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ICPM Case Study

Buying into the 407:

The Syndication Protocol as a New Model for Infrastructure Investing

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Buying into the 407: The Syndication Protocol as a New Model for Infrastructure Investing

Case Study Description

> *"Collaboration is challenging. Large and complex transactions often require the involvement of more than one investor and this cooperation creates its own issues."*
>
> *Else Bos, CEO PGGM*
>
> *"We've tried many things in the past. The syndication protocol is an important step forward for collaboration. It provides a new economic model for infrastructure investing."*
>
> *David Denison, CEO CPPIB*

It had been a hectic holiday season for the Canada Pension Plan Investment Board (CPPIB) infrastructure team. Like many pension plans, CPPIB wanted to increase its allocation to infrastructure as it offered great opportunities to match long-term cash flows with long-term liabilities. After closing on two separate transactions in the Fall of 2010 to purchase close to a 40% equity interest in a toll road in the greater Toronto area (the 407) for more than $3.5 billion CPPIB was ready to syndicate up to 30% of this position. December 31, 2010 marked an important day in that process, as CPPIB sent out a confidential investment memorandum (CIM) to a select group of like-minded long-term investors detailing key items about the transaction and the terms for syndication.

CPPIB CEO David Denison saw the syndication as beneficial not only to CPPIB but to plans of all sizes. The CIM followed closely a syndication protocol developed jointly with other large plans with internal capabilities, including the Ontario Teachers' Pension Plan (OTPP), and potential investors in the syndicate. If successful, the protocol would allow large plans with internal capabilities to go after bigger targets, where competition was less intense. By investing with the syndicate, plans without internal capabilities could benefit as well, as syndicate members only paid pro-rata share of costs of the lead investor, much less than the fees in traditional fund structures. But what would other pension plans think of the syndication and the protocol? Would there be enough pick up, and would this set the stage for more collaborative ventures in the future?

Growing Attractiveness of Infrastructure to Pension Funds

Infrastructure investing had increased sharply in the last decade (see Exhibit 1 for more on the key characteristics of infrastructure). Historically, plans had not separately identified infrastructure investing, including it in equities, or in private equity portfolios. In recent years a growing number of plans reported it separately and looked for more exposure to the class. For example, Canadian plans had more than doubled their investment in the class from 2% of assets in 2006 to more than 4% by 2009 (see Exhibit 2) Some plans had dramatically increased their exposure, with funds such as Australian Super having 14% of its assets, and Canada's OMERS having 15.5% of their assets in infrastructure.[1] Providing tailwinds to these developments were some powerful economic arguments and the recent disappointing experience with traditional assets during the Global Financial Crisis (crisis).

[1] (OECD, 2011)

Maximizing Risk-Adjusted Returns

An important rationale for the trend towards infrastructure was its potential to increase the efficiency of funds' portfolios without compromising expected returns. Infrastructure offers good diversification potential for it exhibits relatively low correlation with other asset classes. Such low correlations are not surprising because the inelastic demand or regulated revenue nature of many infrastructure assets can render them less sensitive to economic cycles. In addition, the valuation volatility associated with infrastructure assets is generally low as a result of the predictability of cash flows. Infrastructure assets also potentially offer an illiquidity premium. Assets with low liquidity have a higher expected return in order to compensate investors for bearing the risk associated with illiquidity. The large size of many infrastructure assets, combined with restrictions on sale in some circumstances, render them relatively illiquid.

Liability Management

At least as important was the attractiveness of infrastructure as part of liability management. The trend toward liability-driven investing (LDI), that had increased post-crisis, made infrastructure assets particularly attractive as they provided better liability matching than traditional equities. Pension liabilities are indexed to inflation and infrastructure assets are particularly suitable for managing the associated inflation risk because prices charged by infrastructure businesses are often explicitly or implicitly indexed to the rate of inflation. As an example, usage fees for most toll roads are revised according to changes in inflation. This feature, combined with the stability and resilience of infrastructure revenue streams to the turbulence of business cycles, prevents the values of such assets from deteriorating under inflation. Some pension funds classify infrastructure within the portfolio category of ``inflation-sensitive instruments''. The long-lived nature of infrastructure assets makes them useful for pension funds in minimizing the duration gap between assets and liabilities. The duration of pension liabilities is typically about 20 years while infrastructure assets usually have life spans exceeding 20 years.

All Infrastructure is Not the Same

Seasoned infrastructure investors, while recognizing these positive features, were careful to suggest appropriate caution in approaching the class. Infrastructure assets are still linked to economic cycles, some much more closely than others (e.g. trade based assets such as ports). As a recent Alberta Investment Management Corporation (AIMCo)-sponsored study put it:

> *"At AIMCo, the view is that "infrastructure shouldn't just be another form of equity. It should be a somewhat higher return, somewhat higher risk substitute for real return bonds." The emphasis is on finding the relatively small subset of "unrisky" projects that generate predictable, long-term, inflation linked cash flows with low volatility. These so-called "core" infrastructure investments offer a sort of holy grail, generating equity-like returns with bond-like risks and serving as a first-order proxy for long-dated liabilities."*[2]

[2] (CFA Institute, 2012)

Traditional Approaches to Get Equity Exposure to Infrastructure

Traditionally, Pension Plans interested in investing in infrastructure assets had at least three possibilities. Most simply, they could buy a stake in a publicly listed equity in infrastructure space or into publicly listed funds focused on infrastructure. Second, they could invest as a limited partner in an infrastructure fund that would assemble a portfolio of assets including private and possibly public assets. Third, particularly for larger funds, they could build a platform and proceed with direct investment.

Publicly Listed Equities and Funds

This category encompasses listed infrastructure companies such as Dynegy Inc. and listed funds that invest in both public and private securities of infrastructure companies and projects, like Macquarie Airports listed on the Australian stock exchange. According to an S&P estimate in 2007, listed infrastructure companies around the world were worth a total of US$ 2.1 trillion. Precise estimates of global pension fund investment in listed infrastructure are not readily available, but rough estimates suggest that the amount is at least US$ 60 billion.[3] Relative to private infrastructure investments, listed infrastructure offers greater liquidity and may permit greater diversification both globally and across infrastructure sectors. Listed infrastructure is, however, likely to exhibit a higher correlation with the value of Pension Plan's equity portfolios. In other words, listed infrastructure could carry a greater exposure to systematic risk and may thus not be as effective as private infrastructure investment in improving overall portfolio efficiency. Another issue with publicly listed infrastructure is that it can tend to grow beyond its initial simple definition – take Enron as an example of something that started out as a simple regulated business, but then layered on other ventures. If a Pension Plan chooses to have exposure to riskier business ventures, then it can accomplish that through different investments, it doesn't need to bolt on a derivatives business to a regulated utility.

Private Infrastructure Funds

Private infrastructure funds are structured like private equity funds, where a general partner (GP) pools together capital from limited partners (LP), sources infrastructure projects and then invests the funds at its discretion. GP's attempt to create value by seeking improvements in the management and overall efficiency of projects. In return, the GP receives an annual management fee of between 1% and 2% as well as a performance fee of between 10% and 20% if returns on the fund exceed a specified threshold. One example is the Macquarie Essential Assets Partnership fund which, at one time, owned stakes in the British Columbia Sea-to-Sky Highway and the Edmonton Ring Road In 2008, private infrastructure funds were seeking to raise over US$ 90 billion, up from US$ 34 billion raised in 2007.[4] Like listed infrastructure funds, private infrastructure funds' investments can be diversified internationally as well as across sectors. Private funds are an attractive and feasible option for investors such as pension funds because they do not require expertise and very large capital commitments as would be the case were they to invest directly in the funds' assets.

[3] (Inderst, 2009)
[4] (Inderst, 2009)

Private funds have an additional advantage of being likely to be less correlated with other asset classes than listed infrastructure. Privately owned infrastructure through funds or direct investments requires a periodic (quarterly, annual) valuation. So it's less susceptible to the volatility of short term market pressures. Also, the private valuation process uses "sticker" assumptions (average discount rates, rather than spot rates, etc.). This significantly reduces the observed correlation between privately held investments and public equities.

Perhaps the largest disadvantage however, is that fees paid by LPs are quite high. Given that many infrastructure assets are relatively simple to manage, it is difficult to justify paying high management fees to a GP. Another significant disadvantage is that the life span of such funds is between five and fifteen years, which falls short of a typical Pension Plan's investment horizon. These private funds would be forced to exit infrastructure investments that LPs would like to hold on to. In addition, there is likely to be a wedge between the incentives of Pension Plans investing in unlisted funds, and the GPs managing them, whose ultimate goal is to make a profit and exit the investment within a relatively short period.

Direct Investment

Direct investment involves the acquisition of an ownership stake in infrastructure assets and thus results in a direct claim on the cash flows from the asset as well as control of the asset. This frequently takes the form of project finance where a special purpose economic vehicle is created for the purpose of investment. In addition to allowing Pension Plans to manage infrastructure assets according to their specific needs, direct investment also allows them to retain the assets for their entire economic life, which as discussed previously is appealing for Pension Plans looking to match asset and liability durations. The absence of management and performance fees makes direct investing a potentially cost-effective means of gaining portfolio to infrastructure. Plans would of course have to be able to bear the costs to attract and maintain a team to pursue investment opportunities and manage assets. As with any significant investment that comes with governance rights, an infrastructure investment requires dedicated time to manage the investment: attendance at board meetings shaping business strategy, participation at all committees (Audit, Human Resourcing/Leadership, etc.), and so on. Although the valuation of infrastructure businesses is less volatile due to the appraisal process, the businesses themselves require similar level of governance and oversight to any other business.

Mark Wiseman, Executive Vice-President, Investments at CPPIB, was one of a growing number of experts pointing out the scope for cost saving. For example, a large plan like CPPIB could potentially negotiate a 1% management fee and 10% performance fee structure, and external management fees in this case for its current $10 billion infrastructure portfolio would be $100 million - $200 million annually or 100 to 200 basis points (bps). In contrast, CPPIB expected costs for a similarly larger internally run portfolio of infrastructure assets of less than $30 million annually, or 30 bps.

The large capital commitment for direct investing represents a substantial barrier for many pension funds, particularly those that are smaller in size. Furthermore, having control over the asset requires either substantial in-house expertise or hiring outside consultants, which can be costly if not investing

on a large scale. Deal making is made difficult by tight time frames for decision making and sunk costs of due diligence. Diversification is also a challenge when investing directly, not least because of the large amounts of capital involved, but also because the availability of investment opportunities is uncertain and very sporadic. These factors generally preclude all but the largest Pension Plans from using the direct investing model efficiently.

Importance of Models for Returns

Recent evidence provided some suggestive evidence supportive of the cost challenges of investing through funds, and the opportunities offered by internal investing. In 2009 for example, 72 plans reporting to CEM Benchmarking's database provided separate information on costs, with mean costs of 2.4% per year, with fund-of-fund investing most costly at 3.7%, fund investing close to the mean costs at 2.5%, and internal infrastructure substantially less at just 44 bps. Return evidence was scant, but what there was lined up with the cost differences. In 2009 for example, internal infrastructure reported positive returns of 9 percent (4 percent median), while external infrastructure posted returns of -1.7 percent (2.4 percent median) (see Exhibit 3).

CPPIB Infrastructure Investing and the Opportunities with Collaboration

Established in December 1997, CPPIB is a Canadian crown corporation responsible for managing the Canada Pension Plan (CPP) to which approximately 17 million Canadians currently contribute or receive benefits from. CPPIB manages over $120 billion in assets and is known for its ``Total Portfolio Approach'' which allocates risk across its entire portfolio rather than to individual asset classes in isolation.

Through its private investments department, CPPIB had been applying the direct investment model in infrastructure since 2006. As of March 31, 2010, CPPIB had $5.8 billion in infrastructure, slightly less than 5% of its holdings.[5] CPPIB's earlier exposure to infrastructure took the form of fund investments (2003-2005). With more experience, CPPIB modified its approach to focus on direct investments. Its infrastructure team now consisted of twenty individuals.

A challenge for CPPIB was that possibly the most attractive opportunities were deals with required equity commitments of more than $1.5billion, which would allow for an efficient deployment of capital. But how many of these could CPPIB get involved with?

Was collaboration between Pension Plans an answer? It seemed like a natural opportunity – combine the capabilities of plans with in house infrastructure teams with the appetite of other Pension Plans interested in more exposure to the asset class which were frustrated by the traditional economic model. Compared to private equity, the infrastructure business was relatively simple and asset-oriented, so investing in infrastructure may not require intermediation. Of course, the devil was in the details. The

[5] (CPP Investment Board Annual Report 2010)

economic model would have to work both for CPPIB and for the plans that would join the syndicate, and it had to work consistent with legal constraints and fiduciary obligations.

Part of the attractiveness of collaboration through syndication was the opportunity to compete for larger deals where competition would be reduced.

Pension Plans were attracted to the opportunity, since many of them did not have a significant infrastructure teams, and faced challenges of building one on their own. These same limitations made it difficult to work through syndication, as the syndication process still required Pension Plans to perform their own due diligence on specific deals, and to do so in a very short time frame.

Past Efforts at Collaboration

Turning to syndication as an answer was the latest example of ongoing efforts to work collaboratively with other large, long-horizon investors. Over a series of meetings, many coinciding with Rotman's International Centre for Pension Management (ICPM) meetings, various models for collaboration had been explored. It became clear that progress was most likely when Pension Plans had the 'triple C' of Capital, Commitment and Courage. Areas where there was broad agreement that by working together they could be stronger included: regulation, IFRS, negotiation over incentive structures with GPs through the Institutional Limited Partners Association (ILPA), and finally, syndication opportunities in infrastructure and possibly real estate. Initial sticking points in moving forward on syndication focused on an appropriate compensation model between the lead and other investors, a reluctance of Pension Plans to give up turf, and concerns about how syndication would affect their fiduciary responsibilities.

As these discussions were taking place, CPPIB moved ahead on its own, purchasing Macquarie Communications Group (MCG) in July 2009. This entity invested in several assets in the communication infrastructure sector in the UK and Australia. MCG was listed on the Australian Stock Exchange. About a year later, CPPIB closed a syndication agreement with a group of Canadian investors. The structure was carefully written so that CPPIB had no fiduciary responsibility, with other plans joining the investor group being responsible for their own due diligence. Although the syndication was successful, the process was long and tedious. Slowing down the process was complication of the various assets, the fact that the assets were in various geographies surfacing structuring due diligence issues, and discussions about the appropriate economic model.

Syndication Protocol

In parallel with these developments, a broader effort was underway to define a syndication protocol to guide and hopefully facilitate future collaboration. An important component of the protocol was clarifying what type of deals the protocol would be useful for. The protocol in the end set this value at deals with enterprise values exceeding $1.5 billion (see exhibit 4 for an overview of the key terms of the protocol). It was also important for the lead investor that there not be too many players to coordinate with, as this would be costly and potentially slow down decision making. Reflecting this concern, the protocol entailed a minimum commitment of $100 million per investor. In addition, the protocol made it clear that the investor group had to decide relatively quickly. Investors are expected to invest on the

closing of the proposed investment or up to a maximum of ninety days after the closing date of the investment. The ninety-day period was seen as a compromise between allowing investors enough time to make an informed decision and not delaying the process longer than necessary.

Finally, the protocol made clear the economic model would be one where there were no extra fees for the lead investors, the investor group simply being required to pay their pro rata share of acquisition costs and the lead investor's costs on a pro-rata basis. There is no ongoing management fee, nor is there a performance fee. Limiting costs to direct investment costs seemed right according to David Denison, CEO of CPPIB: “philosophically, we are not in the business of making money from our peers and we would thus rather work together as partners”. Costs were of course higher for the CPPIB infrastructure team, as they had to review and pursue many more deals than they actually closed on.

The program is discretionary in that the lead investor is not obliged to offer syndication and investors independently evaluate the merits of the investment and the size of their commitment. The investment objectives of the investor group are expected to be aligned in terms of the investment horizon, investment philosophy, cost of capital, governance views, a focus on long-term assets, risk profile and inflation protection. The targeted representation on the board of the acquired entity is one board seat per 15% acquired interest. A key feature of the protocol is that neither the lead investor nor any member of the investor group has any fiduciary duty towards any other member of the investor group. Also, quarterly and annual accounts will be provided by management and an annual valuation of the investment will be performed by an independent firm.

Putting the Protocol into Practice: Syndicating CPPIB’s stake in the 407 ETR

David Denison saw the syndication of CPPIB’s stake in the 407 Express Toll Route (407 ETR) as the first test of the protocol, as it lay behind the Confidential Investment Memorandum that had just been circulated to a pool of prospective investors.

The 407 is a state-of-the art, pay-per-use highway in Ontario that runs from east to west in the northern Greater Toronto Area (GTA) and is the world's first all-electronic open-access toll highway. It is an alternative route to Highway 401 which is one of the busiest highways in North America. Over 2 billion kilometres are travelled on the 407 ETR annually. See Exhibit 5 -7 for more information.

At the time, the 407 ETR was owned by 3 entities. Cintra Infraestructuras, S.A. in Spain, a subsidiary of Ferrovial S.A., which specialized in the development of transport systems around the world, owned a 53.33% stake. Intoll Group based in Australia, which was spun-off from Macquarie Infrastructure Group in 2009 and also owned 25% of the Westlink M7 highway in Sydney, owned 30% of the 407 ETR. Finally, 16.77% was owned by SNC Lavalin, a Canadian construction and engineering company.

On October 5, 2010, CPPIB reached an agreement with Cintra, to acquire a 10% stake in the 407 ETR for $894 million.[6] Earlier that year, CPPIB had negotiated the purchase of Intoll for $3.2 billion.[7] On December 15, 2010, with both deals completed, CPPIB had accumulated a 40% stake in the highway, worth an implied value of roughly $3.6 billion.

CPPIB's efforts to secure a stake in the 407 ETR had been no secret and had captured the attention of other Canadian pension plans. Many of these plans were keen to invest in infrastructure, but being relatively new to the asset class, lacked CPPIB's level of expertise, with some plans having infrastructure teams of no more than 2 individuals. On learning of CPPIB's interest in the 407, many plans approached CPPIB and expressed interest in being a part of the deal. In fact, CPPIB had long been fielding calls from smaller pension plans in particular who were inquiring about possible involvement on infrastructure deals. CPPIB on the other hand had initially not intended to invite other plans to join this particular deal and was more than happy to hold the entire stake.

In terms of the newly established syndication protocol, this was a text book-perfect asset and CPPIB decided to seize the opportunity to put it to use by syndicating up to about $1 billion of the stake they had just purchased in the 407 ETR. The asset was simple in nature and straightforward to understand, particularly for the other Canadian plans which were all comfortably familiar with the asset.

The Confidential Investment Memorandum

On December 31, 2010, CPPIB's infrastructure team sent out a Confidential Investment Memorandum (CIM) to a group of investors who had expressed interest in the deal and whom CPPIB saw as having similar investment objectives as themselves. CPPIB had a strict schedule. The entire process was to be completed in no more than 3 months. Exhibit 5 illustrates the projected timeline for the syndication process. The CIM also had to be carefully crafted to respect confidentiality agreements with Cintra and SNC-Lavalin that restricted CPPIB's ability to share information with potential members of their syndicate.

The 60-page document contained a description of the asset, information on traffic and tolling and key financial information on revenue, expenses, tax issues and capital structure. (See Exhibit 6). Suggestive of the information available in the memorandum was a description of the asset, and some summary financial information (see Exhibit 7a, 7b and 7c). The 407 was in a strong competitive position particularly because congestion on the 401, which runs roughly parallel to the 407 in the GTA was growing. The 407 ETR was expected to provide a competitive alternative to the 401 for at least 30 years to come. Moreover, a critical feature was that there was considerable flexibility regarding tolling and the highway had a history of toll increases that essentially matched the rate of inflation.

A company called Blue Jay Roads Limited (BJRL) was created to represent the 30% stake in the 407 ETR that materialized from the acquisition of Intoll. Members of the syndicate would be buying into BJRL.

[6] (CPPIB News Release, 2010)
[7] Ramya Jegatheesan,"CPP Intoll Bid gains support", CBC News, August 27, 2010, http://www.cbc.ca/news/business/story/2010/08/27/cppib-intoll.html, accessed May 2012

Once the Intoll deal closed, BJRL was renamed ITRL. Some of the Intoll asset management team stayed on and roughly one-third of their time and resources were to be dedicated to serving the needs of the syndicate, including the production of reports and responding to ad hoc requests. As the protocol specified, there was to be no management fee or carry. Members of the syndicate would instead be paying their share of the ongoing operating costs, which were estimated to be less than 10 bps. These costs would be deducted from the streams of cash flows and so applied on a pro-rata basis to all investors (including CPPIB). Importantly, the asset management arrangement was subject to a vote every year so that members of the syndicate would have the ability to replace them.

For pension plans to evaluate this investment opportunity, they each needed to independently arrive at a valuation. This required forecasts of revenue and costs. Five important inputs into this valuation model were: CAPEX costs, operating costs, traffic growth, toll growth, and the inflation rate. These were important judgement calls. Exhibit 8 provides information on the implied value if one assumed CAPEX grew from its historical average escalated at inflation, traffic growth remained moderate (1%), toll growth was stronger in the short term than long term (10% and 5% short term and 2% long term), and inflation was projected to be 2%. Such assumptions, along with various others, produce an ETR enterprise value at $13 billion, and a straightforward evaluation of a buy and hold equity investment for the next 88 years produced an IRR of 11%. Of course, this information was only a starting point, and plans would need to carefully assess all of these inputs, as well as their risk tolerance, in arriving at their own assessment.

Sufficient Pension Plan Interest in the CIM?

Across town in Toronto, one of the first recipients of the CIM was George So of Kindle Capital. Kindle Capital aggregated the interests of smaller mainly Canadian pension plans with assets of between $1 and $15 billion that lacked the internal capability to invest directly in infrastructure (most plans had at most 2 employees who could oversee investments in infrastructure) and/or could only invest smaller amounts. However, by combining their investment commitments he was able to ‘soft circle’ enough dollars to meet the terms of the CIM (and syndication protocol) that required a minimum $100 million capital to be in the investor group and the ability to meet all diligence and legal requirements within 90 days. In fact, in short time he had 8-10 funds with a collective commitment of $200 million ready to participate in the transaction.

George benefited from the fact that Kindle had also been involved in the prior MCG deal, and the plans were familiar with the process. Kindle had to charge fees to plans that participated, and in this was similar to a traditional fund. But there were two major differences. The first was that the investment was completely discretionary and took place on an individual asset basis. The second was the fee structure. Kindle’s fee base in contrast was fixed at substantially less than 50 bps with no carry. In addition, Kindle had a policy to use over half the amount of fees collected to invest in the asset themselves.

Other plans, a mixture of mid-size and large, also received the CIM. They looked with interest at the specific details of the asset and the terms of the CIM. They had traditionally accessed the infrastructure space by investing as limited partners in funds. The timetable was quite tight, and the minimum commitment to one investment was large. They could get asset diversification going through funds, although the costs were higher. They also had to consider the attractiveness of this offer relative to other developments in the infrastructure space. For example, there was a nascent global infrastructure fund that OMERS (a $50 billion fund with an experienced in-house infrastructure team) was expected to lead that likewise sought to disintermediate typical funds. Like the syndication approach, this fund was expected to focus on very large projects, and offer lower fees with longer hold periods than traditional fund structures. Their model also had important differences. This was targeted at funds that could make much larger initial capital commitments and the investment was a blind pool in that investors had to accept portfolio chosen that offered more diversification potential.

A Significant Step Forward for Collaboration?

For plans outside the loop, including the many mid-size and large plans not contacted, thoughts turned more to the implications of this launching of the syndication protocol.

For David Denison, CEO of CPPIB and Jim Leech, CEO of OTPP, their biggest fear for the future growth of the protocol was not a flaw in the model but that pension plans' infrastructure teams would see the protocol as a threat to their existence, rather than a valued opportunity. It was true that plans choosing to go this route would not be likely to grow their deal teams. To be successful, the opportunities needed to be marketed successfully and reach the ears of those at the top of plans, and they needed to be managed so that the opportunity was not ignored for the wrong reasons.

These concerns were echoed in part by other CEOs. Consider Else Bos, CEO of the large Netherlands fund PGGM, which manages over €120 billion worth of assets for several Dutch pension plans. PGGM has been investing in infrastructure since 2005, initially investing in funds. In 2009, it changed its approach to place a greater emphasis on direct investing, as it began to recognize that the fees commanded by funds were unsustainably high. Its current infrastructure portfolio was worth about €1.25 billion.[8] Their infrastructure team was 9-strong and was expected to grow to about 15-16 individuals in the near future.[9] Else's infrastructure team had looked at the 407 toll road but decided it was not the best opportunity to pursue. Could infrastructure teams from different cultures, with different compensation structures, work well enough in the short time frame provided by the protocol she asked? In her view "it's certainly challenging. Different teams may have different views on the future of the business and the valuation. But the size and the complexity of the deals often requires investors to cooperate. The necessity to get all the different views and interests aligned creates a dynamic and sometimes difficult process".

[8] (OECD, 2011)
[9] (OECD, 2011)

But this was not her first concern. A frequent issue she had encountered in past collaborative efforts was the alignment of interest between participating investors. They were particularly concerned about the investment horizons of the parties involved and to what extent the parties were 'sticky' investors. They were also concerned about how the reputations of their investment partners affected their own.

George So of Kindle Capital too wondered about how important this model would become, more for reasons of limited supply of deals from lead investors than of any limited demand. There were very few pension plans with the capability of serving as lead investors. And even for them, deal flow was likely to be very lumpy. This mattered for the plans he talked to. How could they reserve capital for these types of opportunities if they weren't repeated regularly or anticipatable?

Case Study Questions

1. Are pension plans 'natural owners' of infrastructure? What should be the target allocation for infrastructure for a pension plan today? What are the most important economic arguments in your thought process?
2. What do you anticipate returns per year will be for infrastructure assets for the next decade? Will they be stronger or weaker than in the past?
3. Consider the 407 investment opportunity specifically. Would you invest on these terms?
4. Suppose your plan was offered the opportunity to join the syndicate. What do you like about the syndication opportunity? How attractive is the asset? What are your biggest concerns? For what type of plans does this make the most sense, the least sense?
5. Do you think the syndication protocol will be used often in the future? Why or why not?
6. If you could make one change in the protocol, what would it be?

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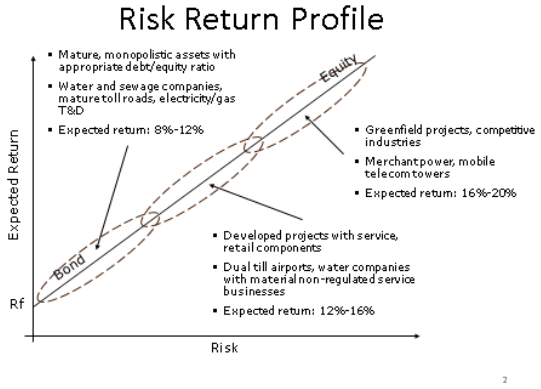
Exhibit 1: Background on Infrastructure

Infrastructure investments encompass any fixed assets that are required for the orderly functioning of an economy, such as roads, power lines and hospitals. One distinction often made was between economic infrastructure, which includes assets related to transportation, utilities, communication and energy; and social infrastructure, which includes assets related to the provision of education, healthcare and security. Another distinction was between lower risk infrastructure, usually established companies in developed markets, and higher risk infrastructure associated with greenfield developments, more reliant on subsidies, and in emerging markets (see below).

Although infrastructure-related businesses are diverse in nature, they share several common key economic characteristics. The first is stable, recurring cash flows. This is a result of having a captive customer base because infrastructure businesses often provide essential services which have inelastic demands and are resilient to economic cycles. In addition, infrastructure businesses often involve contractual purchase agreements. A second common feature is high barriers to entry which arise because infrastructure is highly asset-intensive and most often exhibits natural monopoly characteristics which limit competition. Lastly, infrastructure businesses are long-lived because the nature of infrastructure assets like roads and electricity grids is such that they require major maintenance efforts very infrequently.

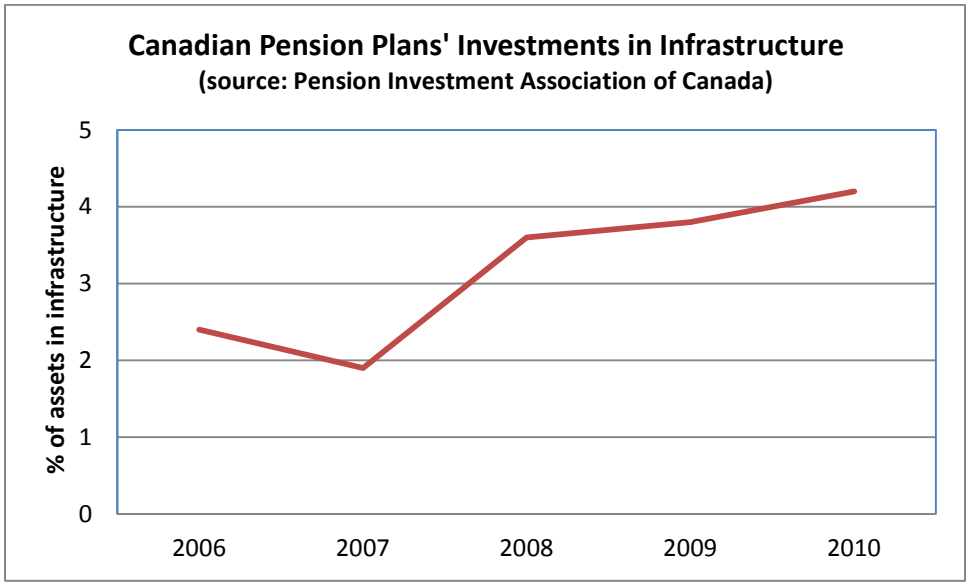
The global appetite for infrastructure is tremendous and growing, creating the potential for more private investments in infrastructure equity. A 2005 World Bank estimate valued global infrastructure assets at US$17 trillion and the OECD forecasts that global economic infrastructure requirements until the year 2030 will amount to US$50 trillion. The latter is equivalent to an average of about US$2 trillion annually, or 3.5% of world GDP.[10] Governments have traditionally taken on the role of investing in infrastructure, but they have been unable to keep pace with infrastructure demands imposed by increasing urbanization and modernization. The crisis appears to have further constrained the ability of governments to raise debt and taxes.



Source: Kindle Capital.

[10] (Inderst, 2009)

Exhibit 2: Evolution of Canadian Pension Plan's Investments in Infrastructure



Source: PIAC.

Exhibit 3: Costs and Returns of Infrastructure Investments

The table below contains the median and median costs and returns of infrastructure investments made by a sample of global pension funds in 2009.

		Mean	Median	Obs
Cost (bps)	External through Fund	252	183	52
	Internal	44	34	12
Returns (%)	External through Fund	-1.73	-2.4	52
	Internal	9.05	3.95	12

Source: CEM Benchmarking

Exhibit 4: Key Terms of Syndication Protocol

Term	Details
Obligations	• Commit Discretionary program: no obligation for lead investor (E.g., CPPIB) to offer syndication. • No fiduciary obligation among members of the investor group • Each investor shall form his own view as to the merits and size of commitment (subject to the minimum size and availability)
Minimum commitment	• Minimum commitment of $100 million per investor
Investment objectives	• Aligned in terms of investment horizon, philosophy, cost of capital and views on governance • Common view on infrastructure investments: focus on physical assets with long-term cash flows, a low risk profile, and inflation protection
Closing period	• Up to three months post-close
Pricing	• At lead investor's cost, plus (1) a roll-forward at the expected IRR and (2) share of acquisition costs • No ongoing management costs, no performance fee ("carry")
Governance	• Majority of directors nominated by investors; target 15% interest per board seat • Structure for both simple majority and super majority decision thresholds
Information rights	• Quarterly and annual accounts from management • Annual valuation performed by an independent firm

Source: Kindle Capital

Exhibit 5: 407 ETR Map and Projected Timeline for Syndication

Source: Kindle Capital

Timeline:

18 Nov 2010 – CPPIB acquires a 10% stake in 407 ETR from Cintra Infraestructuras S.A.

15 Dec 2010 – CPPIB acquires Intoll, a publicly listed Australian infrastructure fund, which owns 30% of 407 ETR plus 25% of a second toll road in Australia

15 Dec 2010 – concurrent with CPPIB's close, some parties who held a stake in Intoll chose to roll their interest into the new private vehicle (approximately 10%)

31 Dec 2010 – CIM distributed

Mid Jan 2011 – distribution of financial model

Mid Feb 2011 – meetings with CPPIB investment team, Intoll asset manager, traffic forecasters, and tax/structuring advisors (KPMG)

Mid Mar 2011 – due diligence finalized. Finalize M&A legal documents.

31 Mar 2011 – syndication close

Source: Kindle Capital

Exhibit 6: Table of Contents of Confidential Investment Memorandum

- Exec summary
- Asset overview
- Traffic and tolling
- Revenue
- Operating expense
- Capital expenses
- Capital structure
- Structure and tax
- Legal
- Governance
- Valuation and Cost

Exhibit 7a: Sample Information from TransAxio Highway Concession Inc. Prospectus

Description of 407

The principal business of 407 International is the ownership of 407 ETR, which is responsible for the operation, maintenance, management and expansion of Highway 407. 407 ETR signed a Concession Agreement with the Province of Ontario, pursuant to which it was granted a 99-year exclusive concession and ground lease of the lands upon which the 407 operations are located (which commenced on April 6, 1999).

Highway 407 is the first all-electronic open-access toll highway in the world. It traverses the GTA, the largest urban centre in Canada. As part of the integral transportation network of Toronto, Highway 407 currently stretches 108 kilometres from the west to the east of the GTA and directly connects to seven other large freeways—QEW, 403, 401, 410, 427, 400 and 404. Highway 407 comprises three main sections: Highway 407 Central, Highway 407 West Extension and Highway 407 East Partial Extension.

The mission of 407 is to be the route of choice for communities in the GTA by maximizing both customer satisfaction and shareholder value through the delivery of a superior travel experience providing a safe, fast, reliable and convenient alternative transportation route in the GTA.

Production and Services

Highway 407 was designed to provide open and unimpeded access to the public. The toll system was designed based on the following concepts:

- All-Electronic Toll Collection: Toll transactions are registered electronically under an open road system. There are no barriers, cash or token/ticket toll booths or coin machines. Motorists are not required to stop or slow down nor are there lanes restricted to pay tolls.
- Open Access Highway: All vehicles are able to travel on the Highway. Users are either identified for billing purposes through video based licence plate identification or by a transponder.
- Revenue Maximization: Variable tolling manages congestion and maximizes revenue by allowing the operator of the Highway to charge based on usage, by time of day, by vehicle type and by segment of the Highway.

…The toll structure includes a charge based on distance travelled, class of vehicle, time of day and segment of highway travelled. Effective February 1, 2008, using the flexibility available in the Tolling, Congestion Relief and Expansion Agreement ("TCREA"), 407 ETR introduced different pricing during the peak hours for the busiest segments or "zones" of the Highway. The Highway has been segmented into a regular zone and a light zone. In 2009, 407 ETR introduced a Trip Toll Charge of $0.25 per trip for light vehicles, $0.50 for Heavy Single Unit Vehicles (HSV) and $0.75 for Heavy Multi-Unit Vehicles (HMV) in addition to the per kilometer charge.

Key Business Attributes of 407

10-year Track Record of Financial Performance

Highway 407 was established in 1999 as the world's first all-electronic open-access toll highway. Since 2000, 407's revenues increased at a CAGR of 12.8% and reached $560 million in 2009. In addition, during the 2008-2009 economic recession, 407 revenues continued to grow at a 3.9% CAGR when compared to 2007. Contributing to this growth are steady increases in average workday trips which are attributable to population growth in the vicinity of Highway 407, increased capacity of Highway 407, and the growing acceptance of the toll road concept by the travelling public within the GTA and surrounding regions. Since 2000, EBITDA increased at a CAGR of 15.1% from $125.3 million to $444 million in 2009…

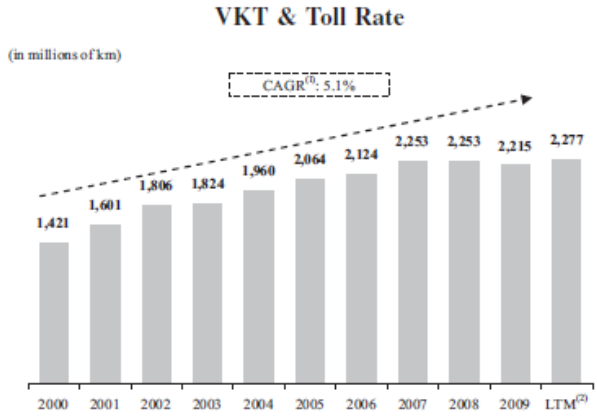
Cash Flow Generation & Dividends

Since 2000, 407's revenues have more than doubled and income from operations and EBITDA have more than tripled, contributing to the establishment of dividends in 2002, which have since grown at a 18.5% CAGR. 407 ETR has performed substantially all of its obligations under the Concession Agreement in connection with the design and construction of the Highway 407 Central Deferred Interchanges, Highway 407 West Extension and Highway 407 East Partial Extension. 407 continues to improve Highway 407 through construction projects designed to improve traffic flow and customer convenience. 407 is also investing in widening bridge structures and adding new lanes to Highway 407 to increase capacity and reduce traffic congestion.

Selected Key Performance Metrics and Financial Information

The following represents a historical summary of selected key performance metrics and financial data pertaining to 407 which was prepared by the Corporation and derived entirely from 407's publicly filed continuous disclosure documents for the past ten years.

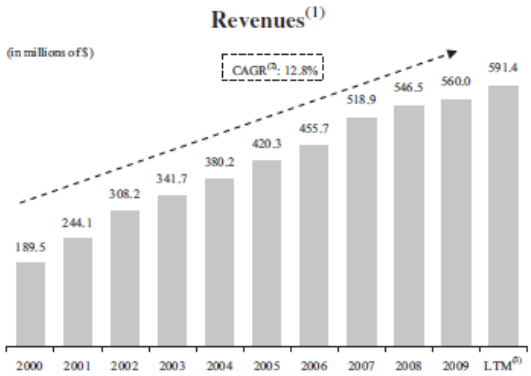
Key metrics, as defined by 407 and used by 407 management to monitor 407's performance include such measurements as: the total number of trips (traffic), vehicle kilometres travelled ("VKTs"), average trip length, revenue trips, average workday trips, average revenue per trip, unbillable traffic rate, transponder penetration rate, transponders in circulation, maintenance costs per lane kilometre, as well as call volumes and service levels in the customer service call centre.

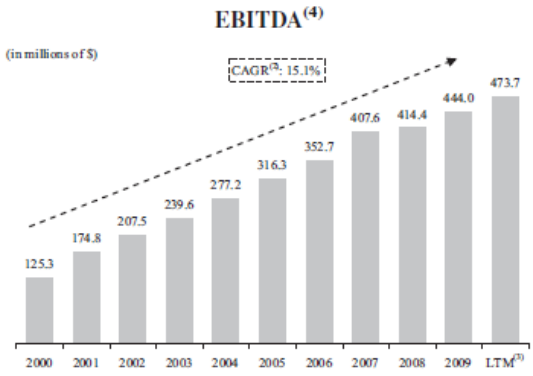


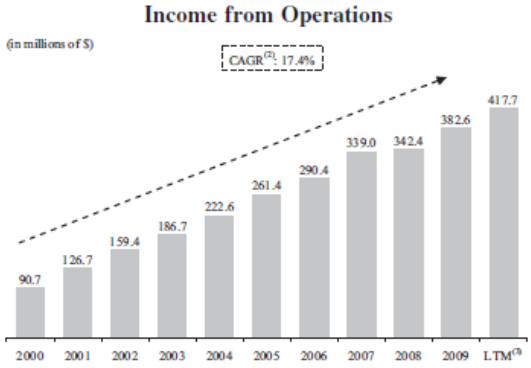
Effective Date	May-00	Jan-01	Jan-02	Feb-03	Feb-04	Feb-05	Feb-06	Feb-07	Feb-08	Feb-09	Feb-10
Toll Rate(3) ($)	0.1050	0.1100	0.1150	0.1295	0.1395	0.1495	0.1625	0.1760	0.1925	0.1985	0.2135

Toll Rate CAGR (May 2000 – February 2010) **7.6%**

(1) For the period from January 1, 2000 to December 31, 2009.
(2) For the twelve-month period ended June 30, 2010.
(3) Light vehicle, regular zone, peak rate per kilometre.





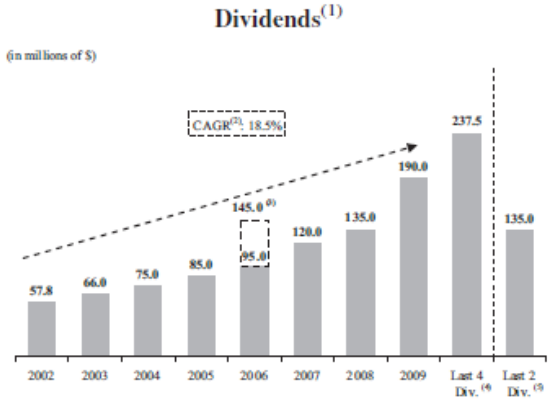


(1) Revenues for the years 2000 to 2002 have not been adjusted retroactively to reflect 407's management decision, in 2004, to offset a portion of late payment charges for which collection is not reasonably assured against revenues. These late payments charges were previously included in the provision for doubtful accounts.

(2) For the period from January 1, 2000 to December 31, 2009.

(3) For the twelve-month period ended June 30, 2010.

(4) For a reconciliation of EBITDA to net income and income from operations, see the reconciliation table at the end of this section.



(1) Includes distributions of $9.3 million, $10.7 million and $12.1 million paid to convertible debenture holders in 2002, 2003 and 2004, respectively, as a result of an agreement whereby holders of the convertible debenture had obtained rights similar to that of shareholders and were entitled to an amount equal to a specified percentage of the aggregate amount of any dividend payment. The convertible debenture was converted into common shares in October 2004.

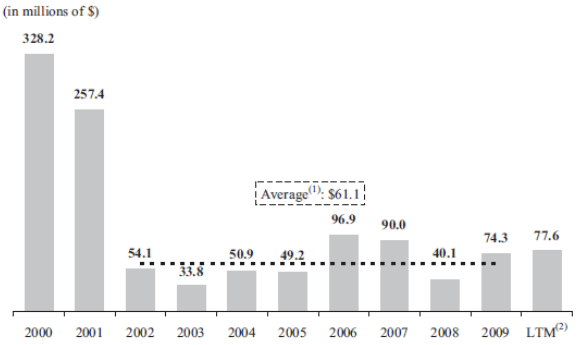
(2) For the period from January 1, 2002 to December 31, 2009.

(3) Includes payment of a special dividend of $50 million following the execution of the 2006 Settlement Agreement with the Province of Ontario.

(4) Represents the last four dividend payments prior to June 30, 2010.

(5) Represents the last two dividend payments prior to June 30, 2010 ($55 million in April 2010 and $80 million in June 2010).

Capital Expenditures



(1) For the period from January 1, 2002 to December 31, 2009.
(2) For the twelve-month period ended June 30, 2010.

…

EBITDA Reconciliation

EBITDA is not a recognized measure under Canadian GAAP. See "GAAP and Non-GAAP Measures".
A reconciliation of 407's EBITDA to its net income and income from operations is set out below.

(in millions of $)	Twelve Months Ended June 30, 2010	Fiscal Year Ended December 31, 2009	December 31, 2008	December 31, 2007	Six Months Ended June 30, 2010	June 30, 2009
Net income	$ 88.4	$ 58.2	119.1	$ 60.3	$ 46.2	$ 16.0
Current income tax expense (recovery)	—	—	(0.5)	—	—	—
Future income tax expense (recovery)	3.8	(15.4)	(33.5)	—	21.8	2.6
Interest and other expenses, net	325.5	339.8	257.3	278.7	144.0	158.3
Income from operations	$417.7	$382.6	$342.4	$339.0	$212.0	$176.9
Depreciation and amortization	56.0	61.4	72.0	68.6	26.6	32.0
EBITDA	$473.7	$444.0	$414.4	$407.6	$238.6	$208.9

Source: TransAxio Highway Concession Inc. Prospectus dated October 12, 2010

Exhibit 7b: 407 International Inc. Summary Financials

Year ended Dec 31,	2007	2008	2009
Revenues	$ 518.93	$ 546.54	$ 560.00
Operating Expenses	$ (111.28)	$ (132.19)	$ (116.00)
Depreciation and Amortization	$ (68.62)	$ (71.97)	$ (61.40)
Income from Operations	$ 339.03	$ 342.37	$ 382.60
Interest and Other Expenses	$ (278.72)	$ (257.28)	$ (339.80)
Income before Income Tax	$ 60.31	$ 85.09	$ 42.80
Income tax recovery - Current	$ -	$ 0.50	$ -
Income Tax Recovery - Future	$ -	$ 33.45	$ 15.40
Net Income	$ 60.31	$ 119.04	$ 58.20
Deficit, beginning of period	$ (895.80)	$ (955.49)	$ (971.45)
Dividends Paid to Shareholders	$ (120.00)	$ (135.00)	$ (190.00)
Deficit, end of period	$ (955.49)	$ (971.45)	$ (1,103.25)
Statement of Cash Flows Data			
Cash Flow from Operating Activities	$ 187.82	$ 245.52	$ 196.70
Cash Flow from Investing Activities	$ (162.02)	$ (141.11)	$ (79.50)
Cash Flow from Financing Activities	$ (13.11)	$ (71.46)	$ (102.30)
Increase in Cash and Cash Equivalents	$ 12.68	$ 32.95	$ 14.90
Cash and Cash Equivalents, beginning of period	$ 91.76	$ 104.44	$ 137.40
Cash and Cash Equivalents, end of period	$ 104.44	$ 137.40	$ 152.30
Balance Sheet Data			
Total Assets	$ 4,572.22	$ 4,658.46	$ 4,746.10
Total Liabilities	$ 4,702.31	$ 4,805.71	$ 5,026.00
Total Shareholders' Equity	$ (130.09)	$ (147.25)	$ (279.90)

Source: TransAxio Highway Concession Inc. Prospectus dated October 12, 2010

Exhibit 7c: 407 International Inc. Balance Sheet

As at Dec 31,	2007	2008	2009
Assets			
Cash and Cash Equivalents	$ 104.44	$ 137.40	$ 152.30
Short-Term Investments	$ -	$ -	$ 0.40
Restricted Cash	$ 137.80	$ 186.19	$ 219.40
Accounts Receivable	$ 150.01	$ 132.20	$ 136.10
Future Income Tax Asset	$ -	$ -	$ 51.00
Total Current Assets	$ 392.25	$ 455.78	$ 559.20
Long-Term Restricted Cash	$ 231.19	$ 218.09	$ 197.10
Long-Term Investments	$ 66.59	$ 92.00	$ 101.70
Property, Plant and Equipment	$ 2,256.67	$ 2,232.62	$ 2,258.20
Intangible Assets	$ 1,625.53	$ 1,626.53	$ 1,621.40
Other Assets	$ -	$ -	$ 8.50
Future Income Tax Assets, Net	-	$ 33.45	$ -
Total Long-Term Assets	$ 4,179.97	$ 4,202.68	$ 4,186.90
Total Assets	$ 4,572.22	$ 4,658.46	$ 4,746.10
Liabilities			
Accounts Payable and Accrued Liabilities	$ 35.89	$ 41.10	$ 41.90
Accrued Interest on Long-Term Debt	$ 59.27	$ 68.22	$ 72.80
Current Portion of Long-Term Debt	$ 9.38	$ 10.67	$ 799.40
Current Portion of Obligation Under Capital Leases	$ 1.55	$ 2.33	$ 2.10
Total Current Liabilities	$ 106.08	$ 122.32	$ 916.20
Long-Term Debt	$ 4,594.15	$ 4,681.70	$ 4,103.90
Obligations Under Capital Leases	$ 2.08	$ 1.68	$ 3.80
Future Income Tax Liability	$ -	$ -	$ 2.10
Total Liabilities	$ 4,702.31	$ 4,805.71	$ 5,026.00
Shareholders' Equity			
Share Capital	$ 775.00	$ 775.00	$ 775.00
Subordinated Convertible Debenture	$ 29.57	$ 29.57	$ 29.60
Retained Earnings / (Deficit)	$ (955.49)	$ (971.45)	$ (1,103.20)
Accumulated Other Comprehensive Income	$ 20.83	$ 19.64	$ 18.70
Total Shareholders' Equity	$ (130.09)	$ (147.25)	$ (279.90)
Total Liabilities and Shareholders' Equity	$ 4,678.30	$ 4,780.79	$ 5,662.30

Source: TransAxio Highway Concession Inc. Prospectus dated October 12, 2010

Exhibit 8: One Cash Flow Forecast and Valuation Information for 407 International Inc.

Year ended Dec 31, Actual / Forecast Period	2009 Actual	2010 Forecast	2011 Forecast	2012 Forecast
Vehicle Kilometres Travelled growth	-1.68%	1.00%	1.00%	1.00%
Toll growth	6.80%	10.00%	10.00%	10.00%
Toll Revenue Growth (real)		11.10%	11.10%	11.10%
Toll Revenue (real)	$ 509.50	$ 566.05	$ 628.89	$ 698.69
CPI Factor	1.00	1.02	1.04	1.06
Total Toll Revenue (nominal)	$ 509.50	$ 577.38	$ 654.29	$ 741.46
Total Other Revenue	$ 50.50	$ 55.31	$ 58.01	$ 59.73
Total Revenue	$ 560.00	$ 632.69	$ 712.30	$ 801.19
Total Operating Expenses	$ (116.00)	$ (131.88)	$ (136.67)	$ (141.77)
EBITDA	$ 444.00	$ 500.81	$ 575.63	$ 659.43
CAPEX				
Total CAPEX (real)		$ (112.77)	$ (65.00)	$ (65.00)
Total CAPEX (nominal)	$ (74.30)	$ (115.03)	$ (67.63)	$ (68.98)
Cash Flow Summary for Return Analysis				
EBITDA		$ 500.81	$ 575.63	$ 659.43
CAPEX		$ (115.03)	$ (67.63)	$ (68.98)
Capital Leases		$ 1.47	$ 1.47	$ 1.47
Changes in Working Capital		$ (1.44)	$ (17.22)	$ (19.25)
Reserve Accounts & Other Cash Movements		$ (75.94)	$ 0.89	$ 21.67
Interest Income		$ 9.26	$ 10.10	$ 10.30
Cash Taxes		$ -	$ -	$ (5.20)
Net Cash Flow Before Debt Service		$ 319.13	$ 503.25	$ 599.45
Debt Issuance		$ 800.00	$ 611.97	$ 363.43
Principal Repayment		$ (636.30)	$ (561.51)	$ (312.26)
Interest Expense	$ (274.50)	$ (289.04)	$ (277.14)	$ (288.85)
Other Cash Movements		$ 67.68	$ -	$ -
Cash Flow Available for Distribution		$ 261.48	$ 276.57	$ 361.77

Valuation Summary

2010 EBITDA	$500.8
Purchase Multiple	26.0x
Implied Enterprise Value (100%)	**$13,000.0**
Less: Net Debt (as at 31-Mar-10)	($4,380.9)
Implied Equity Value (100%)	**$8,619.1**

Transaction Costs

Legal Costs	$0.320
Model Audit and Tax	$0.098
Traffic and CAPEX	$0.065
Total	**$0.483**

Long-Term hold IRR (88-year): 11%

Key Inputs/Assumptions:

VKT growth rate: 1%

Toll growth rate: Years 1-5 10%, Years 6-10 5%, Years 10-88 2%

CPI/Inflation: 2%

CAPEX: $65 Million