

Texas Hold ‘em
Will the State go “all-in” on Public Private Partnerships
(“CDAs”) and lose \$2 Billion?

An Economic Analysis of
The Texas SH 121 Toll Road Concession

April 12, 2007



NW FINANCIAL GROUP, LLC
Exceeding Expectations

Overview

In January of 2007 the Texas Department of Transportation (“TxDOT”) received bids for a to-be-built toll road in the Dallas area. The winning bidder was Cintra, who was also part of the winning bids for the Chicago Skyway and Indiana Toll Road Public Private Partnership (“P3”) concession deals done in 2005 and 2006 respectively. TxDOT decided to exclude the regional public toll road authority – North Texas Tollway Authority (“NTTA”) - from bidding for the concession even though the proposed roadway directly intersected with an existing NTTA toll road. This exclusion from bidding resulted in the Texas Senate Transportation Committee, chaired by Senator John Carona, to hold hearings and obtain testimony concerning the public monetization option and how that compares to the P3 option. As a result of these hearings legislation was proposed to create a 2-year moratorium on P3 concessions in Texas where they are known as CDA’s (Comprehensive Development Agreements). The State Senate panel also asked the public authority, NTTA, what it could pay for the concession rights. The response from NTTA indicated that it would provide a price worth billions of dollars more than the Cintra bid.

Background

First, in 2005, there was the \$1.8 billion Chicago Skyway sale, a 99-year transaction. In some respects, the Chicago Skyway was the perfect candidate for long-term privatization because the seller, the City of Chicago, gained all the proceeds and the seller’s constituency will pay virtually none of the costs. The sale allowed initial rate increases of 12.5% per year for a total of 150% in a twelve-year period, and ongoing increases of 2% to 7% or more over the life of the franchise. It was made with no apparent sensitivity to ratepayer impact. A large part of the willingness to permit large toll increases may likely have been the fact that these increases will primarily be paid by commuters from another state (Indiana). If the Skyway were an in-state road, it is unlikely that the toll increases would have been politically palatable.

In 2006, following the Chicago Skyway transaction, the State of Indiana decided to privatize the statewide Indiana East-West Toll Road. It awarded a 75-year concession to the Cintra/Maquarie syndicate, the same bidder that won the Chicago Skyway concession, with a winning bid of \$3.85 billion. Proceeds from that transaction will be used to fund a ten-year transportation initiative of the Governor of Indiana called “Major Moves”. It should be noted that the Indiana Toll Road is not a major commuter route,

traffic is mostly commercial, and the Governor instituted toll increases of between 73% and 113% prior to the bidding in order to increase the size of the winning bid.

Now, in 2007, the Texas Department of Transportation (TxDOT) has targeted State Highway 121 (“SH 121”) in the Dallas region as its first effort to convert an existing free roadway into an expanded private toll road. TxDOT is facing severe statewide transportation funding shortfalls. One of TxDOT’s strategies to address this funding gap is through the use of Public-Private Partnerships, also known as Comprehensive Development Agreements (“CDAs”) in Texas. CDAs are essentially the sale, through a long-term lease, of toll roads to private investors. CDAs are intended to generate up-front concession fees in excess of the cost of building the road itself, and also to provide possible on-going public sector revenue sharing proceeds on an annual basis. SH 121 extends 24.9 miles and intersects with the publicly owned and operated Dallas North Tollway. Unlike the Chicago Skyway or the Indiana East-West Toll Road, where tolls are paid by commuters from other states, SH121 is located within Collin and Denton Counties and is heavily used by commuters within the Dallas region. The regional toll authority, the North Texas Tollway Authority (NTTA), was specifically excluded from bidding for the concession on SH 121 by TxDOT, even though SH 121 will intersect with one of their existing toll roads.

Texas public policy makers now face similar questions to those addressed in Indiana and Illinois:

- Do CDA's (Public Private Partnerships) increase or decrease the public benefit and economic value to the public sector?
- Could the use of a *public* tolling authority such as the NTTA provide an economic advantage to regional transportation funding by capturing more public transportation dollars than the Public-Private Partnership approach of a CDA?

News Flash

As we release this report the Texas House of Representatives has voted to impose a two-year moratorium on Public-Private Partnerships (known as CDAs in Texas) by a vote of 134 to 5. Also the Board of the North Texas Tollway Authority has voted to make a formal bid to TxDOT to construct the road and enter into the 50-year concession agreement.

The Private Public Partnership Proposal

TxDOT received three bids for the SH 121 project and selected Cintra, a Spanish toll road operator, as the winning bidder. The key elements of the Cintra bid were as follows:

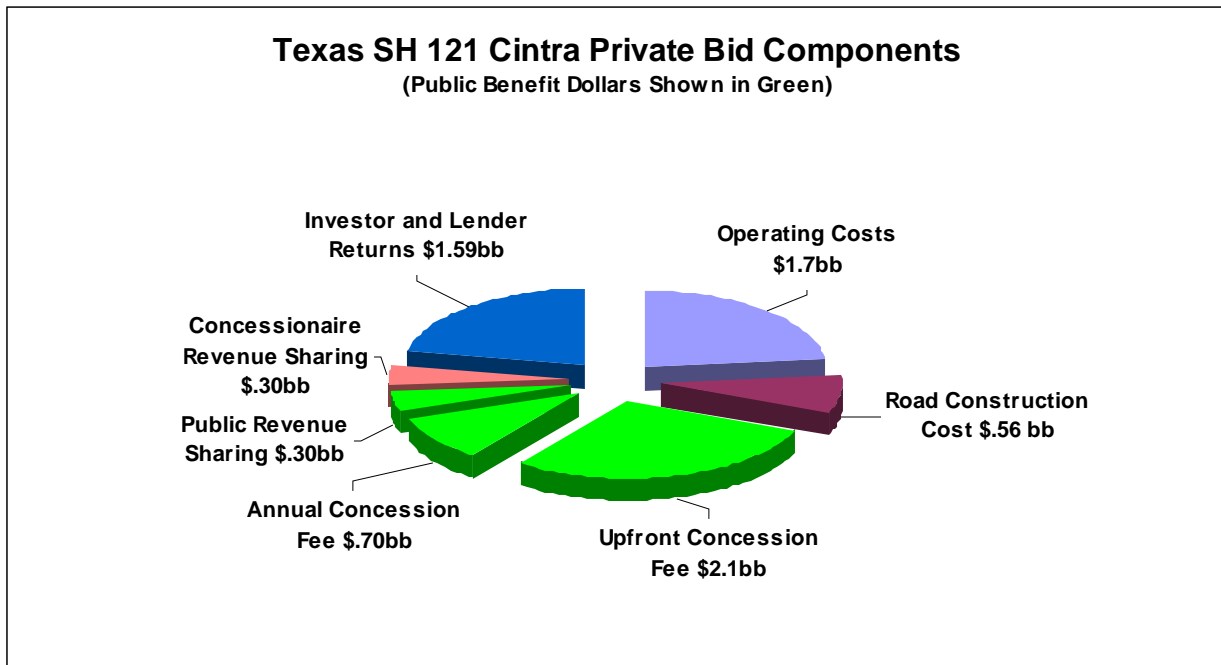
- 1- Upfront Concession Payment of \$2.1 Billion
- 2- Concession of 50 years
- 3- Road Construction Costs of \$560 million
- 4- Annual Concession payments with a present value of \$700 million, paid as \$25.2 million per year escalating at 3%.
- 5- Future revenue sharing with a value estimated at \$300 to 400 million over time, present value not known
- 6- Equity return to Cintra and partners expected to exceed 12.5% internal rate of return
- 7- All electronic tolling
- 8- Starting toll upon completion = 14.5 cents per mile
- 9- Toll regime equal to Consumer Price Index imposed every two years
- 10- Peak pricing for greatest 6 hours of traffic at 30% premium if lowest 6 hours of traffic is discounted 20%
- 11- Cintra compensated if competing roadway built within 20 miles
- 12- Public participation in any refinancing proceeds

Through a thoughtful and more sophisticated approach than prior US deals, TxDOT created a P3 procurement that has gone a long way to mitigate public concerns raised by the Chicago and Indiana transactions, including:

- Reducing the concession term from 99 or 75 years to 50 years which is much closer to the historic international model of 30 years or less

- Public participation in annual cash flows and revenue sharing rather than a full give up of revenues from traffic growth
- Eliminating both the GDP per capita ceiling and the 2% floors used for toll escalations in other deals in favor of the more modest CPI inflation based index (note: Cintra talks about a “retail price index”, presumably this is CPI)
- Public participation in proceeds from any refinancing to avoid windfall profits to the private concessionaire

Clearly these improvements in public policy developed by TxDOT have provided the best P3 procurement rules we have seen to date.



The Public Public Partnership Proposal

Although officially precluded from participating in the formal P3 bidding process, at the request of Texas State Senator John Carona, Chairman of the Senate Transportation and Homeland Security Committee, North Texas Tollway Authority (“NTTA”) provided a detailed letter addressing the dollars it could offer in upfront fees and future distribution of excess cash flows from the SH 121 project. It is important to note that NTTA had in its possession detailed information about the project, including traffic reports, from its previous involvement with the road and its valuation approach appears to have reflected an accurate analysis of the cash flows and construction costs associated with the project.

The NTTA proposed concession agreement ranged in total value from \$4.6 Billion to \$7.3 Billion depending upon traffic assumptions. Their base case produced \$6.3 Billion with the same \$2.1 Billion upfront as the private bid and slightly higher estimates of construction cost at \$620 million. The net present value of 50 years of future cash flows added the additional \$3.3 Billion versus the Cintra proposal to provide future payments with a present value of less than \$1 Billion consisting of an additional \$700 million in guaranteed present value annual payments plus some form of revenue sharing worth less than \$300 million on a present value basis. So in this case the **Public Ownership Dividend** equaled over **\$2.3 Billion** and the net price offered by the public entity was significantly greater than the price of the private entity.

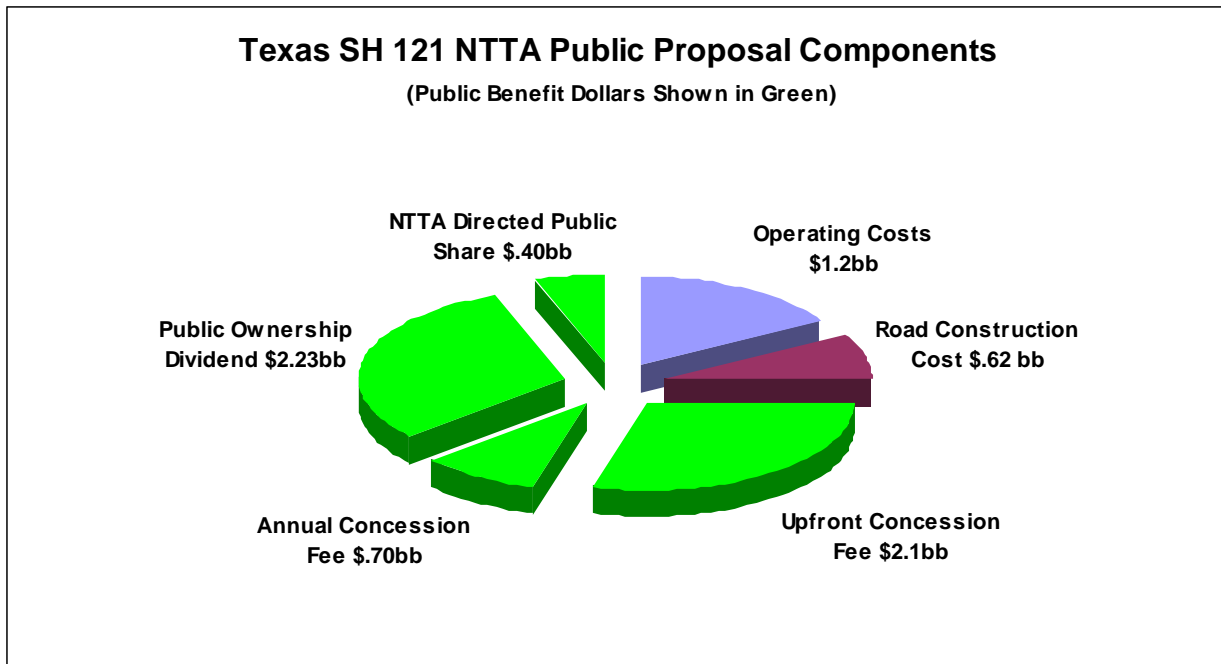
The key elements of the NTTA funding proposal are as follows:

- 1- Upfront Concession Payment of \$2.1 Billion
- 2- Concession of 50 years
- 3- Road Construction Costs of \$620 million
- 4- Annual Concession payments with an estimated present value of \$3.3 Billion,
- 5- All future revenues are returned to the public sector not the private sector
- 6- Cost of funds estimated at market plus .50% or about 5.00%
- 7- All electronic tolling
- 8- Starting toll upon completion = 14.5 cents per mile
- 9- Toll regime equal to 2.50% annual increase imposed every two years
- 10- Peak pricing starting in 2012 based upon CDA policy

11- No compensation if competing roadway built

12- Due to public ownership, 100% of any refinancing benefit would go to the public sector

Although NTTA caveated its proposal, basically to allow further study to verify its assumptions, in actuality NTTA was intimately familiar with this project and any variation in its valuation analysis should be minimal.



Analysis

In order to validate the differential between the public and private options we have undertaken an extensive economic analysis utilizing the same traffic data available to NTTA and also provided to the private bidders in the TxDOT CDA Public Private Partnership bidding process.

Toll Rates

The accepted toll regime for the SH 121 project starts at 14.5 cents per mile at opening of the completed road in 2010. Assuming a 2.5% annual increase applied every 2 years this would result in the following toll results over time:

Texas SH 121 Toll Regime Results			
Calender Year	Operating Year	Toll per Mile	Full Toll 24.9 miles
2010	1	\$ 0.145	\$ 3.61
2019	10	\$ 0.181	\$ 4.51
2029	20	\$ 0.232	\$ 5.77
2039	30	\$ 0.297	\$ 7.39
2049	40	\$ 0.380	\$ 9.46
2057	48	\$ 0.463	\$ 11.52

It is important to note that the Cintra proposal also included toll collections prior to 2010 at rates in the 13 cent plus per mile range and that Cintra planned on redirecting the proceeds of these collections into their capital financing. Cintra estimated the net value, after operations of these toll revenues to produce \$332 million before state annual lease payments of \$78 million thus providing approximately \$254 million in funding to pay for the upfront concession. Since NTTA does not appear to have taken these net revenues into account in their bid we have applied a value of \$200 million for this period in developing the cash flows.

Traffic Projection

Traffic Reports by Wilbur Smith Associates (“WSA”) were provided to the private sector bidders in the CDA Public Private procurement process. These reports provided 5 scenario cases, while it is likely that the private bidders had other studies done for their

own purposes, NTTA relied upon the “revised base case” in the WSA Study for its analysis. Given the high growth corridor surrounding this road it is reasonable for either a public or private bidder to confidently assume a more aggressive traffic growth than the original base case and the revised base case reflects reasonable assumptions. The WSA study basically projects average annual traffic growth in the first 10 years of about 6.7% per annum and then tapers down to about 0.5% growth in the final 10-year period. Our analysis of the WSA study also indicates an expected average trip length of about 6 to 7 miles on the 24.9 mile route.

Toll Revenues

The results of this analysis produce annual revenues for the WSA original base case over the 50-year concession period of approximately \$35 Billion. These gross revenue dollars are then utilized by the bidder to determine the net present value of the cash flows at their cost of funds and tender their bid after deducting operating costs, road construction costs and any other charges that are applicable. Our analysis would indicate that the two bidders in this case determined their values as follows:

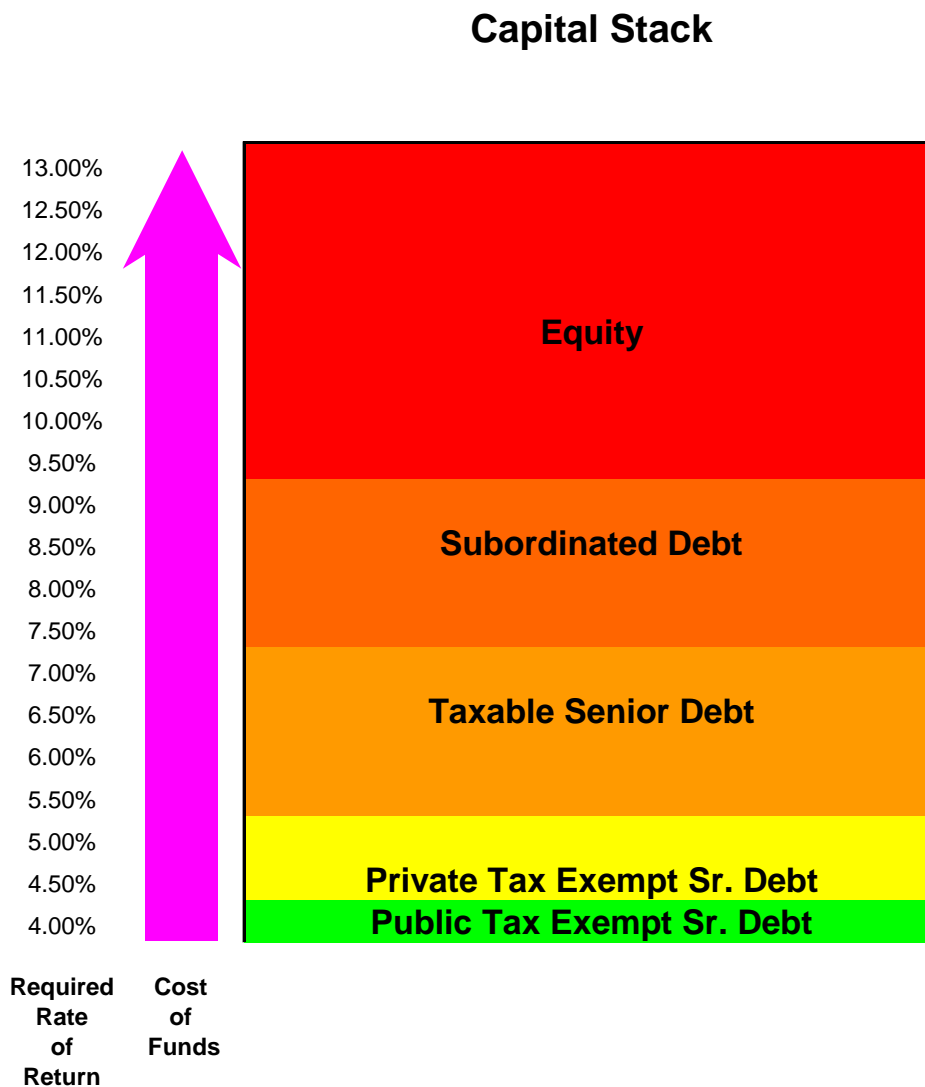
**Texas
State Highway 121
50 Year Concession Agreement
Public vs Private Comparision**

Bidder Type	Cintra Private	NTTA Public
Cost of Capital (estimated)	6.17%	5.00%
<i>Billions of Dollars</i>		
Gross Toll Revenues	\$ 35.00	\$ 35.00
NPV Value of Toll Revenues	\$ 5.66	\$ 7.25
NPV Cost of Operations	\$ 1.70	\$ 1.20
NPV Net Income	\$ 3.96	\$ 6.05
Cost to Build Road	\$ 0.56	\$ 0.62
Upfront Concession Fee	\$ 2.10	\$ 2.10
Concessionaire Revenue Share	\$ 0.30	\$ -
NPV Public Revenue Share	\$ 1.00	\$ 3.33
Payable as:		
NPV Annual Concession Fee	\$ 0.70	
Revenue Sharing Estimate	\$ 0.30	\$ 2.93
NTTA Directed Public Share		\$ 0.40

Review of the Cost of Capital

Capital funding for any venture can come from a variety of investor classes and in the case of public infrastructure that qualifies it can also come from investors seeking tax-exempt income, which significantly lowers the cost of capital to the borrower.

The cost of capital rises as risks increase and the following Capital Stack chart illustrates the approximate price of capital for various investor types:



Current Market Cost of Capital

In the current market environment the price of capital can be readily quantified to reflect the relationship to risk-free US Treasury bond returns and in turn can be utilized to establish the expected weighted cost of capital for a bidder for US 121 as follows:

Comparative Cost of Capital

Assumed AAA Insured Debt
As of 3/30/2007
10 Year Treasury = 4.63% *
Average Maturity = 20 years

	Weighted Average Cost of Capital	Tax Exempt Debt	Taxable Debt	Deferrred Debt	Subordinated Debt	Equity
Public Tax Exempt	4.44%					
		US Treasury plus -0.40%	US Treasury plus 0.80%	US Treasury plus 0.30%	US Treasury plus 0.35%	US Treasury plus n.a.
Percent of Funding	100%	4.23% 70%	5.43% 0%	4.93% 30%	4.98% 0%	n.a. 0%
	Weighted Average Cost of Capital	Tax Exempt Debt	Taxable Debt	Deferrred Debt	Subordinated Debt	Equity
Private Taxable	6.98%					
		US Treasury plus 0.00%	US Treasury plus 0.80%	US Treasury plus 1.90%	US Treasury plus 3.00%	US Treasury plus 8.00%
Percent of Funding	100%		5.43% 70%	6.53% 10%	7.63% 0%	12.63% 20%
Cintra SH 121	6.17%		Taxable Debt	Cash Flow	TIFIA Loan	
			5.15% 48.2%	0.00% 9.6%	4.63% 20.2%	12.50% 22.0%

*Taxable Finaincg likely to be LIBOR based, relationship to US Treasury 10 year is for consistency purposes only

In the case of SH 121 Cintra successfully lowered its costs of funds as shown above by utilizing cash flows during construction and low cost Federal TIFIA subordinated loan dollars in combination with senior debt and equity capital.

Valuation and Tolling Summary

Utilizing the variables outlined above we can compare the expected valuation of the cash flows from the tolling of US 121 to produce the following economic results with a starting toll rate of 14.5 cents per mile at opening in 2010:

SH Route 121 Dallas Texas

Valuation and Tolling Summary

Toll per Mile in 2010 \$ 0.145

Valuation	Billions of Dollars	Year of Concession deal						
		1	5	10	20	30	40	48
Public - NTTA	\$5.68	Toll for Full 24.9 mile Ride						
		<i>US Dollars</i>						
		\$ 3.61	\$ 4.06	\$ 4.71	\$ 6.33	\$ 8.51	\$ 11.43	\$ 14.92
Private - Cintra	\$3.10							

Lost Public Transportation Dollars

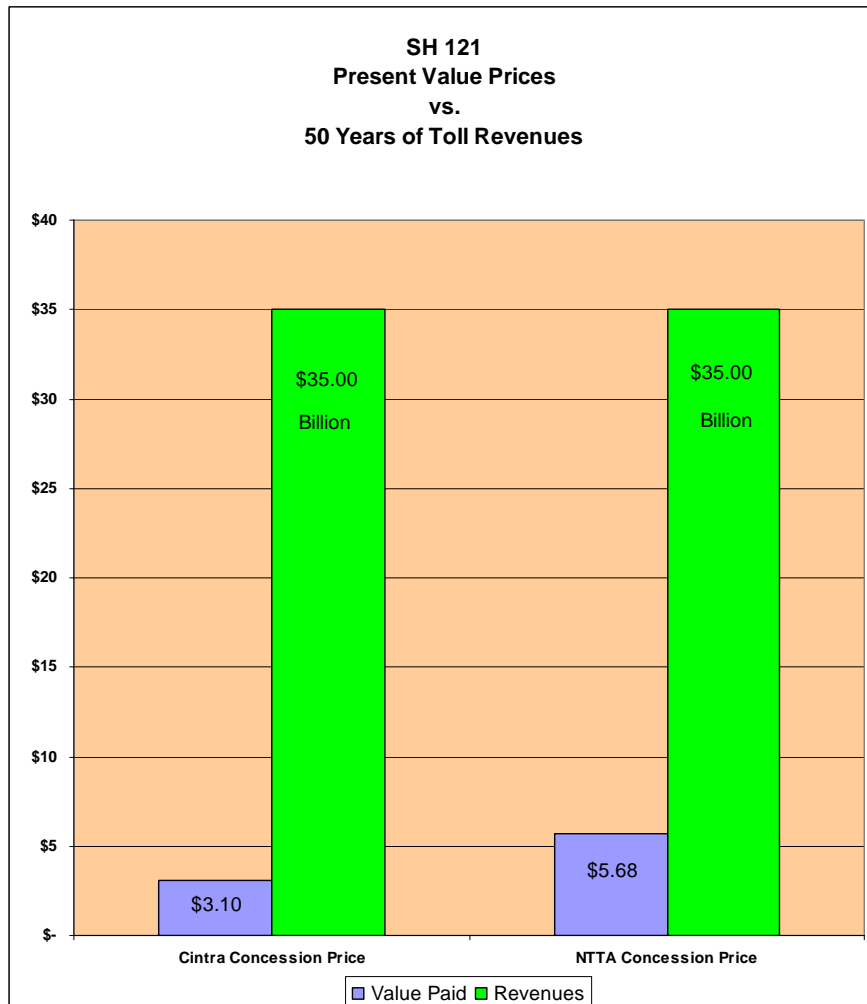
When a CDA style public private partnership concession/lease model is utilized for a toll road project, the private buyer is by definition a profit motivated entity and will calculate how much he is willing to pay for the concession based upon what profit margin is in the best corporate interest and what his overall cost of capital will be, thus bidders with lesser credit will have higher capital costs and therefore lower valuations of the toll road asset in question. Given a known tolling regime, the two driving factors in valuation will be expected traffic levels and cost of capital.

Our previous analysis of both the Chicago Skyway and Indiana Toll Road sales have found that private vendors do not utilize future traffic expectations different from what would be expected of a public agency. In the case of SH 121 the valuations also prove that both the public and private traffic growth views are on parity. If one were to choose to be more aggressive then the debt side of its funding would either increase the interest cost or more likely reduce the funding available forcing a higher proportion of funding from the most expensive source –equity dollars. Again the higher the cost of capital, the lower the valuation.

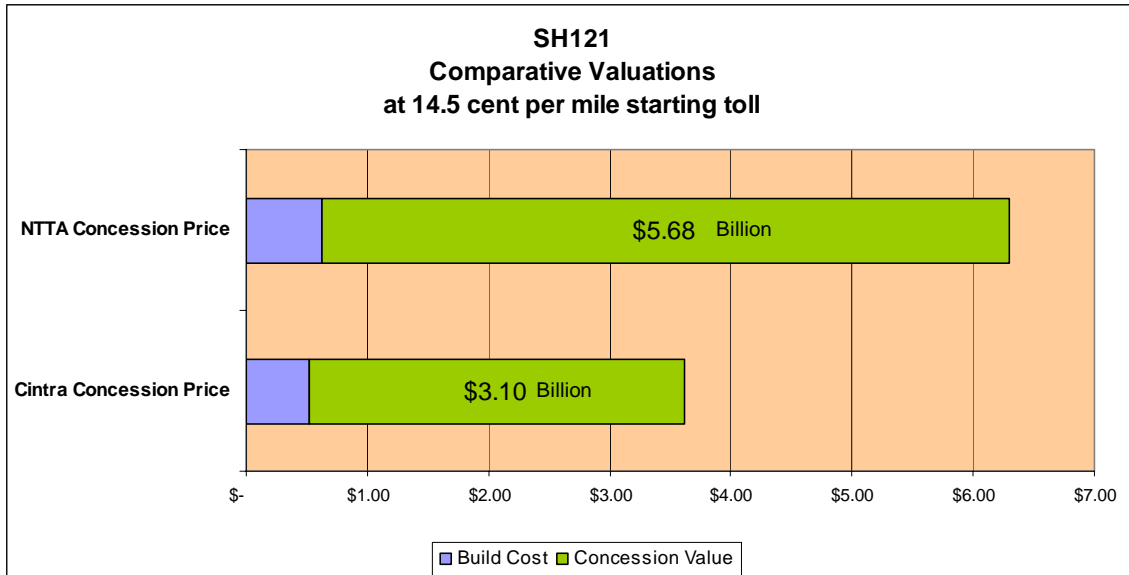
Thus due to the discipline imposed by the credit markets upon risk adjusted capital and the actual experience as evidenced by Chicago and Indiana, and now SH 121, we can conclude that the traffic projections that would be utilized in determining the future revenue potential of SH 121 will not be materially different for either a public or private proposer. And as shown above public cost of capital will always be significantly lower than private cost of capital, so the real policy question is:

How many transportation dollars will be lost by using a Public/Private Partnership approach rather than direct public ownership?

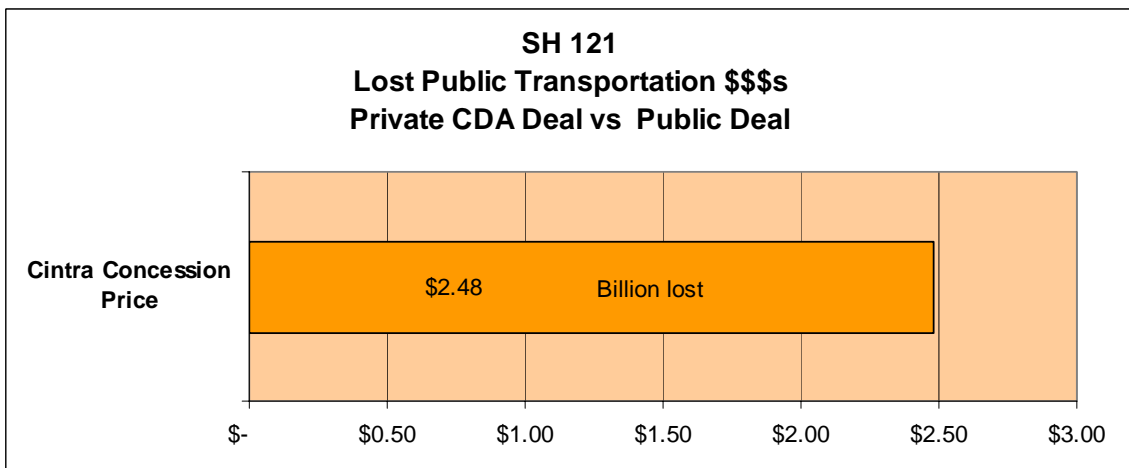
Although all of our analysis uses present value discounting it is important to realize that by “getting the money up front” you are surrendering 50 years of future cash flows. Although it is not a fair comparison to say the difference between the present value price paid and the future cash flows are the lost dollars, it is illustrative to view the relationship graphically in the following chart:



The actual calculation of lost transportation dollars need to be undertaken on a present value basis comparing the difference in valuation between the public and private sectors. For the purposes of presenting the differences we have utilized the tolling regime that assumes a starting toll in 2010 of 14.5 cents per mile and escalates at 2.5% per annum applied every two years. This revenue stream and resulting valuations would create the following differentials in net present value proceeds for the concession:



The result of these differentials is a likely true loss in transportation funding exceeding **\$2 BILLION** versus the alternative of capturing 100% of these revenues by utilizing a public tolling authority as owner of SH 121



Summary

Undertaking the development of SH 121 through a contract with a non-public entity, when an existing and capable public tolling authority exists in the region, raises several public policy concerns:

- 1- Is the State not optimizing its economic opportunity to raise transportation dollars by preferring the private sector over the public sector?
- 2- Is the State surrendering the full value of future cash flows – the **Public Ownership Dividend** - by agreeing to share in only a portion of the profits with the private sector?
- 3- Is the State missing an opportunity to strengthen overall regional transportation funding by withdrawing profitable operations from the region wide system to a private deal that could be blended into a stronger public funding system to absorb low revenue (or free) roads that the private sector does not want?

In our view the economic and policy advantages of utilizing public tolling authorities are compelling and should not be set aside in favor of a private sector preference. At the very least regional public sector tolling authorities should have the opportunity to match or better any private sector offers, note how public sector participation has identified a much greater value for SH 121.

The ability to rely on the public mobility mission rather than the private profit motive would seem to be the prudent public policy choice, assuming economics benefits are essentially equivalent.

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