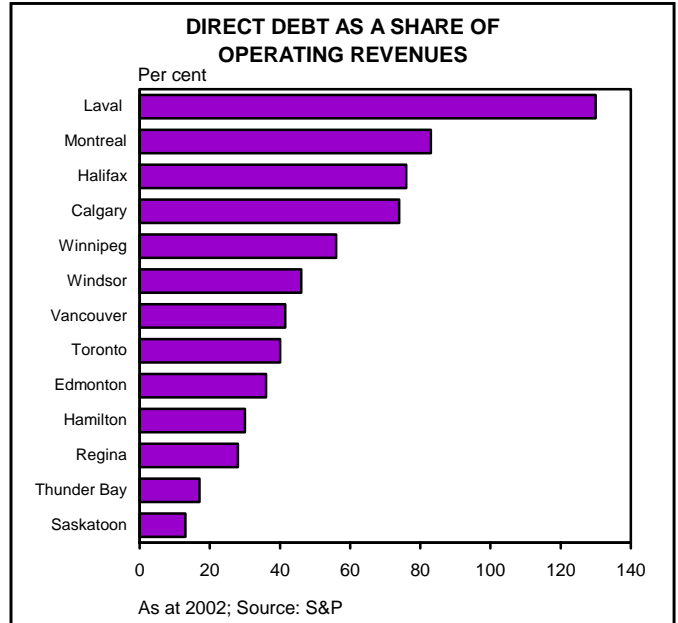
Municipalities could make better strategic use of debt

There is a lot to be said for maintaining a low debt burden. For one, a government’s total borrowing costs are lower in absolute terms than it would otherwise be if it were heavily indebted – providing more room to fund other priorities. And, second, less indebted governments tend to be more highly rated by bond-rating agencies, and hence have lower *per-unit* costs of debt financing. Furthermore, flexibility to respond to unanticipated future events is greatly enhanced compared to a jurisdiction that is highly burdened.



At the same time, however, there could be a large opportunity cost associated with not making use of borrowing in certain circumstances. If a government does not have enough internal funds available, a project may be delayed until the proceeds can be raised or be scrapped entirely. On the flip side, debt-financing can provide “just-in-time” financing that will allow construction to go ahead immediately. As importantly, a healthy level of borrowing passes the test of equity, since the benefits – which are normally consumed over a number of decades – are closely matched with the costs. The question then becomes: what constitutes a “healthy” level of debt? Unfortunately, there is no easy answer to that question, as assigning explicit benefits to future generations is difficult. But, this hasn’t stopped some researchers from taking a stab at it. Applying the intergenerational-equity principle that debt is warranted to the point that it finances capital that is passed forward, William Scarth of McMaster University has estimated the optimal federal debt-to-GDP ratio set at 25 per cent and a combined-federal provincial ratio at 45 per cent (public-accounts basis), compared to their current levels of about 40 per cent and 65 per cent, respectively.²⁵

But, while federal and provincial governments have been heavy users of debt for several decades largely to fund past operating deficits, there is a good argument that many municipalities have been overly debt-averse. In several provinces, statutory debt restrictions exist. However, few governments are even remotely close to breaching them. Figures released by Standard & Poor’s show that direct debt as a share of operating revenues in most cases stands below 40 per cent, and lower than 15 per cent rela-



tive to GDP. As the chart reveals, there are exceptions to the rule – Montreal and Laval have debt burdens above 80 per cent of operating revenues. But, for the most part, municipalities have relied on funding infrastructure primarily through other non-debt sources, including external funds (i.e., federal and provincial grants), direct contributions to capital from operating budgets (i.e. “pay-as-you-go”) and monies set aside in special reserves.

MOST INDEBTED U.S. CITIES: Overall Debt Burden and Tax Base: 2002			
	Overall Net Debt (US\$M)	Tax Base FY 2002 (US\$M)	Overall Debt Burden (%)*
New York City	43,767	409,607	10.7
Chicago	12,793	189,362	6.8
Los Angeles	6,574	230,142	2.9
Philadelphia	5,700	39,150	14.6
Houston	4,867	95,539	5.1
Washington	3,356	52,522	6.4
San Antonio	3,043	39,588	7.7
Detroit	2,826	21,952	12.9
Phoenix	2,469	63,269	3.9
San Diego	2,482	92,526	2.7

* ratio of debt to tax base; Source: Moody's

Part of the problem preventing the increased use of borrowing by municipalities to finance infrastructure is that many – in particular smaller communities – lack the expertise of their federal and provincial counterparts. Moreover, some may not have bond ratings, or may be rated so poorly that they can't issue bonds or if they did, the resulting costs would be prohibitive. However, some provinces have come up with solutions to this problem. In particular, Ontario and British Columbia have set up centralized provincial authorities to borrow on capital markets at their credit rating, and correspondingly lend the funds out to municipalities at the lower rate.

Some U.S. debt instruments better than others

U.S. municipalities have tapped debt markets to a much greater extent than their Canadian counterparts, with US\$1.9 trillion in bonds outstanding vis-à-vis only about C\$30 billion in Canada. This larger borrowing appetite reflects in part higher overall financing needs, as cities south of the border were required to invest large amounts in the 1970s and 1980s in order to stem growing urban decline. However, it is also owing to a number of debt instruments that are at U.S. municipalities' disposal, but are either unavailable or not used widely in Canada. No doubt, any talk of increased use of borrowing is likely to come hand-in-hand with requests for provinces to allow these U.S.-style vehicles. Still, some of them warrant greater consideration than do others.

Tax-exempt bonds (TEBs) – an approach used widely in the United States for financing urban infrastructure (see

Annex 1). These debt instruments provide a particularly cheap form of borrowing for local governments, since interest income is exempt from federal and state income tax, and hence borrowers will accept a lower rate from the municipality. Yet, TEBs have deep flaws. For one, as we show in an example in Annex 1, they're regressive in nature, with most of the benefits accruing to those with above average marginal income tax rates. Second, a sizeable share of the benefits are leaked, as the money saved by state and local authorities in lower interest payments is considerably less than the level of foregone revenues. In Canada, this leakage would be larger than in other countries, given the importance in the bond market of non-taxable entities such as foreigners and pensions. And, if that isn't enough, TEBs are weak on accountability, because one area receives the benefits but another foots the bill in terms of a lower tax take.

Among Canada's provinces, only Ontario has moved to adopt TEBs, issuing the first tranche of bonds exempt from provincial income tax in May 2003 through its Ontario Municipal Economic Infrastructure Financing Authority (OMEIFA). By topping up the interest-relief grant with an additional subsidy, the Authority will lend the funds to municipalities for infrastructure investments at half the going market interest rate. Only residents of the province can purchase these instruments which are labelled Opportunity Bonds.

State Infrastructure Banks – state infrastructure banks (SIBs) offer another inexpensive borrowing option for municipalities free of many of the inherent problems of TEBs. Created by federal grants, SIBs are state-run institutions in the U.S that operate like private banks, providing municipalities with seed funding to start a project and a range of low-rate loan and credit enhancement products.²⁶ A feature of the SIB is the continual "recycling of funds". In other words, as the assistance is repaid, funds are then used for other purposes. These vehicles have been used extensively in the United States to finance transportation, environmental and water and wastewater projects. Moreover, they have proved to be useful in leveraging private sector funds. In Canada, the Green Municipal Investment Fund, established by the federal government in its 2000 budget, is one of the few examples of a permanent revolving fund for capital project financing.

In many respects, these institutions operate like the provincially-administered Canadian municipal finance

U.S. DEBT INSTRUMENTS			
Option	Pros	Cons	Rating
Tax-exempt Bonds	<ul style="list-style-type: none"> lowers cost of financing 	<ul style="list-style-type: none"> regressive weak in accountability significant leakage of benefits 	0
Infrastructure Banks	<ul style="list-style-type: none"> flexible lowers cost of financing funds "recycled" provide financing expertise to municipalities 	<ul style="list-style-type: none"> potential interference in local operational issues 	4
Revenue Bonds	<ul style="list-style-type: none"> no recourse to general revenues in the event of default promotes full-cost pricing of services facilitates the use of public-private-partnerships 	<ul style="list-style-type: none"> can be an expensive form of financing 	3

* Rating is from 0 to 4, where 0 signifies least desirable and 4 signifies most desirable.
Source: TD Economics

authorities that have been established in both Ontario and B.C., since they borrow on behalf of a number of local governments in order to secure lower interest loans and provide expertise, particularly to smaller communities. In contrast, however, SIB loans are guaranteed by the bank's reserves rather than the credit of the municipality.

Revenue bonds – along with TEBs, revenue bonds have been used increasingly by municipalities Stateside. These instruments, also referred to as *limited* obligation bonds, are legally secured by a specified revenue source. Accordingly, in the event that the revenue source is not sufficient to service the debt, the state is not legally obligated to appropriate other revenues for debt repayment, thus allowing revenue bonds to get around constitutional debt limitations imposed in many states. On the plus side, these bonds promote full-cost pricing of services and shift the economic risk to investors without any loss of ownership or control. However, given that these instruments are not backed by the government's overall revenue source, interest rates are often higher than for *general* obligation bonds.

Addressing derelict areas spurs creative U.S. solutions

The severe "hollowing out" of downtown cores in many U.S. cities in the 1970s and 1980s left behind large pockets of impoverished and dilapidated areas. And, in many of these areas, situated at or nearby their heart are abandoned, idle or under-utilized commercial and industrial properties that have either known or likely contaminants – or so-called "brownfield" developments. In addition to significant funding through the U.S. government's Hous-

ing and Urban Development (HUD) and the Environmental Protection Agency, a number of creative funding solutions have been spawned with the aim of spurring redevelopment in these heavily-challenged districts, most of which involve significant up-front investments by the public sector and/or tax incentives. These innovations are either just beginning to make their way on Canada's radar screen or have been adopted in some provinces, given the worsening pockets of poverty and significant brownfield sites in the urban cores.

Tax-increment financing (TIFs) – a more detailed discussion of TIFs is provided in Annex 2. The overall goal of TIFs is to revitalize deteriorated sections of the city (designated as a TIF area) through public investment in a variety of physical infrastructure improvements. Under TIF policy, property taxes flowing to governing bodies in the district are frozen at the level that existed prior to the injection of government investment. That revenue remains fixed throughout the life cycle of the TIF (normally 20-35 years). At the same time, the investment by the government is expected to increase the assessed real estate valuations in the district by stimulating new construction projects by the private sector, and any new tax revenues are earmarked for repayment and servicing the debt. Once the debt is retired, the increment tax is folded back into regular municipal government coffers. The debt issued to finance TIFs take the form of a revenue bond, since they are usually backed by the property tax and/or another revenue source within the district.

Enterprise Zones – like TIF districts, enterprise zones are a dedicated area for development or improvement. In this case, however, the private sector undertakes the development. In order to lure the private sector, generous tax incentives are provided, such as a corporate income-tax holiday, accelerated capital cost allowance, or reductions in property tax. Ontario has passed legislation that allows enterprise zones at the provincial level, although municipalities are still not free to use them.

Tax-exempt equivalent grants (TIEGs) – this is an example of a hybrid between enterprise zones and TIFs. In this program, the city will designate an area in need of investment, although the investment initiative is in the hands of the private sector. If a private consortium decides to invest in the area, and if the land assessment subsequently appreciates, then the government will return a portion of the tax increment to the private consortium in the form of a grant. The City of Toronto is experimenting with TIEGs in a pilot project in Etobicoke.

Asset-backed debt – asset-backed debt embeds one important conceptual feature of TIF policy: the ability to

identify and secure debt against an asset in need of economic development. The city borrows against the existing value of a designated area in order to finance redevelopment. In the event of a loan default the asset is handed over to the bondholders. In many cases in Canada, municipalities have not been given the right through provincial legislation to borrow against specific assets.

A close look at U.S. solutions reveals no magic bullet

Each of these options – TIFs, enterprise zones, TIEGs and asset-backed borrowing – all come with their strengths and weaknesses. For one, the “self financing” nature of both TIFs and TIEGs make them politically palatable for economic development. In other words, there is no real loss to the community in using the taxes generated by redevelopment to pay for the financing of the project. With the TIEGs approach, however, the private sector developer would take on the risk of the costs of up-front construction. Thus, TIEGs would have limited application in higher-risk areas or in addressing brownfield developments, where the cost of cleaning up contaminated land

U.S. INSTRUMENTS FOR ECONOMIC DEVELOPMENT			
Option	Pros	Cons	Rating
Tax-increment Financing	<ul style="list-style-type: none"> self-financing does not necessarily require a direct government subsidy no recourse to general revenues in the event of default good candidate for "brownfields" development 	<ul style="list-style-type: none"> very expensive form of borrowing may require additional security, such as "full faith and credit" provision beggar thy neighbour can result difficult to assess if plan passes the "but for" test can result in unintended displacement of residents 	3
Enterprise Zones	<ul style="list-style-type: none"> can be effective in spurring re-development 	<ul style="list-style-type: none"> requires large government subsidies difficult to assess if plan passes the "but for" test beggar thy neighbour can result can result in unintended displacement of residents 	2
Tax-increment Equivalent Grants (TIEGs)	<ul style="list-style-type: none"> self-financing private sector takes on risk of up-front development no recourse to general revenues in the event of default 	<ul style="list-style-type: none"> not a good candidate for "brownfields" development beggar thy neighbour can result difficult to assess if plan passes the "but for" test 	2
Asset-backed Borrowing	<ul style="list-style-type: none"> no recourse to general revenues in the event of default leveraging incremental property values can provide significant proceeds for development 	<ul style="list-style-type: none"> not a good candidate for "brownfields" development 	3

* Rating is from 0 to 4, where 0 signifies least desirable and 4 signifies most desirable.
Source: TD Economics

can be exorbitant. In those cases, it is likely that the TIEG would need to be complemented by a number of tax incentives, such as those used in enterprise zones, to lure private-sector interest.

In contrast, TIFs are better equipped for brownfield developments, since the public sector takes on the investment initiative. Still, financing these instruments through the debt market is expensive – for example, if the TIF obligations are not insured or if the bondholder is not given access to the revenue sources in case of default, a risk premium of a few percentage points is not unheard of. This high price presents a significant roadblock in the way of their near-term use in Canada, where cities have not even taken advantage of low-cost general-obligations borrowing. Moreover, south of the border, the costs of financing TIF districts are kept in check by using TEBs. As noted earlier, we do not support the use of these borrowing instruments in Canada.

Similar to TIEGs, asset-backed loans would not be all that attractive in financing brownfield developments, as there would be significant risk attached to value of the land until clean-up occurs. On the plus side, asset backed loans would likely carry with them lower financing costs than TIF revenue bonds. Moreover, borrowing against assets could also provide the city with significant proceeds for redevelopment, since investors – anticipating some appreciation in the value of the redeveloped land – would likely make available a share of that incremental amount for lending.

Enterprise zones are another tool in the U.S. economic development arsenal. However, these vehicles can prove costly to public coffers, since the revenue loss to government of, say, a corporate tax holiday is high while the incentive to invest is marginal.²⁷ More specifically, businesses have an incentive to invest outside the zone, where they can write-off these investment costs for tax purposes, and shelter the income earned from taxation by reporting profits in their tax-exempt enterprises. Furthermore, enterprise zones, TIFs and TIEGs all run up against another roadblock – the potential for “turf wars” or beggar-thy-neighbour. The incentives put in place may simply draw businesses from other areas adjacent to the zone rather than result in incremental benefits to the region. As a result, each of these need to pass the “but for” test – i.e., areas must show no recent or current growth and no prospect for future growth “but for” the implementation of the

economic development tool.

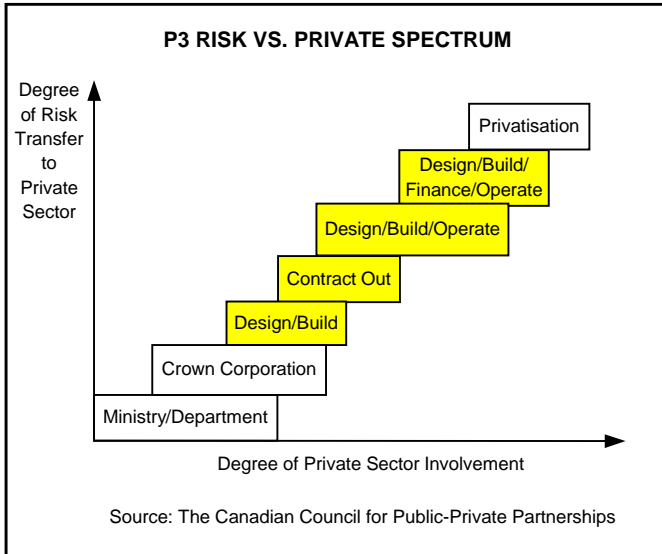
In sum, there is no easy answer to which one of these instruments is most useful in revitalizing a blighted area. It depends on the situation and the accompanying risk involved. But, while Canadian municipal governments should at least be given the flexibility to implement these types of approaches, they in turn must be careful to always weigh the costs against the private and social benefits of redevelopment. There is a good case to be made that many U.S. municipalities have used these incentives in an almost ad-hoc fashion with the lone goal of kick-starting activity. In instances where the risks are particularly high or where there are market failures – such as brownfield developments – Canadian municipal governments will be hard-pressed to tackle challenges on their own. As a result, additional assistance from the federal and provincial governments would be needed in the form of loan guarantees, grants, or the provision of additional tax incentives.

PART III - BRINGING BUSINESS ON BOARD

Recently, there has been increased talk about the need to bring the private sector on board to assist in the country’s infrastructure challenge. Here, we’re not talking about governments selling assets, although in some instances privatizing may be the optimal route to take. We are referring instead to partnering with the private sector in the operation and provision of public infrastructure, and in doing so, sharing the risks, costs and rewards of developing large projects. There is no doubt that public-private-partnerships (P3s) are complex arrangements that require careful planning and execution. But, while they have been used only sparingly in Canada, other countries around the globe have demonstrated that if P3s are pulled off right, they can be a valuable part of the overall solution to addressing the infrastructure gap. In the following section, we summarize the key themes presented in Annex 3, which is entitled *Better Leveraging the Benefits of Public-Private-Partnerships*.

The range of options is considerable

While most government activities are operated in public hands, partnering with the private sector is not a new concept in Canada – in fact, jurisdictions at all levels have increasingly turned to “contracting out” the delivery of public services to the private sector over the past decade.



However, as the accompanying chart reveals, this form of P3 represents only one step along a continuum that extends from commissioning a private-sector group to design and build infrastructure to one whereby the project is designed, built, financed and operated (DBFO). And, in our view, it is in the upper part of the spectrum – and notably the DBFO approach – where Canadian governments have only begun to scratch the surface in exploiting infrastructure opportunities.

Even though governments have traditionally turned a blind eye to more sophisticated P3s in Canada, this is starting to change, as the demand for infrastructure outstrips the ability of governments to finance and maintain capital projects. Around the country, there are a number of high-profile P3 projects already put in place or on the table – including P.E.I.’s Confederation Bridge, a state-of-the-art water treatment facility in New Brunswick, and B.C.’s Sea-to-Sky Highway to name a few. But, Canadian governments remain in the early stage of the learning curve, particularly when stacked up against the United Kingdom, continental Europe and Australia. It is this country’s relative inexperience with P3s and the resulting lack of public understanding of them that remains the number-one roadblock in the way of more widespread use of this model.

The P3 approach does not equal privatization

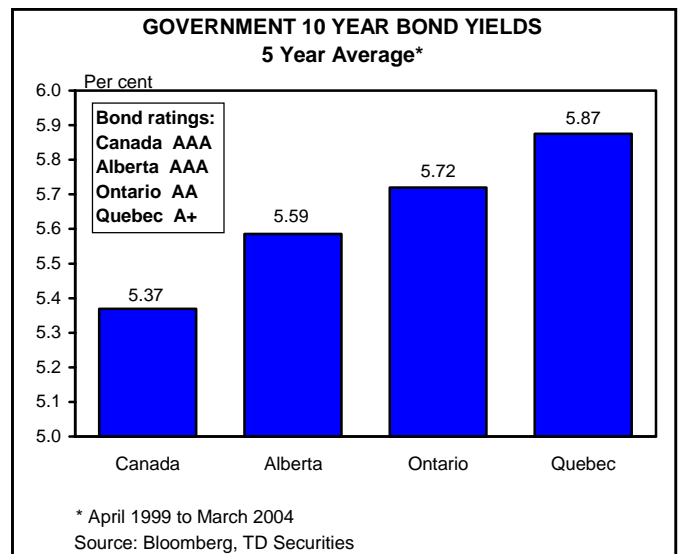
Among the largest public misperceptions of P3s is that they are viewed to be little different from privatization. However, the two concepts are indeed different. Privatization – at the extreme right of the spectrum in the chart –

refers to the outright selling of a public asset or service to the private sector. In contrast, in a P3 arrangement, the private sector takes charge in the development and operation of the project, but the government retains ownership of the assets and continues to establish the ground rules. Hence, there is little loss of control under P3s. Furthermore, since public authorities remain responsible for setting policies and the level of service, a much higher degree of accountability in service delivery is achieved relative to privatization.

Benefits, not just costs, should be considered

P3s also face resistance from the belief that they always fail to deliver value to the public sector because the cost of private financing is simply too high. This argument is grounded on two facts. First, the government can borrow money at a cheaper rate than the private sector, as the bonds of the former are backed by tax revenues and so are deemed to be virtually risk free. And, second, in contrast to public-sector provision, the private sector will require a reasonable rate of return on its investment, exacerbating concerns that the financial benefits that accrue to the private sector will be more generous relative to a publicly-funded model or relative to the benefits that the public derives from the delivery of the good itself.

These are valid concerns, but they oversimplify the cost issue. For one, as in the case of measuring the infrastructure gap, there is an opportunity cost involved when governments tie up significant resources to a particular cause, which few analyses take into account. These costs – which include elevated tax rates, debt-loads or an inability of



government to take advantage of more beneficial opportunities when they arise – can be significant. And, in some instances, they can be measured with some precision. Excessive borrowing, for example, may lead to a downgrade in the credit rating of a government, which would not only result in higher costs for new debt but for refinancing existing obligations. And, given that Canadian governments are still heavily indebted, despite recent progress in lowering debt burdens, the risks of a downgrade can not be ignored.

In any event, it is not cost, but *net benefit*, which is the most relevant benchmark in considering which way to go. And, on this count, P3s have the potential to provide significant bang for the buck by leveraging the skills, talent, and deep pockets of the private sector. Although the Canadian experience in P3s is too nascent to provide much evidence on this front, the United Kingdom offers some good proof, where the private sector has a consistent track record for carrying out projects ahead of schedule and avoiding cost over-runs that are common under traditional public procurement. In fact, the National Audit Office (NAO) in the U.K. has revealed that only 24 per cent of P3 projects were delivered late to the public compared to 70 per cent in the public sector. Similarly, cost over-runs occurred in only 22 per cent of the time under P3s compared to 73 per cent in the public sector.²⁸

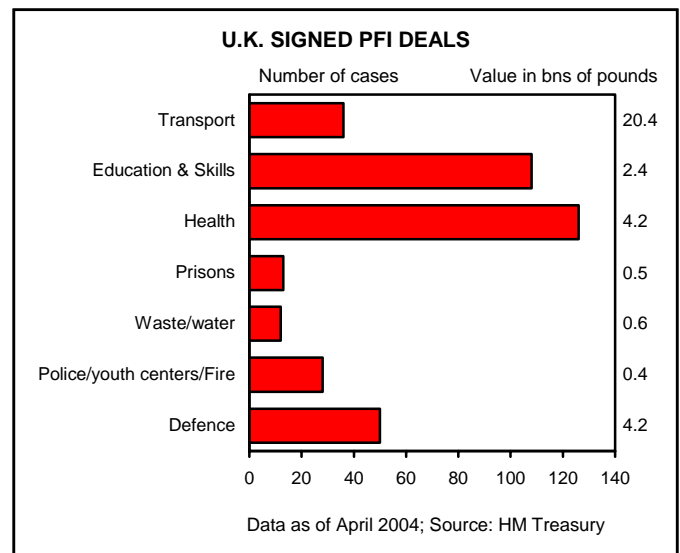
Public sector has been weak at allocating risk

Still, we acknowledge that P3s can be a risky game to the taxpayer if not executed correctly. As is the case with any business relationship, there must be synergies in working closely together. And, to the extent that the private and public sector parties have different cultures and attitudes, there may be a leakage in the potential rewards of a P3. Moreover, while agreements lay out the detailed responsibilities of both parties, the private sector – by way of its traditional dominance in the provision of public infrastructure – might attempt to retain significant control. Above all, for P3s to provide value to taxpayers, risk and return have to be properly aligned. However, the public sector has a tendency to underweight or improperly evaluate risk, which can result in excessive private returns at the expense of taxpayers. This roadblock is often attributable to an inadequate level of expertise and resources at the public level, as well as a lack of a cohesive government plan in measuring risk and establishing P3s.

These problems are not unique to Canada. In fact, a major reason why the U.K. has achieved success on the P3 front – and why a number of other countries in Europe have followed its lead – is that the central government there took earlier action to address many of these pitfalls. Most importantly, through its Private Finance Initiative (PFI) legislation, it developed a standardized process to assist public-sector employees in comparing risk and rewards across public- and private-sector procurement options. In addition, the U.K.'s National Audit Office has a mandate to review and evaluate the performance of a P3. In fact, many of its recommendations have been incorporated into the government's PFI structure. Lastly, in order to help public-sector employees identify opportunities for P3s and to help bridge the gap in expertise between the public and private sectors, the central government established Partnerships UK – which is a public-private-partnership in itself.

Time to eliminate these roadblocks in Canada

In Canada, in contrast, the approach to P3s can only be described as piece-meal, with little federal government involvement and provincial practices and policies that vary significantly across jurisdictions. Among the few consistencies, however, is the fact that provincial legislation continues to highly restrict municipalities from entering into P3s. Certainly, there needs to be a made-in-Canada solution to P3s – not all of the U.K. techniques may work here or be worth adopting. However, some of the more appealing aspects of the U.K. model that should be considered include, and which could be achieved through a strong



federal role in co-operation with the provinces:

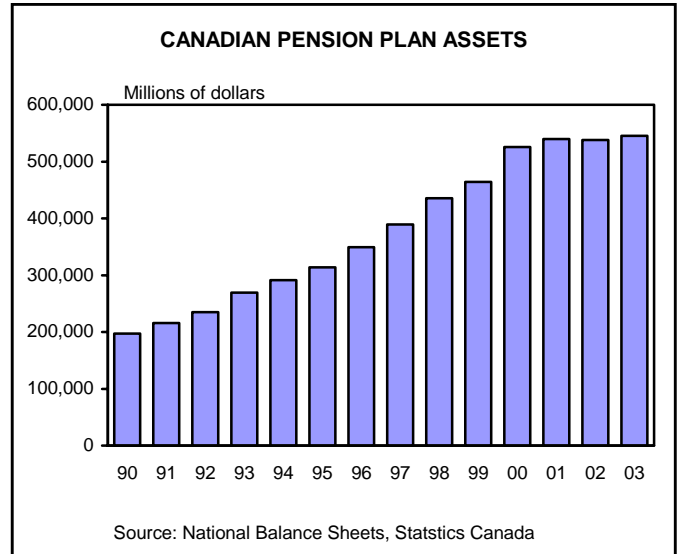
- Standardize contracts for “like” projects with the aim to increase public transparency and facilitate the procurement process;
- Define minimum reporting standards for P3 project obligations over the whole life of the assets in order to enhance transparency;
- Continually monitor and evaluate project performance similar to the U.K. National Audit Office.
- Establish a U.K.-Partnership-style model that centralizes resources with the aim of providing advice and expertise on P3s to the public sector.

Start with projects that easily accommodate P3s

The UK experience suggests that P3s can extend to most any public area in need of development or revitalization. However Canada’s smaller and relatively less experienced market suggests that governments may be wise to concentrate their efforts in areas that more easily accommodate P3s. Projects that fall under this umbrella tend to be large in scale, capital-intensive, have an identifiable revenue stream (i.e., user fee), and have measurable results – all of which would raise commercial viability and make it relatively straightforward to assess the potential risks and rewards. Roads, bridges, highways and water and wastewater facilities could all be considered good candidates in this regard.

Pension funds at the ready

For the P3 market to truly get off the ground in Canada

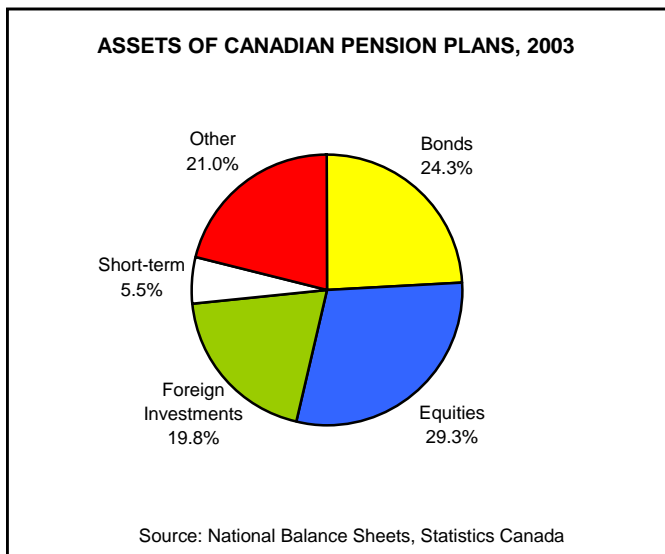


increased public-sector attention will only do so good – considerable private sector interest will be the other necessary ingredient. And, on this front, the country’s large pension funds, who are armed with a whopping \$800 billion in total invested assets, offer considerable potential to fill much of the gap.²⁹ In fact, after suffering dismal stock-market returns over the past three years – which, in turn, led to significant increase in unfunded pension liabilities – some of the largest funds have already shown increased appetite for diversifying their asset holdings into non-financial investments. And, not surprisingly, pension funds whose members are retired public servants have shown particular interest in investing in public infrastructure. For example, both OMERS and the Ontario Teachers Pension Plan have indicated that they would like to allocate up to 10 per cent of their pension assets to this area in the future.

Indeed, infrastructure assets are particularly well suited to pension plans, since real asset returns provide an excellent match to pension benefits, which are indexed to inflation. Nevertheless, pension funds will not just be looking at domestic opportunities, but those abroad, so competition will be fierce. The federal government’s recent decision to cancel a plan that would have imposed restrictions on pension funds from participating in the burgeoning income trust market will have been well-received in the pension industry.

P3s only part of the solution

The need to look more closely at P3s as a solution to the infrastructure challenge does not mean that public serv-



ice delivery is inherently less efficient – in many instances, the traditional public model would still win out as the best way to provide value for money. Still, P3s have proven their worth on the international landscape in allowing infrastructure projects to be carried out more quickly and with greater net benefits to taxpayers. And, where governments have bumped up against cash and/or borrowing constraints – pressures that are certainly witnessed in Canada – they have permitted projects to proceed that might have been delayed or shelved. Looking ahead, the usefulness of P3s as an alternative will be largely dependent on the ability of the federal and provincial governments to create a more competitive market, maintain sufficient opportunities for private-sector involvement, bolster public-sector expertise and ensure accountability and transparency.

PART IV – THE FEDERAL ROLE

The previous section speaks of the importance of strong federal leadership in laying the groundwork for a healthy market in public private partnerships – an interesting twist, since up until then, references in the report to federal involvement in infrastructure have been narrowly defined to providing grant assistance to municipalities. This raises the question of what broader role – both financial and non-financial – the federal government should play in closing the country's infrastructure gap. And, with an election fast approaching and federal funds allocated to infrastructure in recent budgets fast running out, this exercise couldn't be any timelier.

All eyes on federal government to ante up

Over the past decade, the current Liberal government has launched a number of programs in the infrastructure domain, and notably to assist municipalities to upgrade their capital stocks. The first program – the \$2.0-billion Canada Infrastructure Works Program – was announced in the 1994 budget. However, it was not until 2000, that calls for increased federal assistance for the purposes of municipal infrastructure began to pay dividends in the form of the creation of a number of new programs, some of which included:

- In the 2000 budget, the creation of the \$2.05 billion Infrastructure Canada Program, a \$600 million Strategic Highway Infrastructure Program, and a \$200 million Green Municipal Investment Fund.

- In the 2001 budget, a \$2.0 billion Canada Strategic Infrastructure Fund and a \$600 million Border Infrastructure Fund. At the same time, the government also announced that it would venture back into the housing arena for the first time in more than two decades by establishing a \$680-million Affordable Housing Program.
- In the 2003 budget, additional infrastructure funding of \$3 billion was announced over 10 years – a long-term commitment that would provide increased reliability and predictability. Of that amount, \$2.0 billion would be used to top up the Strategic Infrastructure Fund, and an additional \$1 billion would be directed to a new Municipal Rural Infrastructure Fund. Furthermore, an additional \$320 million over five years was also earmarked toward the Affordable Housing Program.

Nonetheless, this increased involvement since 2000 has not stopped at funding only – there have also been meaningful changes implemented to governance and basic policy. For example, in 2002, the government established Infrastructure Canada (INFC) to administer and co-ordinate infrastructure programs and to provide research and strategic policy development, and in December 2003, appointed a Minister of State (Infrastructure).

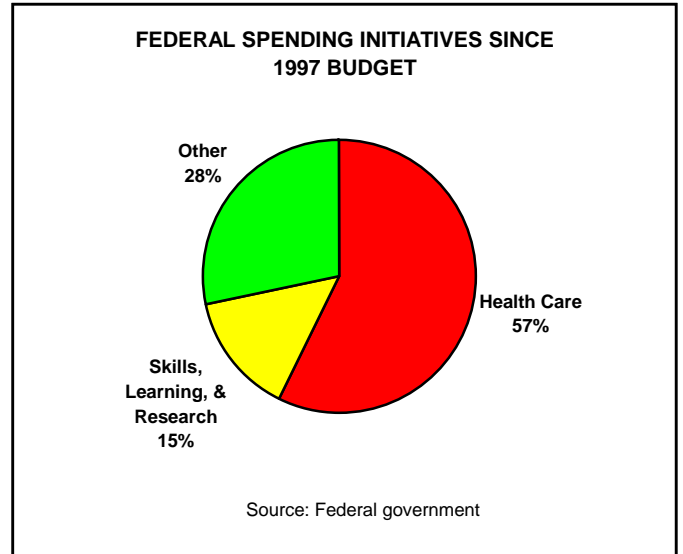
In spite of the actions taken since 2000, the federal government has still fallen short of the lofty expectations that have been placed on it by many Canadians. First, international comparisons often bandied about have continued to cast federal assistance in Canada in an unfavourable light – notably, the fact that the roughly \$12 billion or so allocated to the federal infrastructure programs over the past decade still represents roughly one-twentieth of the amount put aside by the U.S. federal government in its transportation infrastructure program alone (i.e., the US\$217 billion TEA-21 initiative), not to mention the equally impressive centrally-funded programs in the European Union. But, while cross-border comparisons can be dicey, particularly when the differing taxation and spending responsibilities across countries are taken into account, what is clear is that Canadian federal support for infrastructure has been slipping over the past few years. In particular, the total amount set aside in the 2003 budget for infrastructure worked out to be \$300 million per year – considerably less than the average tally of \$1 billion per year that the federal government had been effectively spending on infrastructure in the 1993-2002 period.

Meanwhile, several other spending areas – notably, health care – have received increased attention over the past few years.

Worse still, a good part of the funds booked in the infrastructure programs to date have already largely been committed, leaving little money left for additional projects. Even one half of the \$2 billion set aside in the 2003 budget for large, strategic projects has been dedicated. The same thing can be said of the border infrastructure fund, where \$500 million of the \$600-million total has already been spoken for.

A new program in the works

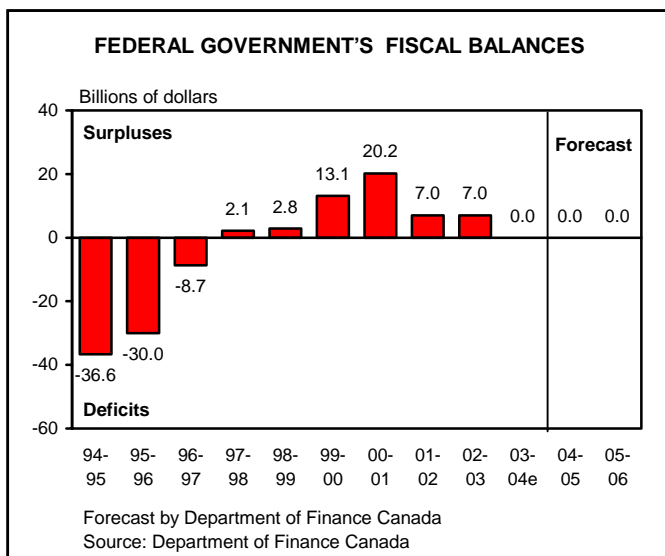
At the same time, however, the most recent federal actions have kept hopes alive that infrastructure will soon make its way back on the government’s list of top priorities. The February 2004 budget offered up no additional money for infrastructure explicitly, but included a measure to exempt municipalities from paying GST – a tax expenditure worth about \$700 million per year. But, more importantly, the budget also highlighted a pledge that further steps would be taken toward a “New Deal for Communities, and notably, a vow to work with provinces to share with municipalities a portion of gas tax revenues. In a speech in April 2004, the Prime Minister went further, promising that the government would provide a share of the federal gasoline excise tax or “equivalent” to municipalities by *year-end*. But, while the specific form of how the money will be provided remains uncertain, the amount is likely to be significant – it has speculated that it could be in the order of \$2.5 billion per year or roughly half the

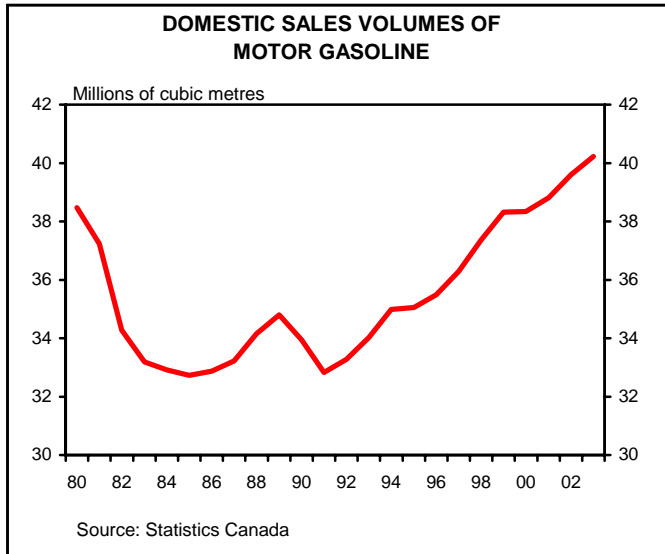


annual \$5-billion federal take from the gasoline tax.

Gas tax transfer not the way to go

While the “year-end” commitment for more money was almost universally welcomed, some observers interpreted the use of the phrase “or equivalent” as a sign that the Prime Minister is backing away from his earlier promise to transfer a share of the gasoline excise tax. However, we were pleased to see that he has left the door open to other options for municipal financial assistance. As we argued earlier, such a revenue-sharing arrangement is, for all intents and purposes, a grant. Hence, it suffers from the same accountability problems, with citizens outside the community paying for the benefits enjoyed locally. Furthermore, from a reliability perspective, these taxes fail the test, since they’re levied on the volume of consumption, which tends to grow only slowly over time. And, while there has been the argument put forward that gas-tax sharing for infrastructure purposes makes sense since it draws a direct link between car usage and transit needs, we would rebut that this is only superficially compelling. Federal excise taxes, along with their provincial counterparts, were not designed with transportation needs in mind, so the efficiency argument loses some of its muscle. Above all, the notion of transferring the gas tax is just a semantic trap. Given that all the government’s revenue sources are “fungible”, any funds transferred under the label of the gasoline tax are just as likely to come from, say, personal and corporate income taxes or the GST. *In short, while we support increased funding for municipalities to help them combat their infrastructure challenges, we do not think*





that handing out a share of the gasoline tax is the best route to take.

Not only is it necessary for the federal government to make better use of the money, but to take a larger and more effective role than it presently does in tackling the nation's infrastructure challenges. The good news is that such a focus would not require much of a strategic shift for the federal government. Consider the major priorities laid out in the federal government's 2004 budget – health, learning (i.e., post-secondary education and innovation), communities, and Canada's relationship with the United States and position in the world. The need to upgrade infrastructure – from health facilities, to sewers to educational institutions and border crossings – spans all of these areas.

First step – deal with issues in own jurisdiction

First, the federal government can go a long way in strengthening Canada's infrastructure by getting its own house in order. Both the nation's standard of living and security are closely tied to a smooth running Canada-U.S. border, which falls under federal jurisdiction. Yet, the infrastructure at the border crossings is inadequate, as evidenced by long queues and delays, which have been worsened since the September 11th, 2001 terrorist attacks. The \$100 million in uncommitted money in the Border Infrastructure Fund will not go very far toward addressing the capital needs in this area. It could be used to widen and improve the highway route from the 401 to the Windsor Border Crossing – one of Canada's busiest border points. However, without funding for a tunnel or another bridge

at Windsor, little would be done to cure the backlogs.

Many other federal government activities feed more indirectly into infrastructure, but are necessary nonetheless – and especially how they relate to boosting prosperity and relieving fiscal pressure in the nation's cash-strapped municipalities. To better understand why this is the case, consider how almost every federal policy change affects life in Canada's communities. Federal support of post-secondary institutions and research provides the skilled talent that largely goes to work in cities. Immigration policies are also vital. And, we should not forget the important role in supporting Canada's social safety net – including the Child Tax Benefit and the Guaranteed Income Supplement – which is critical in alleviating poverty and crime in the nation's communities.

There is still unfinished work to do in all of these areas. At the top of the list, the federal government needs to do a better job at matching immigration settlement funds to the areas where the costs are being incurred. The large increases in funding for research funding and assistance for students in recent federal budgets have been positive, but there remains a patchwork of programs across the federal and provincial levels that should be better integrated. And, while many of the government's enrichments of social programs in recent years have been paved with good intentions – for example, the 2004 budget announced significant financial assistance for low-income individuals to attend post-secondary education – they have also come with some unfortunate side-effects. Notably, in light of the rapid rate at which benefits are taxed back as income rises, marginal personal income tax rates often exceed 60 per cent for low and modest income individuals. This needs to be addressed.

Federal resources should satisfy some criteria

Increased attention on its own playing field would be a good first step for the federal government to pursue in order to play a more important and constructive role on the infrastructure front. But, as importantly, any new funding for infrastructure – including further commitments for local governments – needs to be as efficiently spent as possible. We identify two major criteria that federal funding should satisfy.

Criteria 1 – minimize interference in local operational issues

Although final approvals on federal infrastructure funds

are made by the Minister of State (Infrastructure) following consultations with other levels of government, there is always the risk that federal priorities could trump local priorities in allocating funding or that funding could follow a one-size-fits-all approach. The federal government has recognized this impediment. In fact, it had planned to set up the Strategic Infrastructure Fund as a foundation that would run it at arm's length from the government. However, because it was criticized for having weak accountability to Parliament for the public spending, the government ultimately changed its mind and opted to operate it as conventional spending.

Criteria 2 – don't substitute taxpayer funds in cases where user pay works

In the past, federal funding has been used in effect to subsidize projects that were good candidates for full-cost pricing. Moving forward, the federal government should avoid using general taxpayer money to fund capital projects in situations where users should pick up the tab. For example, any new investments targeted at border crossings should be cost-recovered through user fees.

Advisory board would strengthen mechanism

Happily, Infrastructure Canada has been moving in the right direction on both of these fronts. More specifically, the federal department has been pressing for assurances that user fees will be applied in certain cases and has been paying greater attention to local needs in allocating funding. But, while we don't believe the current system is broken – and, in fact, is preferable to setting up a new vehicle such as one to share the gasoline tax – we do recommend some improvements to the process, beginning with establishing an advisory board.

Although the government should still call the ultimate shots for the sake of accountability, the independent board could provide advice to the government on what type of infrastructure should be financed and how. In particular, it would play a lead role in setting standards, but also set the principles on what infrastructure should be cost-covered (i.e., water sewage, etc) and what might require general tax-financed funding. And, in order to ensure local priorities are heard the board should have a strong local and provincial government representation. Furthermore, the private sector should also have a seat at the table, so that the governments can better capitalize on opportunities for P3s.

The federal government could model the infrastructure advisory board after its very own National Round Table on the Economy and Environment (NRTEE). The NRTEE, which was formed a few years ago to study and make recommendations on sustainable development, has an impressive list of public and business sector leaders on its membership roster. Chief among its stated goals was to “advise decision makers and opinion leaders on the best way to integrate environmental and economic considerations into decision making.”³⁰ The NRTEE's work to date has been widely praised.

Funding a tough issue

The creation of the advisory board to provide advice on project decisions would help to address the criticism that federal infrastructure funds are not spent with local needs in mind. The only tricky issue becomes how the programs should be funded. Federal politicians – who will continue to have the ultimate decision-making authority – are clearly attracted to this funding vehicle because they can dump into them “surprise” surpluses that appear at year-end. But, there is a convincing body of evidence piling up, not of least is emerging from the Office of the Auditor General, that that practice is not good fiscal management.

Education needs to be eligible

More attention also needs to be given to project selection. Certainly, there is no shortage of areas in need of capital investment. But, one in particular that we believe should be high up on the pecking order is the all-important area of education, which made it as one of the federal government's five main priorities in its 2004 budget. The funding needs in education have been fairly well documented. Notably, the Canadian Association of University Business Officers estimates a massive deferred maintenance bill of almost \$4 billion in fiscal 2000-01 – a shortfall which is contributing to a significant rationing of facilities and student entrance cutoff averages in the lofty 80-90 per cent range for many university programs. Worse, with the mini-boom created by the echo generation to continue to move through university over the next few years, the education infrastructure gap will only worsen. This presents a major risk to Canada's ability to compete down the road.

The federal government could play a major role in assisting post-secondary institutions with their limited finan-

cial capacity, which could fall under the banner “Building a Classroom for the 21st Century”. However, the aim to turn Canada’s post-secondary schools into world-class institutions would require federal-provincial cooperation. Put simply, there is no point building the capacity in post-secondary education unless universities also have sufficient operating funds to go along with it. And, that side is under the purview of the provincial government.

Create infrastructure bank with private-sector involvement

Federal assistance to municipalities does not need to stop at providing grants. The federal government could also play an important role in helping municipalities to finance projects by establishing a lending vehicle similar to that of the state infrastructure banks (SIBS) that were discussed earlier. This revolving fund program – created by a federal grant – could be made flexible, offering term loans and lines of credit at varying interest rates, debt service guarantees, debt-service reserves, and bond insurance. The infrastructure bank would accomplish several objectives. First, it would complement the provincial efforts to assist municipalities to take better advantage of borrowing to finance projects. Second, such a vehicle could be used to lure private investment by lowering the financial risk. And, lastly, advice on lending decisions could be made by the same public-private advisory board as that created for the infrastructure funds to ensure that taxpayer money is well spent.

Greater federal involvement in combatting the most severe urban challenges

Many of Canada’s larger cities face problems that are so enormous in scope that local governments cannot handle them alone. Affordable housing and brownfield sites are two shining examples of large impediments that are driven by market failure. The lack of affordable housing for the low-income Canadians reflects the fact that are too many people that have too little income to pay for what developers can build. And, while redeveloping brownfield sites provides considerable potential to generate income and wealth – in fact, it has been estimated that successfully developing as many as 30,000 sites in Canada could lead to \$7 billion per year in net benefits to society – the huge costs of cleanup and liability rule out private sector involvement in many cases.³¹ Thus, even though both areas are eligible for funding under existing federal infra-

structure programs, the severity of these problems indicates that additional creativity and leadership are required. The good news is that the federal government is already taking steps to address both problems in cooperation with local and provincial governments.

In the TD Economics’ June 2003 report, *Affordable Housing in Search of a New Paradigm*, we argued that the ultimate solution lies in raising market incomes at the low end of the income spectrum. In the meantime, however, subsidies can form part of an interim solution, with capital grants (rather than tax incentives) the most efficient form of assistance to stimulate the creation of new supply of affordable housing. Indeed, the cost-sharing affordable housing agreements underway between the federal and provincial-territorial governments are set on capital grants funding, which we support. Although the implementation of these agreements has contained its fair share of problems – for example, some provinces have been slow to step up to the plate with matching contributions – we do believe that the mechanisms in place offer potential to put a severe dent in the housing crisis.

The federal government has also demonstrated leadership in tackling the challenge of brownfield sites. In 2003, the NRTEE issued a report entitled, *Cleaning Up the Past and Building the Future*, which contained a number of well-thought-out recommendations and strategic directions

PROPORTION OF HOUSEHOLDS WITH AN AFFORDABILITY PROBLEM			
	Census Years		
	1991	1996	2001
Owners & Renters			
30% or more	22.7	26.6	24.1
50% or more	9.4	12.0	10.6
Owners			
30% or more	15.4	16.9	16.0
50% or more	5.4	6.5	6.2
Renters			
30% or more	34.8	43.2	39.6
50% or more	16.0	21.6	19.0
* Proportion of household income devoted to shelter costs. Shelter costs refer to gross rent for renters and owner’s refer to gross rent for renters and owner’s major payments for owners; Source: Statistics Canada (1991, 1996, 2001 Census), TD Economics			

for Canadian governments at all levels to follow.³¹ These included measures to provide effective liability protection for developers, remove tax impediments and implement financial incentives to spur revitalization of the brownfield areas. Encouragingly, provinces have also shown a desire to work with the federal and local governments on this issue, led by legislation passed in both Ontario and Quebec aimed at promoting brownfield development. It may be useful for governments to consider some of the U.S. financial instruments put in place to regenerate blighted lands that we discussed on page 17, although care should be taken to ensure that any incentive passes the “but for” test (i.e., development would not have occurred “but for” the subsidy).

Tripartite agreements part of the answer

In the most pressing urban challenges, the governments – federal, local and provincial – might want to consider formalizing a tripartite agreement that spells out their various responsibilities of each level. In fact, there have been precedents in Canada for this type of arrangement. In Winnipeg, where urban aboriginal issues and an abandoned downtown core top the list of priorities, there have been three agreements put in place over the past two decades. Although the most recent five-year deal – the Winnipeg Development Agreement – expired in 2001, the three governments are currently negotiating a new one. In Vancouver, a similar five-year agreement was reached in 2000 that sets the stage for governments to address poverty in the city’s downtown east side.

The results flowing from both the Winnipeg and Vancouver experiences have been mixed. Certainly, the joining of financial forces under a common vision has paid dividends in the form of development and social progress that likely would not have occurred otherwise. But, some observers have criticized the approaches on several fronts. First, there is the view that many of the activities across governments have been poorly integrated, dampening the overall synergies. Second, community groups and the private sector have not been effectively brought into the equation. And, third, in some past experiences, a number of crucial issues at the heart of the problem – notably, rebuilding weak physical infrastructure – have not been ad-

equately addressed. With these lessons learned, the federal government, along with its provincial and local counterparts, is now looking at opportunities to implement such agreements in other cities, including Toronto. We see significant opportunities in pursuing such an approach.

Conclusion

Canada’s eroding public infrastructure presents one of the largest risks to the country’s competitiveness and overall quality of life over the longer run. While estimates of the so-called infrastructure gap range, a consensus has emerged that the price tag involved in bringing the aging infrastructure up to scratch and supporting future growth is sizeable. Recognizing that the public is ultimately on the hook for paying the bill one way or another, Canadian governments need to make smart choices to ensure that these costs are minimized. **First**, there needs to be a shift towards charging those directly who consume the services in areas where there are no over-riding equity concerns. **Second**, a stronger link between governments who raise the funds and those who spend it should be incorporated. Providing municipalities with a broader range of revenue tools, and assist them in making better strategic use of debt would go a long way in achieving these ends. **Third**, the skills and deep pockets of the private sector can present an enormous opportunity to more efficient delivery of services in many cases. And, **fourth**, a greater federal contribution is required. In particular, the role of the federal government needs to extend far beyond offering up increased financial support and spending that money more effectively, but in leading the way and bringing all levels of government and the private sector together under one roof. Without all parties working along side each other, the elimination of the infrastructure gap will remain a pipe dream.

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Annex 1

TAX-EXEMPT BONDS (TEBs)

Best left on the shelf

With \$1.9 trillion outstanding in municipal debt in the United States, debt financing is the single most important means of funding state and local public infrastructure. Although there are many different types of municipal bonds in the U.S., the one that is grabbing considerable Canadian attention is tax-exempt bonds (TEBs). In effect, tax-exempt bonds represent a federal subsidy, in which the interest earned by the holders of these debt instruments is not subject to federal income taxes (and may even be exempt from state and local taxes). In theory, the municipality can extract the entire amount of tax deduction in the form of lower interest rates, thereby reducing the cost of borrowing. In Canada, municipalities currently do not have authority to issue these bonds and doing so would require some legislative tweaking. However, there are hybrid versions of TEBs in existence. For example, the Ontario provincial government in 2002 made the necessary legislative changes to permit Opportunity Bonds – in which the income earned by the bondholder is exempt from provincial taxes only. Nevertheless, TEBs are in their infancy stage in Canada and are not permitted in other provinces, not to mention that there does not appear to be any appetite for them at the federal level.

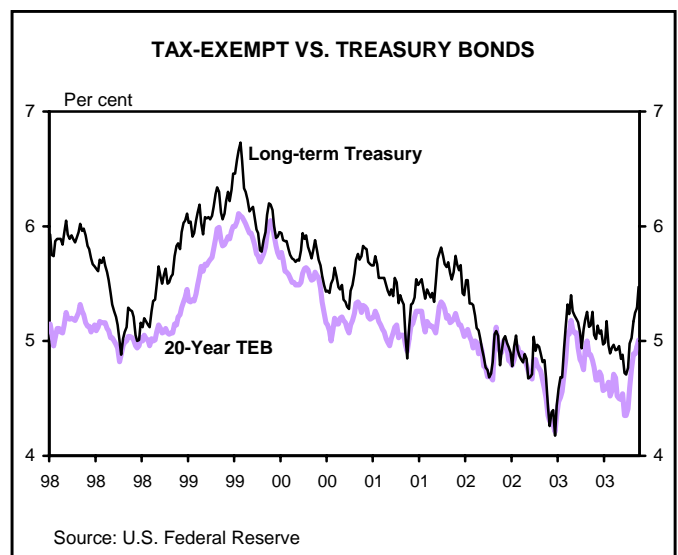
Not all taxpayers treated equally

TEBs are hailed in the U.S. as a cheap source of municipal funding, but in our view, the instruments are severely flawed with inefficiency and inequity. For one, in theory, the yield on TEBs should settle at a level that is equivalent to the after-tax return on other competing taxable instruments. This equilibration normally occurs at the level of the *average* marginal tax rate. As a result, individuals with higher-than-average tax rates enjoy disproportionately higher returns by investing in TEBs, while those with below-average tax rates would actually be at a disadvantage in purchasing TEBs rather than an equivalent taxable bond. For illustrative purposes, the average federal marginal tax rate in Canada is 22 per cent and the yield on a taxable 10-year government bond at the start of the year was 4.8 per cent. Therefore, the equivalent yield for TEBs would be 3.74 per cent in theory. Taxpayers in the highest bracket (29 per cent) would obtain after-tax

cash of \$3.74 per every \$100 bond year, compared to \$3.41 if they bought the taxable bond. That means the taxpayer has retained an additional \$0.33 per \$100 bond year by purchasing the TEB. In contrast, individuals in the lowest income tax bracket of 16 per cent would obtain after-tax cash of \$4.03 per \$100 bond year on a regular taxable bond, meaning they would *forgo* \$0.29 cash per \$100 bond year if they purchased TEBs instead of taxable bonds. TEBs clearly favour those in least need of a tax break – high income earners – making it a regressive application of a federal tax-subsidy.

Too much leakage

To make matters worse, the U.S. experience indicates that taxpayers are not often willing to pay a premium that is exactly equal to the full amount of available tax savings. This means that the break-even yield of 3.74 per cent calculated in our example would actually have to be higher in order to attract buyers, thereby reducing the cost-advantage of financing a project with TEBs. In fact, it is estimated that only two-thirds of every dollar of tax-subsidy reaches the municipality in the form of reduced costs, with the rest funneling to the bondholder. U.S. financial markets provide stark evidence to this point. In 2003, the average spread between 20-year TEBs and 20-year taxable Treasuries was a slim 30 basis points. But, because



TEBs are disproportionately held by income earners in the 25 per cent or higher tax brackets, a spread in the neighborhood of 100 basis point would be more representative of the extraction of the federal tax benefit to the municipality. Therefore, the money saved by state and local authorities in lower payments is considerably less than the cost of the tax break to the federal government. Clearly, it would be more efficient for the federal government to deliver a direct grant to the municipalities for infrastructure projects rather than promote the use of tax-exempt bonds which leak a significant amount of the benefits.

Canadian inefficiencies would be even greater

In Canada, the leakage from TEBs would likely be exacerbated by the importance in the bond market of foreign

and pension fund investors. This is because these investors are not subject to Canadian income tax, or at least only after deferral in the case of pensions. Thus, there would be less overall appetite to hold these bonds than a higher-yielding non-TEB debt instrument.

And, as if sizeable benefit-leakage isn't enough to discourage the use of TEBs, these debt instruments also lack accountability. Tax-exempt bonds provide benefits to one specific group of society (the local citizens of the city issuing the TEB) but tap the entire population for the costs, through lower state and federal revenues. Put simply, TEBs compel nonresidents to finance the infrastructure of others.

Annex 2

TAX INCREMENT FINANCING (TIF)

A Possible Fiscal Tool for Cities?

Tax-increment financing (TIF) has enjoyed widespread popularity in the United States as a means of financing local infrastructure investments and improvements. The overall goal of tax-increment financing is to revitalize deteriorated sections of a city (designated as TIF districts) through public investment in a variety of physical infrastructure improvements, including land acquisitions, property rehabilitation, road improvements, sewage expansion and building construction. Under TIF policy, municipalities can freeze property taxes in the TIF district at the level that existed prior to any injection in government investment. That revenue continues to accrue back to the governing bodies in the district throughout the life cycle of the TIF (usually between 20-35 years). At the same time, the investment by the government is expected to increase the assessed real estate valuations in the district by stimulating new construction projects by the private sector, and any new tax revenues (i.e. the tax increment) are earmarked for the repayment and servicing of the debt. Once the debt is retired, the increment tax is folded back into regular municipal government coffers.

TIFs gaining popularity in the U.S.

TIFs were first legislated to municipalities by the state of California in 1952. However, widespread use didn't take hold in the U.S. until the 1970s and 1980s, as local governments were increasingly financially constrained under shrinking project funding from federal and state governments. At the same time, local government officials were confronted with voter backlash from attempts to extract more revenue by raising property taxes. This reaction was so severe in California that it led to the passage of Proposition 13, which effectively capped local property tax increases. Currently, 48 states in the U.S. have adopted TIF policies, though it is most frequently used in California, Illinois, Colorado, Florida, Wisconsin, Minnesota, and Indiana.

The nationwide popularity of TIFs grew out of a number of perceived funding advantages:

First, the “self financing” nature of TIFs makes them more politically palatable for economic development.

Since the repayment of the debt does not require any new levies, property owners are not asked to pay more than their normal tax burden. In addition, there is no real loss to the community in using the taxes generated by redevelopment to pay for the financing of the project.

Second, financing is done on a local basis and does not necessarily require any direct subsidy from higher levels of government. This statement, however, is only partially true in the U.S. because many municipalities finance their investment with tax-exempt bonds.³³ In effect, tax-exempt bonds represent a Federal subsidy, in which the interest earned by the holders of these debt instruments is not subject to Federal income taxes (and may even be exempt from state and local taxes). As a result, TIF bonds provide substantial interest cost savings to developers.

Third, and perhaps the biggest reason for the widespread use of TIF policy, is that it offers a convenient way for municipalities to skirt around constitutional and statutory debt limitations imposed by the state. And, there's the added perk that tax-supported debt usually does not require voter approval. Unlike traditional general obligation (GO) bonds, tax increment bonds in most states are not subject to municipal debt limits or public referendum requirements. Therefore, local officials have much more discretion to sell TIF securities than they do general obligation securities, which gives them more debt capacity to finance infrastructure improvements.³⁴ As a result, this off balance sheet means of financing opens up a significant amount of capital for projects that may otherwise not have occurred if the municipality was restricted to traditional GO financing.

TIFs are expensive

At the same time, TIF projects usually carry a high price tag because the default risk is transferred to the holders of the bonds rather than the municipality (the taxpayers). With TIF projects, debt repayment and servicing depends entirely upon future increments in property tax revenues. In other words, the City has no obligation to pay the bondholders if the project does not generate sufficient increment taxes. Some U.S. municipalities pledge other

revenue sources in the district – such as increment sales taxes – in addition to increment property taxes to help circumvent this risk and reduce the cost of borrowing. But this still leaves debt repayment under serious risk if the tax base does not expand as expected. Because of this, TIF bonds (otherwise known as revenue bonds) carry a hefty risk premium compared to general obligation borrowing, which is backed by the whole municipal operation. In the U.S., revenue bonds for TIF projects can carry a risk premium in excess of 300 basis points over comparable general obligation bonds.

In order to reduce the cost of financing, many municipalities will include a “full faith and credit” provision, which essentially securitizes the revenue bonds against the whole source of municipal finances. However, by doing so, the financing for TIF projects starts to resemble a conventional, general borrowing program and defeats a critical purpose of revenue bonds, which is to transfer financial risk away from the taxpayer.

Beggar thy neighbor can result

A number of equity issues also crop up under TIF policy. For instance, projects can often trigger “turf wars” between neighboring localities – in economic jargon, it’s the classic “beggar thy neighbor” problem – because they can result in a transfer, rather than a creation, of resources from one region to another. As an example, if a shopping mall is constructed on completely undeveloped land, then all sales tax revenue collected is an increment to that district. But, it may not be an increment to the city or municipality, as the sales in the new mall may simply represent a transfer from a nearby central business district.³⁵ In addition, TIF districts are often in areas where there are overlapping municipality and school jurisdictions. Since property value growth in the TIF district is reserved for the repayment of TIF obligations, these other non-benefiting jurisdictions that contain part of the TIF district may feel shortchanged. The U.S. TIF market has been able to mitigate some of this risk by allowing pass-through of increment tax revenues to overlapping jurisdictions. For example, Bill 1290 in California designates a declining proportion of the increment tax in the TIF district to be passed back to the affected taxing entities over the life of the debt repayment. California also smoothes intergovernmental conflicts by allowing a cap on the amount of tax increment that redevelopment agencies receive from a project area. Once the cap is hit, all the collected property taxes

go directly to the overlapping general government, altogether bypassing the redevelopment agency.³⁶ In other cases, TIF policy can place an added strain on government entities located *within* a district. For example, a project that increases the residential population within the district can present a severe financial strain on schools that serve that district, since they now face a constant revenue base alongside a growing population of students. In response to these types of problems, a number of U.S. municipalities have incorporated more flexible funding measures, such as a minimum per capita student financing criteria and/or a redirection of any excess TIF revenues back to the affected entities.

TIF policy used for the remediation of brownfield properties can result in the unintended displacement of residents, because it is often the case that targeted brownfields are located in low-income or impoverished areas. The policy is intended to attract investors and alleviate economic distress in the area, which materializes as increased property values. But at the same time, the revitalized area can harm the residents of the area who cannot afford to pay higher taxes or rents that result from the increased valuation of properties. In such cases, tax increment financing can displace these residents into areas that are not targeted for redevelopment.

U.S. experience supports limited use of TIFs

The high risk premium commanded for TIF bonds combined with the potential for unintended and inequitable consequences certainly suggests that TIFs are not meant to be used as a broad sweeping tool. If some of the increment property tax base would have occurred independent of the TIF project – i.e. through natural population expansion or economic growth – or if the project relocates development that would have otherwise occurred in the jurisdiction, then TIF policy collides with a variety of incentive and equity problems. Simply put, TIF districts should pass the “but for” test – i.e. areas must show no recent or current growth and show no prospect for future growth “but for” the TIF. Although many states in the U.S. require projects to leap over “but for” hurdles before receiving approval, the bar is usually low and the tests are not uniformly or rigorously applied. Most states have resorted to a simple finding by the authorizing governmental body that development would not occur without the assistance and public funds supplied by the government.³⁷ However, the “but for” test is only a necessary, but not

sufficient condition. TIF districts should only be designated in areas believed capable of realizing a significant and sufficient increase in assessed property values. In addition, TIF districts should only be implemented where the project will generate a *new* income stream – large abandoned industrial sites can make a good candidate.

The Canadian Case

In many respects, Canadian cities face some of the same challenges as their U.S. counterparts – including a shift in economic activity from downtown cores to the suburbs, large pockets of brownfields, and inadequate overall infrastructure. Moreover, like in the U.S., legislative limits imposed by provincial governments have restrained municipalities' flexibility to address their specific challenges. This suggests that it might be useful to include TIF policy – which is currently not permitted under the current provincial legislative framework – in the municipal fiscal arsenal.³⁸

Still, some key differences in situations in Canada and that south of the border provide a clearer picture as to why the push for TIFs hasn't transpired in Canada. Most importantly, Canadian cities have not taken advantage of general-obligations borrowing nearly to the same extent as their U.S. counterparts, leaving considerable scope for them to address many of their infrastructure financing challenges through this lower-cost technique. This relative aversion to debt could reflect a number of factors, including an over-reliance on the slow-growing property taxes for revenues, as well as the fact that Canadian cities have not faced quite the extent of urban decline that U.S. cities did in the 1970s and 1980s that triggered massive efforts to redevelop blighted and dilapidated areas. Second, tax-exempt bonds – which have driven growth in the municipal debt market Stateside – have not been used in Canada. At the provincial level, only Ontario has moved to establish this type of instrument (i.e., Opportunity Bonds) which would exempt from tax interest paid at the provincial level. Nonetheless, the federal government has shown little appetite to extend tax-exempt status to municipal borrowers. As we indicated earlier (see footnote 2 on the bottom of page 2), we believe that TEBs are a flawed vehicle, and we do not support their application in Canada.

These differing circumstances between Canada and the U.S. raise the question as to why municipalities would choose to borrow through more expensive TIF debt instruments, when a cheaper alternative remains at their dis-

posal? And, general obligation borrowing is not the only means of securing cheaper financing costs, as we argue in the following section.

TIFs not the only way to go

There is one important feature embedded in the concept of TIF policy that can be borrowed on, and that's the ability to identify and secure debt against an asset in need of economic development. Instead of financing development by borrowing against the future – and therefore uncertain – tax revenues of the property, a city could borrow against the existing value of the designated area. This practice can benefit the city in two ways. First, an asset-backed loan offers a lower cost of financing than that of revenue bonds. Second, it could also provide the city with significant proceeds for redevelopment, since the supply of funds available to the government would likely exceed the current value of the land. That's because investors would make some estimation regarding the future value of the redeveloped land and a portion of that estimated value would likely be available for lending. Cities in Canada currently lack the authority to borrow against assets, and like any financing tool, it would have to be used with discretion. If a city misestimates the cost of development or its ability to repay the loan through future revenues, and then defaults, it risks handing over that asset to the bondholders.

Conclusion

Most cities in Canada still have access to more traditional sources of financing at a reasonable cost, suggesting limited usefulness of TIFs in the near term. Asset-backed loans could offer another reasonable source of funding for municipalities without all the complexities or costs associated with TIFs. But, even these instruments would have limitations when it comes to brownfield developments, since land property assessments would not be sufficient to finance clean-up and development costs.

Over the longer run, the enormous need for cities to invest in deteriorating infrastructures on the heels of a decade of neglect may force Canadian cities to resort to more expensive forms of financing, perhaps opening the door for more creative solutions like TIFs. And, while the U.S. experience shows that TIFs on their own are no magic bullet to the infrastructure financing problems faced by municipalities, they could be a useful tool in the municipal fiscal arsenal.

Annex 3

Better Leveraging the Benefits of Public-Private Partnerships

Public-private partnerships (P3s) reflect a cooperative venture between the government and the private sector with the purpose of delivering a clearly defined need to the public. At the core, P3s provide a means for governments to capitalize on the expertise, innovation and technology of private firms and, at the same time, download some of the risks inherent in the development of a project or in the delivery of a service. In addition, P3s can provide the government with upfront access to a deep pool of funds, without which necessary projects may remain a distant dream. Naturally, nothing is free and the government must financially compensate the private sector not only for its capital costs, but also for the risks it has incurred. This means that the trick to any well-structured P3 is in identifying the risks that are best borne by each party. As an example, in the construction of a major new highway, the managerial and technological expertise of a private firm may lower the risks associated with the design and construction costs, whereas the testing and monitoring of appropriate environmental and safety standards might be more efficiently managed in the hands of the government. P3s come in all shapes and sizes, the most common reflect some combination in which the private sector will **design, build, finance and/or operate** (DBFO) a public infrastructure or service. The most familiar forms of P3s are in basic infrastructure needs such as water, waste management,

energy supply and transportation, however, increasingly their use is extending into public services such as hospitals, schools, government accommodation, defense and prisons.

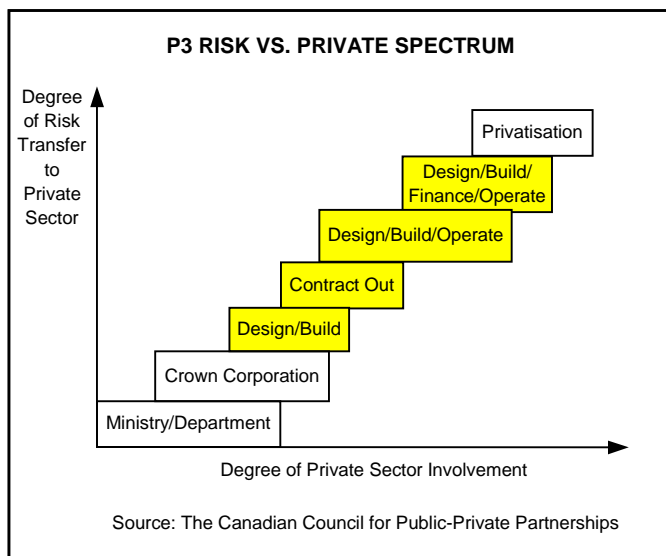
P3s not a smokescreen for privatisation

Public-private partnerships should not be mistaken with privatisation initiatives by the government. Although the words are often used interchangeably in the media, the outright ownership of a public asset or service characterizes privatisation, whereas the government retains ownership of the assets and usually regulates the use of them in P3s. Because of this, P3s carry a much higher degree of accountability than privatisation when it comes to the delivery of a public service, since public authorities remain responsible for setting policies and the level of service.

In fact, governments can extract a high degree of private sector accountability from P3 contracts through performance penalties. P3 contracts usually embed penalty payments that accrue to the private consortium in the event that a project does not satisfy safety and quality standards or predetermined construction deadlines. In essence, the government can transition from one of operations manager to one of contract manager in a P3, thereby allowing it to define outcomes that must be achieved by the private sector, set reporting standards and maintain performance monitoring.

P3s used only sporadically in Canada

Although countries all over the world – the U.K., Australia, Europe, U.S. – have actively and effectively enlisted the aid of private partners to help bridge their infrastructure gap problem, the Canadian approach has been ad hoc under an inconsistent political appetite. This has left an infrastructure landscaped marked with only a spattering of P3s that most commonly fall under the scope of big-ticket transportation ventures – like the Confederation Bridge in P.E.I., the Fredericton-Moncton highway in New Brunswick along with projects currently getting underway like the Sea-to-Sky highway in British Columbia. In order for P3s to be applied effectively and broadly in the infrastructure equation, Canada needs to develop a cohesive plan with defined policies. The failure to do so only



serves to stunt the development of a competitive P3 market, which in turn could lead to their inappropriate and ineffective use.

The government's central role

There is a distinct need in Canada for the federal government to take a more active role in guiding and supporting the implementation of P3s. As it currently stands, there is no one central body that offers a clear legal and institutional framework on P3s, as each level of government (federal, provincial and municipal) across each province defines its own approach.

The experience in the UK shows that the widespread application of P3s requires political consensus and that the central government plays a critical role in mobilizing resources and taking the necessary legislative and organizational actions. Faced with an aging infrastructure system and mounting rehabilitation costs, the U.K. central government launched the Private Finance Initiative (PFI) in 1992, which enacted legislation to facilitate, finance and guide the P3 process. Their efforts were met with such great success, that any country now seeking to shape a national P3 model first looks to the UK for guidance. With more than a decade of steadfast commitment to infrastructure renewal and development, the UK boasts more than 459 P3 projects with a combined value of 32.9 billion pounds. In addition, the availability of private resources and innovation has flourished, allowing for greater cost-efficiency in doing business with the private sector. So much so, that this effective combination of legislation, regulation and funding has given rise to entire new industries and companies – i.e. insured debt instruments – deepening available expertise and financing tools

Four pillars to successful P3s

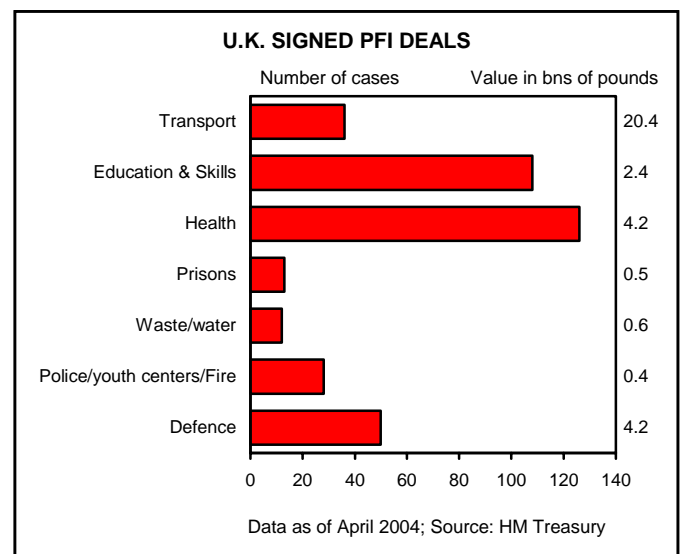
In contrast, the absence of a cohesive national approach to P3s in Canada has contributed to deficiencies in four essential areas: risk evaluation, expertise, transparency and accountability.

Risk evaluation – a critical first step

At the fabric of any P3 process should be a mandate that any public body contemplating a public-private venture must first develop a public sector comparator (PSC) model based on a highly prescriptive process. The PSC is a critical tool in assessing and comparing P3 options with traditional public procurement models, which begins and ends with a rigorous examination of the “in-house” costs

of implementing a project and assigning the various types of risks to the appropriate party that can best handle them.³⁹ This exercise essentially establishes benchmarks against which options are compared and value for money is assessed, thereby providing government bodies clearer guidance on whether or not to use internal or alternative financing for an infrastructure project. The PSC is not a perfect tool by any means, as it is complex to administer and does not easily accommodate non-financial factors. There is also the potential for a public body to overstate its project needs, akin to wanting the Cadillac of facilities instead of budgeting for an equally functional Buick. Nevertheless, the importance of a national PSC standard cannot be overstated, as it is a necessary step that imposes rigorous financial and costing discipline on the public sector, requires a full life-cycle approach and compels consideration and management of risks. Simply put, it imposes stringent accountability and transparency on the P3 decision-making process.

Unfortunately, there is no national standard in Canada to help the public sector evaluate whether a private venture would represent the best value for taxpayers. As it stands, Industry Canada has noted that while most projects would pass the scrutiny of a PSC test, there remains a lack of consistency in value measurement, with everything from internal costing to non-financial considerations weighing into decisions at varying degrees. And in some cases, decisions are made without having completed a thorough assessment of the costs that would be incurred if the public sector delivered the infrastructure and ancillary services.⁴⁰ With all levels of government competing for the



TRANSFER OF RISK					
	Service Contract	Management Contract	Lease Contract	Design Build Operate Finance	Privatize/ Transfer
Market Demand	X	X	X O	O	O
Design Risk	X	X	X	O	O
Planning Risk	X	X	X	O	O
Completion Risk	X	X	X	O	O
Environmental Risk	X	X	X	X O	O
Capital Costs	X	X	X	O	O
Financing Risk	X	X	X	O	O
Maintenance	X	O	O	O	O
Revenue Collection	X	O	O	O	O
Operating Risk	X	O	O	O	O
Residual Value Risk	X	X	X	X O	O

Public Sector - x; Private Sector - o
This chart illustrates how risk sharing occurs along the spectrum of categories for select P3 models

same taxpayer dollar, measures need to be in place to hold the government accountable to the approach and benchmarks used in determining the best bang for the taxpayer buck. Although Industry Canada did release a self-help guide in May of 2003 that provides a general framework for government bodies to evaluate and compare private sector proposals with public models, it has not been adopted nationally, nor it is meant to be a comprehensive step-by-step guide of a public sector comparator (PSC) model.

Wanted: Contract negotiation and risk analysis expertise in public sector

The PSC modeling, in and of itself, offers only part of the solution for proper project evaluation. Risk assessment and project analysis demands a complex skill-set that involves long-term options appraisals, contract negotiations and embodies teams of advisors. The government must ensure that employees across the entire public sector possess procurement skills to deliver quality investment on time and in a way that secures value-for-money to the public. Doing so also makes the public sector a better client, which in turn propels competition and innovation among private interests in bidding for projects. To help bridge the public/private expertise gap in the UK, the central government established Partnerships UK, which combines private sector expertise with a strong public sector

mission to improve the process of planning, negotiation and completion of P3s.

In Canada, a number of provincial governments are headed in the right direction. For example, British Columbia took a page from the UK chapter when it established B.C. Partnerships, which fully represents the interest of the public sector and reports to the Minister of Finance. This organization tries to bring together ministries, agencies and the private sector to develop P3 projects by offering specialized services in a host of areas – from identifying opportunities to advice on project leadership/management. While other provinces are taking similar steps, grouping or centralizing resources at the federal level, rather than provincial, likely presents a more time and cost-efficient way to deliver expertise and innovation, as well as develop financial instruments and tap into capital markets.

Accountability and transparency walk hand-in-hand

While a national PSC standard is one important and necessary means of imposing transparency and accountability on government decisions, it is also essential that the structure and performance of public-private contracts be regularly reviewed. The National Audit Office (NAO) in the UK has a reputation as being one of the harshest critics of its private finance initiative, and has become invaluable in putting forward recommendations that improve on past performances. And, these recommendations are

regularly incorporated into the PFI structure. There is also an ongoing push in the UK to publicly disclose all of the costs and financial commitments associated with the project. As an example, a record of future contract payments for each scheme and the capital value of contracts signed to date and in procurement are disclosed in the Financial Statement and Budget Report. This process not only leads to better management of programs, but it also increases the accountability and openness of the program, which lends itself to greater market and public confidence. Much of the public criticism surrounding P3 projects in Canada has centered on the lack of transparency and questionable accountability in deal structures. To help dispel these concerns, Canadian governments should be more forthcoming with their objectives and payment structures. This is one area where the federal government could help define national reporting and monitoring standards.

Canadian governments can also enhance transparency by simplifying the P3 process with standardised contracts. This has been an effective tool in the UK, where the government has drafted contracts that attempt to maintain the flexibility to set individual needs and requirements, but also provide a standard form for those aspects common to all procurements. This initiative is still very much a work-in-progress in the UK but preliminary efforts have been well received by all parties since it levels the playing field for bidders, reduces bid costs and expedites the government procurement process – all of which bolsters competitive procurement to the benefit of taxpayers.

Canada's smaller, less mature, and inconsistent P3 market already creates a challenging environment towards lower bid costs, and the absence of standardized contracts adds further upward pressure. What's more, standardization does not need to be limited to just common contractual elements, but also common design elements. For example, there are 154 hospitals in Ontario, and yet there is no standard for how an emergency room is best represented. Is it necessary that governments reinvent the wheel every time a hospital is designed? Probably not.

Stronger foundation = fewer barriers

If governments in Canada are able to put in place measures that produce a firmer foundation for effective P3 policies, this would not only provide clearer guidance to private interests, but it would also help mitigate government policy flip-flops – i.e. the expansion of Coquihalla highway in B.C., the Island Airport Bridge in Toronto. It seems commonplace for governments to backtrack on policy due

LAYING A FOUNDATION FOR A COMPETITIVE AND EFFECTIVE P3 ENVIRONMENT

Political commitment: intergovernmental cooperation, consistent internal policies/objectives, long-term funding commitment by all levels of government.

Reduced bid costs: standardize contracts, solid deal flow brought forward at an early stage by government departments and procuring authorities.

Expertise: public sector equipped with the necessary expertise to evaluate in-house project costs, risks and value for money.

Accountability and Transparency: a consistent national PSC model, disclosure of long-term payment responsibilities, continual evaluation of project performance, whole-of-life costing of projects.

to the miscommunication of its objectives, the lack of broader public acceptance or the inaccurate assessment of risk from the onset. This only serves to raise the cost of doing business with the private sector by undermining their confidence and ambition for P3 projects. Without steady policy and political commitment, firms will be reluctant to develop the necessary resources that are required to bid for and carry out contracts. Not to mention that bidding on government projects is a complex and costly venture for private firms, so if the government decides to pull the plug under political pressure, the private sector is left holding the bill. As a result, firms may adopt a “once bitten, twice shy” mentality, which would reduce the pool of competitors and/or require greater government compensation to private firms due to greater risks and costs incurred in the bidding process.

To be clear, there's nothing wrong with the government opting to follow a traditional public model rather than a P3 when the private sector is unable to create sufficient value in the project. However, the government should make every attempt not to surrender to political or public pressure when an alternative public model neither benefits the state of government finances, nor the policy objectives of the public.

Overcoming the financing myth of P3s

A sound P3 policy would also go a long way to dispel the notion that partnerships should only be entered into

GOVERNMENT NEEDS TO STICK TO THEIR GUNS

The 198-kilometer Fredericton-Moncton highway in New Brunswick was one of the largest P3 arrangements ever entered into by the province, not to mention its first experience with a tolled road. When the project was first conceived and implemented, the three main government objectives supporting the P3 model were:

1. to avoid an increase in provincial debt
2. to achieve a reasonable cost of funds
3. to achieve an optimal degree of risk transfer to the private sector

In accordance with these objectives, the government agreed on a DBO P3 structure with the revenue from user-paid tolls deemed the best means to fund the project. However, the tolls were only in place for a brief 14 months – swiftly abolished in March 2000 under new government when the tolled road became a political hotbed during provincial elections. Of course, nothing is free and the government still had a contractual obligation to fulfill with the private developer. It certainly could not transfer all the design/build/maintenance costs and risks without compensation. But since its revenue source through user-tolls was eliminated, the government had to pick up the tab through shadow toll payments – i.e. the government now makes the toll payment to the private company based on vehicle counts rather than the user. So in the end, the government abandoned a sound financial model that avoided an increase in government debt, and in the process did not achieve optimal transfer of risk to the private sector since it ended up with all the revenue risk. Now every New Brunswick taxpayer foots the bill on the highway's use, rather than just the users. This “out-of-sight, out-of-mind” strategy, also means “out-of-pocket”.

To be perfectly clear, our beef is not with the notion of shadow tolls. Shadow tolling is a highly effective means for governments to construct and finance roads, and it is actively used throughout UK and Europe. But, it tends to be used for extensions or upgrades to existing road systems, rather than alternative new road systems. In other words, it is publicly unpalatable, and may not necessarily make financial sense, for a gov-

ernment to instate tolls on roads that were previously considered “free” to the public or to instate tolls on roads where the user does not have a choice of a reasonable “free” alternative route. Moreover, the implementation of shadow tolls in the Moncton highway case does not detract from the fact that the private consortium did (and continues to) meet its obligation to the government.

- The road was completed in short measure, with the construction timesaving estimated in the range of 10-15 years over traditional procurement.
- On the initial cost side, the province estimated savings to be \$170 million.
- On the maintenance side, the province estimated savings over 20 years to be \$13.7 million (net present value).
- The time saving to the user compared to the existing route was estimated to be 30-35 minutes. And, during the first four years of construction, the overall safety record for the workers was three times better than the industry average.

The problem with the Fredericton-Moncton P3 model is that shadow tolling was implemented under political pressure, and not because it delivered optimal value to the public. By switching to a shadow toll structure, the province relinquished an estimated \$321 million in concession fees that would have accrued from the project over a 30-year period – mainly consisting of toll revenues in excess of what is required to fund toll-based debt repayments and interest.⁵⁰ And, more importantly, the province compromised its own P3 objectives, which were to avoid an increase in provincial debt and to achieve optimal risk transfer.

Let's face it, road tolls are a sticky issue for Canadians, making it all the more reason that governments are upfront in their objectives, deal structure and costs. For the public to support the model, it needs to be properly informed. In this particular case, the problem did not lie in the structure or proposal of the P3, but rather in the government's inability to effectively follow through with its objectives.

where the cost of financing is cheaper. Public postmortems of P3 contracts often put a spotlight on the higher cost of financing under a private consortium compared to traditional public models, suggesting that the firms are

profiting at taxpayer's expense. One of the most common arguments is that the government can always borrow at a lower rate than the private sector because government bonds are backed by tax revenues and so are deemed to be

virtually risk-free. This argument is then buttressed with concern that the financial benefits that accrue to the private enterprise will be more generous relative to a publicly funded model or relative to the benefits that the public derives from the delivery of the service itself. But herein lies a disconnection between government and private sector objectives. Aside from having access to the deep pockets of the private sector, the greater benefit to the government comes from being able to divest from project-risk while at the same time leveraging technological and innovative advances from the private sector.

On the other side of the equation, there is no mistaking that every private company that bids on a government project does so with the intent of earning an acceptable rate of return on their investment. Although this matter can often be the subject of public debate, as a rule of thumb, companies should not earn substantially more from a P3 contract than from comparable work. But, in risk allocation, nothing is free. In bidding for a project, the private party estimates the project risks and their potential impacts on project revenues, and in effect sets premiums to insulate itself from the financial results of materialized risks. In essence, the risk premium is a form of self-insurance. Of course, the bottom line is that private parties will accept almost any risk provided that the premium paid is sufficiently large. The question for government is whether the risk premium is good value for money or whether it is more cost-effective for governments to assume the risk itself, taking into account the likelihood of a particular risk occurring and how the government may be able to mitigate the impacts.⁴¹ This returns us to the importance of a thorough project risk-costing evaluation under the direction of a PSC model. The onus of responsibility falls to the government to ensure that proper guidelines and expertise are in place to aid in the decision.

The other claim regarding the public sector's ability to borrow at a lower cost is true, but only if the basis of comparison is the absolute difference between government and corporate bond yields. However, this is not an accurate reflection of the true debt-financing costs of a project, since the yield on government bonds will not factor in the specific risks associated with that project. In this respect, the government does not borrow and spend money absent of any risk, because a publicly financed project means that the taxpayer has, in fact, underwritten all the associated risks of that project, and, where it materializes, bears the costs.⁴² Simply put, if the project fails or ends up costing substantially more than initial estimates, taxpayers are on

the hook. To cover any additional expenses, the government would have to raise taxes, divert funds from other areas of spending or borrow the additional funds, which is an added burden to taxpayers down the road. Therefore, it is inappropriate to compare a "risk-free" government bond yield with the cost of private financing. Instead, the guiding principle for a public-private venture should incorporate risk-transfer under a broader principle of "value for money". We must keep in mind that P3s are not solely about the injection of private financing into public infrastructures; this is but one element of the infrastructure equation.

P3 value extends beyond financing

Whole-of-life solution: There are synergies to be gained from combining design, construction and operation, which contribute to a reduction in operating costs and an enhanced level of service.⁴³ The private sector is often more efficient and innovative in undertaking the design, construction, operation and maintenance of an asset if it also shoulders the responsibility of its performance over the whole life cycle. For example, in the case of the Confederation Bridge, the private sector not only assumed all the construction risks related to the design and development of the bridge, but once completed it also assumed operation and maintenance costs for the next 35 years. Of course, any shortcomings in the design or operation would escalate the private firm's costs and bite into their revenues, which are earned via vehicle tolls over this period. What's more, the private sector's obligation does not end after 35 years, because at the end of the contract, the bridge is transferred back to the government for a price of \$1 in a condition that supports an additional 65-year life. This "whole of life solution" helps assure quality and cost efficiency – further supported by the fact that the Confederation Bridge project has won more than 15 national and international design and construction awards.

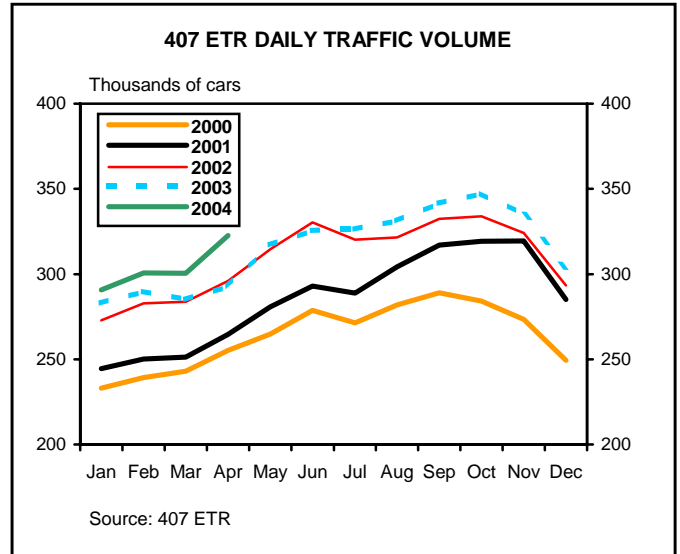
KEY FACTORS UNDERPINNING VALUE FOR MONEY

- Reduced life cycle costs
- Better allocation of risk
- Faster implementation
- Improved service quality
- Generation of additional revenue

Timeliness must also be factored into the value equation of a public-private partnership. The more seasoned P3 market in the UK delivers clear evidence that private firms have greater success at avoiding timetable slippage and the associated costs that are common under traditional public procurement. In 2003, the UK Auditor General evaluated the performance of 37 public-private sector projects and found that only 24 per cent of these were delivered late to the public, of which only 8 per cent were delayed beyond two months. In contrast, the latest statistics on construction projects undertaken exclusively by the public sector indicated that 70 per cent had been delivered late. The gap between private and public performance is not necessarily a reflection of public sector inefficiencies, but rather, of the benefits that the government can extract from the private sector in sharing the risks of the project. First, government payment for the asset usually occurs only after it is up and running, providing a strong incentive for private firms to deliver the project on schedule. Second, many P3 contracts incorporate penalties that accrue to the private consortium in the event that a project is delivered late or does not satisfy predetermined safety and quality standards.

Cost Overruns: The risk of overrun costs also appears to be better managed in the hands of the private sector. Here again the UK Auditor General report provides strong evidence, with only 22 per cent of private sector projects experiencing cost overruns compared to 73 per cent in the public sector. And, in the cases of a private consortium, the price increases were generally small and not due to that consortium charging more for the work than originally specified.⁴⁴ Importantly, in the P3 cases where overrun costs are not associated with changes to the contract, it is the private sector that absorbs them, not the government.

Scale: The scale of a project also enters into the value equation. P3s can provide a means for larger scale projects where fiscal budget constraints may place them out of reach. For instance, the need for highway 407 in Ontario was obvious to the provincial government as a means of reducing congestion on highway 401 – which is reported to be one of the most traveled highway in all of North America – and other 400 series highway links. However, in the early 1990s, the province had limited capability to take on a project of this scale, as it emerged from a recession that had deepened its deficit and debt positions. In all probability, it would have taken decades to develop the new highway under the traditional public model. So, the



government enlisted private interests to build, operate and manage the highway. The first 36 km was up and running within four years.⁴⁵ Today, Ontario boasts a multilane highway that stretches 108 kilometers, benefiting more than 320,000 commuter trips every day during the workweek.⁴⁶

Getting it right with P3s

The UK experience has demonstrated that the P3 model can extend to most any public area in need of development or revitalization. The Canadian market, however, lacks depth and is inexperienced by comparison, suggesting that governments may be wise to try their hand in areas that more easily accommodate P3s before tackling more complicated contract structures. Projects that fall under this umbrella have the combined attributes of:

- large scale / capital intensive
- identifiable revenue stream
- measurable results

Roads, bridges and highways exhibit all of these traits. That's because the large amount of capital required for these projects makes them commercially viable to the private sector, not to mention that these projects tend to be relatively straightforward making it easier for the government to assess and quantify risks. Public-private partnerships also work well here because roads have the potential to generate an identifiable revenue stream through user-paid tolls, thereby permitting the government to compensate the private sector for its capital costs and risks without straining its own coffers.

There are many instances where user tolls are simply

inappropriate or economically unfeasible, such as the myriad of inner city roads, local or low-traffic bridges, and even highway systems where there is no alternative “free” route and where the dominant users are already contributors of the local tax base. In these cases, particularly the latter, P3 models can still offer value for money through a system of shadow tolling. Under shadow tolling, the government assumes the toll cost rather than the users, meaning that the government would estimate the usage of the bridge/road in a given year, and would then pay the contractors a sum based on that usage. This model still allows the government to divest from maintenance, operation and construction risks, while also amortizing the large up-front costs that would accompany construction over a long period (usually 20-35 years).

P3s hold water with water/waste management

By the same token, P3 models can also offer an effective solution for water/waste management in Canada. The water industry is certainly in a period of unprecedented change, driven by a growing demand and a need for substantial investment in new technology and improved water infrastructure. Water/waste facilities display similar attributes to that of roads – they require large capital investments, have an identifiable income stream through user fees and have measurable results – making this industry an ideal candidate for P3 models. Unfortunately, when it comes to water management, the mention of P3s is generally met with public apprehension, especially if the public believes the government may forfeit ownership and regulation of the assets. But it is important to reiterate that in every P3 concession, the public sector can always maintain ownership of the assets, govern safety and quality standards and set user rates.

The Walkerton experience in the spring of 2000 in Ontario certainly rang a loud note of caution among many Canadians, as a water system contaminated with E.coli claimed the lives of seven people while causing severe

illness in more than 2,300 other residents. Although there was plenty of initial finger-pointing at the private sector, which took over laboratory testing from the government in 1996, the Attorney General inquiry indicated that the private sector fully complied with government regulations and was not in any way responsible for the deaths or illness that had occurred. Rather, an inefficient method of water system management by the public sector was a house of cards that came tumbling down. The Attorney General report identified several shortcomings in public sector management, predominantly linked to the lack of training and expertise among Walkerton Public Utilities Commission (PUC) operators, the improper operating practices of the PUC operators, and the inability of the Ministry of Environment inspector’s program to detect and ensure correction of the improper treatment and monitoring practices of the PUC. By no means is this meant to open old wounds, as the government has since put in place a number of corrective and effective measures, but it does speak to an area where the government and broader public can benefit from a transfer of risk to the private sector.

First, the government can place the onus of responsibility for properly trained staff and accountability on the private sector. Under-qualified staff represents an intolerable risk to the private sector because it would undermine its competitive advantage, and its ability to develop efficiencies and manage corporate risk. Any shortcoming here would cost the private consortium dearly through financial penalties embedded in P3 contracts if minimum quality or safety standards are breached. Second, there is the advantage to the public partners of transitioning from one of operations manager to one of contract manager. Since P3 contracts provide the opportunity to define outcomes that must be achieved by the private sector and the means that they can be achieved, the public sector can clearly set out the division of responsibility along with reporting standards and performance monitoring. This allows for heightened enforcement capabilities by the

P3 Type	Water Services P3s around the world
Service or mngt contract	Canada, United States, Columbia, Gaza, Malaysia, Mexico, Turkey, Puerto Rico
Lease	France, Italy, United State, Spain, Poland, Czech Republic
Concession	France, Spain, Argentina, Malaysia, Philippines, Bulgaria
Build-Operate-Transfer	Australia, Canada, China, United States, New Zealand, S. Africa, Mexico, Thailand, Malaysia
Source: Canadian Council for Public-Private Partnerships	

municipalities and provinces. So, if a situation like Walkerton ever did occur under the watch of the private sector, it is the stakeholders of that company who bear the financial price of the error, not the taxpayers.

Indeed, local and provincial governments should not be remiss in exploring P3s as an option in water/waste management because the results so far have been highly encouraging. It is estimated that in the United States and Canada, P3s in the water sector have generated cost savings of between 10-40 per cent.⁴⁷ Although public sector delivery is the dominant service model in Canada for water treatment facilities, there are some P3 contracts in place that reflect either management concessions or build-operate-transfer (B-O-T) arrangements. However, P3s need not be limited to these types of contracts. The City of Moncton in 1998 was the first Canadian municipality to enter into a broader design-build-finance-operate (DBFO) private contract for a water/waste treatment facility. Doing so allowed the City to quickly realize the benefits of stabilized rates, guaranteed safety and compliance, and increased opportunity for improved infrastructure development. In this partnership, the public sector not only retained ownership of the plant, but user costs are fixed

and controlled by council, except those for which neither party has control, like electricity. This milestone partnership was carefully implemented, with the City of Moncton enlisting expert consultation to the tune of \$680,000 in matters of process, legal, contractual, financial and technical requirements. This initial investment by the City resulted in a state-of-the-art treatment facility with capital, engineering and operation costs estimated to have been \$11 million less than what the traditional government model could have delivered over the term of the agreement. In addition, the public sector benefited from significantly reduced exposure to risk and liability. Prior to the new facility, the city of Moncton was subject to two boil orders due to high bacterial levels, one in 1997 and a second in 1999. However, with the P3 contract, the government was able to impose stringent water quality guarantees and performance standards that meet or exceed the Canadian Drinking Water Guidelines. The contract also includes a dispute resolution mechanism that protects the municipality in the event that guarantees are not met. In addition, the contract included a repair and replacement program to ensure that the plant would remain in acceptable condition when it was turned over to the government after the 20-year lease term (i.e. whole-of-life approach). The facility was completed on schedule in 500 days and the City estimated that the traditional municipal method would have added \$120 a year to a typical user's water bill compared to \$91 under the private partnership. The City of Moncton stands today as a model for how a municipality can successfully transfer risk to the private sector, derive the benefits of greater efficiency and innovation, while still maintaining regulatory control over the delivery of the service.

Energy sparks P3 interest

Historically, the generation, transmission and distribution of electricity in most provinces have been held in the hands of provincial and municipal governments in Canada. But more recently, the high costs and risks involved in the development of new energy infrastructures and the maintenance and management of existing ones has lent a sympathetic plea to private sector involvement. Ontario's notorious power outage in August of 2003 certainly brought to light the shortcomings of the current power system and an urgency to secure a consistent and reliable supply to accommodate future demand.

Canada is no stranger to private sector involvement in electricity, though it's in an infancy stage with the broader

VARIOUS CANADIAN P3S IN THE PIPELINE*

Project Name	Type	Province
William Osler Hospital	Health	Ontario
Royal Ottawa Hospital	Health	Ontario
New Fraser River Crossing	Transportation	B.C.
Sea-to-Sky Highway	Transportation	B.C.
Abbotsford Regional Hospital	Health	B.C.
Vancouver General Hospital - ambulatory care	Health	B.C.
Britannia Mine Water Treatment	Waste/Water	B.C.
Okanagan Lake Bridge	Transportation	B.C.
Sierra Yoyo Desan Road	Transportation	B.C.
South Calgary Hospital	Health	Alberta
Edmonton Ring Road	Transportation	Alberta
TransCanada Highway extension	Transportation	N.B.
Deh Cho Bridge	Transportation	NWT
University of Montreal - Health Science Center	Health	Quebec
McGill University Health Center	Health	Quebec

* Projects are at various stages of development, from early political and public consultation to signed contracts between private consortiums.

Source: Standard and Poor's

push towards deregulation and privatisation, rather than public-private partnerships. That's because there are two unique characteristics of electricity supply that favour privatisation. First, the output of any one station cannot be distinguished from any other, and second, supply must exactly match demand as electricity cannot be stored. In order to ensure an ongoing and sufficient supply of electricity and, therefore, a reasonable price, the government attempts to create an environment that promotes competition in generation – though it's not an easy task, as successful deregulation of the industry requires a well-developed set of market rules and substantial regulatory support. Nevertheless, industry deregulation is expected to act as a catalyst towards the construction of generation facilities by private sector consortiums. In January 2001, Alberta deregulated under the division of generation, transmission and distribution of electricity into three distinct functions. Alberta, however, is unique in Canada since it never had a single vertically integrated, provincially owned monopoly. It more closely resembles the U.S. model, with several vertically integrated firms operating as franchise monopolies under cost-of-service regulation, together with an integrated transmission network.⁴⁸ Ontario is in the process of ironing out the wrinkles in its electricity infrastructure, with initial steps looking to incorporate private supply through renewable energy sources, while B.C. is starting to include some small independent hydro operators into its ranks.

In spite of the movement towards privatisation in electricity, there is still plenty of scope in Canada for P3 models. For example, B.C. Hydro in February 2003 undertook a core service review and concluded that there were three areas ripe for public-private partnerships: customer services, computing information services and fleet vehicle services. Following a competitive process, B.C. Hydro contracted a private consortium to provide a wide array of services, from customer – such as billing and metering – to a human resource network, to computing and information consulting, to payroll and to accounts payable.

Looking beyond Canadian borders, countries with deregulation in full swing still employ P3 models in many aspects of the sector. For instance, Australia's deregulated energy sector saw 28 proposed new power stations commissioned for 2003, of which four were structured as P3s. The U.S. is increasingly embracing P3s in energy conservation and alternative power generation models. In March of this year, the U.S. Deputy Secretary of Energy opened

negotiations for 21 public-private partnerships in the development of wind energy technology. The new partnerships are aimed at reducing wind powered electricity generation costs at low speed sites through new design approaches and component developments. P3s are even cropping up in electricity transmission. In a milestone deal in the State of California, the U.S. Department of Energy (DOE) is drawing upon the expertise of a private partner to build and operate a new transmission line that would alleviate the transmission bottleneck between northern and southern California – probably considered to be the most notorious grid bottleneck in the country and takes much of the blame for California's recent power crises. The bottom line is that although there is an increasing global push towards privatisation in the electricity market, Canadian governments should not overlook partnership opportunities with the private sector to develop and maintain generation facilities and transmission lines.

P3s without borders

Although P3s work well in sectors that generate identifiable income, they are certainly not restricted to these types of infrastructure projects. P3s have tiptoed into areas of education and health care in Canada, but the results have been mixed or still need to be tested against time.

For instance, economic hardship in the province of Nova Scotia in 1997 lent itself to an ambitious and creative program that facilitated public-private partnerships for school construction. By 1998, eight schools were built, 30 were approved and 12 were in the development phase. The schools were turnkey operations, constructed to the province's specification with developers providing desks, blackboards, telephones, computers along with full financing. The lease to the developers extended 20 years, however building use covered school hours only. Importantly, the school systems lease payments are only about 85 per cent of the capitalized cost of the building. The remainder of the cost is absorbed by the developer, who earns additional income by leasing the building to other approved entities during non-school hour. The arrangement was set up to incentivize the developer to build cost-effectively in order to reduce financing costs and also to design and build competitive facilities in order to attract the necessary non-school lessees. In addition, since the school system is under no obligation to purchase the building at the end of the lease (though it has the option to do so), it is in the developer's best interest to maintain and upgrade the building

in order to maintain marketability.⁴⁹

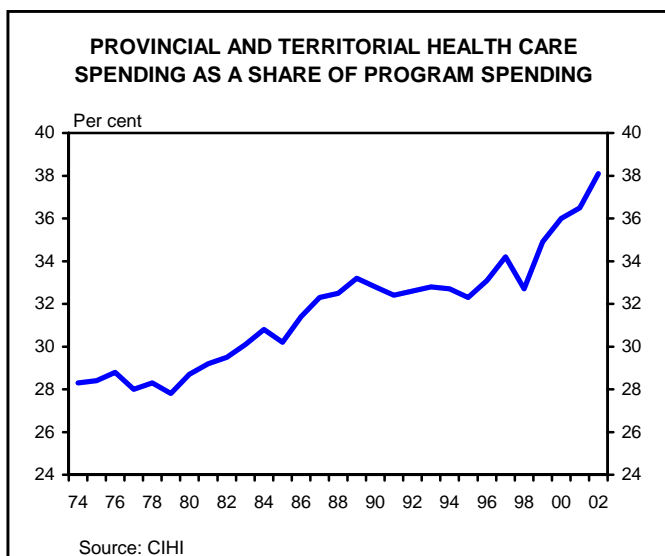
On paper this seemed like a good idea, but these P3s ran into a number of roadblocks that eventually grounded the government initiative in 2000. One of the first problems is that there are limitations on alternative off-hour revenue sources due to the very nature of a school. For example, teachers and students tend to personalize classroom space, the chairs for children are too short for adult events, while desks are too low. In the end, the developer was not dealing with an empty, fully functional rentable space. To make matters more difficult, some developers faced public resistance in attempts to crowd in on other revenue sources from vending machines and cafeterias, as school operators were accustomed to using these funds to purchase additional school and student supplies. In the end, it was difficult to find an appropriate level of risk transfer without creating a public tidal wave of hostility towards the endeavor. That is not to say that P3s can't work in education, as the UK boasts over 100 cases. However, this is a relatively new area for Canadian P3 ventures, and it may require some fine tuning in policy objectives. Not to mention that it is always necessary that the public is fully on board with the initiative.

Canada's health care system is finding itself in a similar predicament. Combined health care budgets from the provincial and federal governments already amount to 42 per cent of total operating spending and are expected to trek higher as an aging population intensifies demand for services down the road. Not surprisingly, governments are increasingly willing to consider P3 initiatives for health care facilities. *To be perfectly clear, Canada's single public-payer model for health care services is efficient and*

equitable and should not be compromised. But, it is possible to stick with a single public payer model and still have private sector involvement in the delivery of services, with the government continuing to stringently regulate and impose guidelines to ensure quality.

Let's face it, many hospitals in Canada already contract out a number of non-clinical hospital support services – such as food preparation, catering and cleaning – to the private sector. In fact, a survey conducted by Canadian Healthcare Manager in the summer of 2003 indicated 69 per cent of the hospitals surveyed are already engaged in some form of public-private partnerships. And, of those that were not, more than one-quarter planned to partner with the private sector over the next 12 months. Recently, some provinces have begun to extend the role of public-private partnerships to more far-reaching contracts in recognition of the synergies in bundling services already contracted out to individual private interests. And, there is an argument to be made for governments to focus their resources on the core business of providing healthcare services, rather than on building maintenance.

In 2001, Ontario launched a pilot P3 program with the William Osler Hospital in Brampton. The current hospital facilities were proving to be insufficient in a region that was experiencing annual population growth of 20,000 to 30,000. As a result, plans were put in place to support the construction of a fourth hospital. With provincial government resources already spread thin, the government enlisted private interests to provide services for facility design, construction, capital financing, building maintenance, materials management, housekeeping, laundry, food services, parking and security operations. In effect, the P3 contract represented a DBFO venture. It is estimated that the hospital will take less than six years to complete from start (planning process) to finish (availability of services), less than half the time estimated under a traditional government model. And, the risk of cost overruns is transferred to the private sector. In many ways, this P3 contract is built on many of the lessons learned from the UK private finance initiative which attempts to encompass full business case analysis for project development in order to provide a good sense of savings on the operating front from capital investment. Planners in the William Osler project also looked at historical data and created value for money benchmarks against which performance could be measured. These benchmarks were then included in the construction, life cycle and operating costs over a 25-year period.



This P3 arrangement allows the government to deliver needed state-of-the-art facilities in a timely and efficient manner to the public. In addition, the contract maintains strict government control over clinical services and regulation over the public assets. Perhaps the biggest challenge for the government will be to overcome public concerns that services and costs will be compromised under a private consortium. As it stands, political wrangling has delayed construction on this project, though the hospital remains committed to the 2006 completion deadline. Although performance standards are incorporated in the P3 contract, only the test of time will determine if the government has effectively defined clear boundaries and set guidelines towards a measurable output performance in order to critically evaluate the lease over its life term. And, importantly, whether the benefits derived through a private consortium exceed the extra costs imposed on the government for its delivery.

P3s not a panacea

P3s are not the be-all-and-end-all solution to the funding of the infrastructure gap in Canada. Even though there is formal legislated policy in the UK, P3s still account for a limited proportion of the government's capital spending. The majority – 85 per cent – of public investment is still carried out through conventional forms of procurement. Like any government tool, P3s do not transcend every public need, and must be evaluated on a case-by-case basis. Moreover, the success and broader use of P3s lies in the government's ability to create a competitive market by lowering the cost of bidding on projects, creating continual opportunities for investment (i.e. deal flow), bolstering public sector expertise and ensuring accountability and transparency.

ENDNOTES

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³² Ibid

³³ TEBs are hailed in the U.S. as a cheap source of municipal funding, but in our view, the instruments are severely flawed with inefficiency and inequity. First, when it comes to the determination of the yield for TEBs, it will settle at a level that is equivalent to the after-tax return on other competing taxable instruments. This equilibration normally occurs at the level of the average marginal tax rate. As a result, individuals with higher-than-average tax rates enjoy disproportionately higher returns by investing in TEBs, while those with below-average tax rates would actually be at a disadvantage in purchasing TEBs rather than an equivalent taxable bond. Second, the federal and provincial government pay the costs through foregone revenues, which would be less than the interest savings. In Canada, this deficiency would be exacerbated by the importance in the market of foreign and pension investors.

³⁴ Tax Increment Financing (TIF), Professor Craig L. Johnson, Indiana University, November 2002.

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³⁸ The TIF policy we've discussed should not be confused with some hybrid programs in existence in Canada. For example, Ontario has adapted some of the U.S. model through a version known as tax increment equivalent grants (TIEGs). In this program, the City will designate an area in need of investment, however the investment initiative is in the hands of the private sector. If a private consortium decides to invest in the area, and if the land assessment subsequently appreciates, then the government will return a portion of that increment tax to the private consortium in the form of a grant. However, this partial incentive scheme runs into a couple of hurdles. Just because the government deems an area in need of redevelopment doesn't mean that the private sector will decide to invest in that area, because there is no guaranteed return offered by the government.

³⁹ The Public Sector Comparator: A Canadian Best Practices Guide, Industry Canada, May 2003

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⁴⁵ And, corresponding to our earlier point, when the private sector delivered this section of the highway late by about three months, it incurred penalty payments.

⁴⁶ Highway 407 is another example where the government poorly communicated its intent from the onset of the project. What was conceived as a build-operate-manage 30-year P3 contract, was effectively turned into a privatisation structure under a 99-year lease contract. Not surprisingly, the general public felt duped by the government's policy reversal. This, combined with a lack of public disclosure of objectives and contract structure, have left every aspect of the deal open to public criticism – from estimations of the sale value of the highway to toll structures to revenue gains by the private consortiums. Undoubtedly, Ontario is left with a more hostile public environment for future P3 toll road initiatives.

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⁴⁸ Public-Private Partnerships in Canada: An Update, C.L. Sugiyama and P.H. Harricks, Gowling Lafleur Henderson LLP.

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