



CHICAGO METERED PARKING SYSTEM TRANSACTION SUMMARY AND VALUATION ANALYSIS

June 30, 2009

Introduction

William Blair & Company (“Blair”) acted as the lead independent, third-party financial advisor to the City of Chicago (the “City”) in connection with the City’s evaluation and execution of the long-term concession (the “Concession”) for the Chicago Metered Parking System (the “System”). Our work on this transaction began in July 2007, and an engagement letter relating to our services was entered into in January 2008. In our role as independent financial advisor, we assisted the City in evaluating the financial feasibility of the transaction, estimating the value of the System to both the City on a continuing basis and to prospective private sector bidders, managing a request for qualifications process to identify and qualify prospective bidders, structuring and negotiating the terms of the transaction, coordinating the bidder due diligence process, and managing the competitive bidding process for the Concession.

Executive Summary

The City’s announced policy is to pursue long-term public-private partnerships involving infrastructure assets only when:

- There is substantial potential financial benefit to Chicago taxpayers and residents;
- The assets involved do not involve the core competencies of City government; and
- Experienced and professional operators are able to improve efficiency, quality of service and make enhanced capital investments in the assets.

In our view, the Concession of the System was a sensible and responsible transaction that satisfied these criteria. We worked closely with the City and its advisory team to determine the potential value of the System to bidders, as well as the value of the System to the City. Using these analyses, the City determined a minimum acceptable bid threshold that would ensure that the City received full value from the Concession of the System. The final bid amount of \$1.156 billion exceeded this threshold by over 15%. Certain commentators, including the City’s Office of the Inspector General, in a report dated June 2, 2009 (the “Report”), have suggested that the City may not have realized full

value for the Concession of the System. Although these observers, in many cases, make an earnest attempt to analyze the value of the System, we believe that many of their assertions, assumptions and conclusions are not correct. In the following analysis, we illustrate the impact of these misconceptions, using as a basis of comparison information presented in the Report. As discussed below, the two most significant inaccuracies contained in the Report are (i) its use of gross System revenue rather than free net cash flow in estimating System value and (ii) its use of an inappropriately low discount rate in estimating the value of the System to the City. Our analysis confirms that by properly projecting System revenues and by applying a discount rate that appropriately reflects the relative risks of the System, the conclusion that the City received full and fair value for the Concession of the System is clearly supported and affirmed.

Background

The City of Chicago (the “City”) has been a leader among American state and local governments in successfully partnering with the private sector by pursuing and completing innovative long-term concessions of the Chicago Skyway, the underground parking garages located in Grant and Millennium Parks, and the Chicago Metered Parking System. In total, those transactions have provided nearly \$3.6 billion for Chicago residents and taxpayers. Many other American cities now hope to copy Chicago’s success, particularly in the area of parking.

The City has applied the nearly \$3.6 billion of proceeds from these transactions to: establish long-term reserve funds of more than \$1 billion, including \$900 million for the City and \$120 million for the Chicago Park District, to replace revenue generated by the Skyway, parking garages and parking meters; retire \$925 million in debt; reserve more than \$700 million for mid-term budget relief in order to maintain essential City services; and invest more than \$322 million in neighborhoods, parks and programs that serve people most in need.

Each of the three successful transactions eliminated long-term risks of increased operating and capital expenditures, while mitigating the risk of future changes in technology and in the behavior of the users of the assets.

After the \$1.83 billion Chicago Skyway concession transaction closed, and the long-term reserve was established, all three bond rating agencies upgraded the City's credit rating. Today, the City enjoys its highest credit ratings since 1978.

The \$563 million concession of the downtown parking garage system helped to pay off all of the debt used to build Chicago's world-class Millennium Park, and allowed for a shift of capital resources from downtown parking garages to neighborhood parks throughout the city by investing \$122 million in neighborhood park infrastructure.

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- Experienced and professional operators are able to improve efficiency, quality of service and make enhanced capital investments in the assets.

City policy and concession agreements further require that private operators treat employees fairly, provide a high level of safety and security, and satisfy strong performance, operating and engineering standards. Throughout each transaction, the City has provided great transparency in the robust competitive bidding process and through the planning of the use of concession proceeds.

How the City Estimated the Value of the System and Determined the Minimum Acceptable Bid

The City and Blair worked together over a period of months to estimate the value of the System to infrastructure investors, estimate the potential value of the System to the City and identify the minimum bid amount that the City would accept for a 75-year Concession. Before proceeding with the transaction, the City wanted reasonable assurance, using widely-accepted financial valuation methods applicable to infrastructure assets, and incorporating various assumptions concerning rates, utilization, risk allocation, discount rate and other factors affecting valuation, that a long-term concession of the System would produce an upfront payment that would be both sufficient to replace the revenues currently produced by the System and to produce a substantial premium that would fairly compensate the City for a 75-year concession.

Infrastructure Investor Valuation Approach

Blair used a multi-variable discounted cash flow analysis to estimate the value of the System to infrastructure investors. The value of the metered parking system is primarily a function of two factors:

- The *long-term free cash flow* of the System --- estimated operating revenue (which makes assumptions about driver utilization), minus operating expenses, minus capital expenditures and corporate tax liabilities; and
- The bidder's *cost and mix of debt and equity financing or cost of capital*.

In estimating the value of the proposed long-term concession of the System, Blair prepared and continued to refine its multi-variable analysis using a variety of assumptions for the factors that impact long-term free cash flow and the bidder's cost of capital. Blair began by identifying all the factors that impact either long-term free cash flow or the

bidder's cost of capital. Next, Blair constructed a range of potential values for each of those factors and assigned each potential value with a probability of occurrence. As such, the probabilities for all the potential values of a factor add up to 100%. A scenario was calculated for every possible combination of those factors, which produced thousands of outcomes, each with a very small probability of occurrence based on the individual probabilities of the factors. The analysis produced a standard distribution of outcomes, similar to a "bell curve" of grades in a college class. Based on this bell curve, Blair was able to predict a range of values based on confidence intervals.

Using the valuation method described above, Blair initially established a valuation range for the Concession of between \$650 million and \$1.2 billion. While this range was refined during the bidding process, the top end of the range never exceeded \$1.2 billion.

City Held System Valuation Approach

The estimated value of the System in the City's hands is much more hypothetical. As such, there are several ways to approach the value of the System had the City not entered into the Concession.

Approach 1 – Current Practices

In 2005, the City increased the rate on meters located in the Loop from \$1.50 to \$3.00 per hour. This marked the first time in many years that the City increased meter rates on such a widespread basis. This increase affected approximately 1,000 spaces and represented only 3% of the System. More importantly, the \$0.25 hourly rate for approximately 75% of the System had not been increased in over 20 years. Exhibit 1 (attached) estimates the value of the System assuming continued operation by the City and annual rate increases of 3.0%. This assumption is probably aggressive given the fact that the rates on 75% City meters had not increased in over 20 years. During that 20-year period, the rate of inflation average approximately 3.2% per year.

Using this valuation method and a discount rate ranging from 10.00% to 14.00%, the estimated value of the System would be between \$177 million and \$276 million (see Exhibit 1).

Approach 2 – Concession Practices

The City faced two significant challenges to increasing parking meter rates. First, as discussed above, the rates on most meters in the System had not been increased in many years and there was a general lack of uniformity as to rates and hours of operation. Second, there was also the challenge of acquiring the expensive "pay and display" meter technology that would be needed to support higher meter rates. The estimated total cost (equipment and labor) for upgrading the City's meter technology is approximately \$50 million. Given the other higher priority demands on the City's limited capital improvement funds, it seemed unlikely that adequate funding would be available from

City capital dollars to pay for the prompt acquisition and installation of new meter technology.

This valuation approach ignores these two challenges and the risks associated with each and assumes that the City increased rates in the same manner as under the Concession transaction. Although many factors impact the value of the System to the City, the two that have the largest impact are the reaction of parkers to rate increases during the initial five years of rate increases and the City's discount rate.

Starting in year six of the pricing structure, rates increase to keep pace with inflation. Because beginning in year six rates do not increase on a real basis, there is no reason to expect that utilization will be impacted solely by parking meter rates. However, during the first five years rates do increase substantially, in some cases going from \$0.25 per hour to \$2.00 per hour. The impact on utilization due to price increases is the elasticity of demand, defined as the percentage impact on demand when price changes by 1%. Obviously, as discussed below, utilization may be adversely impacted by a variety of other factors, and the City has shifted all of these utilization risks to the concessionaire.

The Inspector General's Report analyzes five separate revenue scenarios, which are each produced by differing assumptions regarding the elasticity of demand for street parking. The analysis that Blair prepared for the City analyzed the impact that all relevant factors had on value, not just demand elasticity. However, given that this is the only factor that the Report used and to keep things simple, Exhibit 2 (attached) uses those scenarios and produces a value for each:

- *Scenario 1* - Year five revenue is \$85 million – The estimated value of the System is \$515 million to \$850 million, assuming a discount rate of 10.0% to 14.0% (see discussion below concerning the calculation of discount rates).
- *Scenario 2* - Year five revenue is \$100 million – The estimated value of the System is \$625 million to \$1.024 billion, assuming a discount rate of 10.0% to 14.0%.
- *Scenario 3* - Year five revenue is \$107.5 million – The estimated value of the System is \$678 million to \$1.111 billion, assuming a discount rate of 10.0% to 14.0%.
- *Scenario 4* - Year five revenue is \$115 million – The estimated value of the System is \$732 million to \$1.198 billion, assuming a discount rate of 10.0% to 14.0%.
- *Scenario 5* - Year five revenue is \$130 million – The estimated value of the System is \$839 million to \$1.372 billion, assuming a discount rate of 10.0% to 14.0%.

Assuming that the City could raise rates in the same manner as under the Concession transaction, and had adequate capital dollars available to fund meter technology upgrades, the City established its minimum acceptable bid of \$1 billion at the high-end of the estimated System value. This target is affirmed as reasonable and fair given the revenue assumptions that we utilized. As it turned out, the winning bid was at the very top range of the estimated value to the City based on this method.

Analysis of the Inspector General's Report

While the Report represents an earnest attempt to analyze and critique the Concession, we believe that many of the assertions, assumptions and conclusions contained in the Report are not correct. It appears that the Report reflects a number of conclusory statements, the merits of which are impossible to determine since they are made without citing any authoritative sources or precedent. Rather than attempt a point-by-point rebuttal, the following discussion focuses on the two main major issues raised in the Report that deal with System value to the City.

Revenue vs. Free Cash Flow

The Report assumes \$500,000 in annual capital expenditures for the System beginning in year three. Upon conversion to cashless payment meter technology, the System will be comprised of approximately 4,000 meters with an average acquisition cost of \$11,250 per meter. Meters of this nature typically last seven to ten years before they need to be replaced. Assuming the meters are replaced every 10 years, annual capital expenditures would actually equal \$4,500,000 ($4,000 * 11,250 / 10$ years). This figure represents only true capital costs and does not reflect any increases to operating expenses associated with repair and maintenance of technologically advanced machinery that is exposed to the elements. Further, it completely ignores any other capital expenditures throughout the System. ***It appears that the Report understates the cost of System capital expenditures by \$4 million every year***, thus overstating the amount of System free cash flow in each year.

The Report states that "Free Cash Flow" in year five in each of the five scenarios was \$85 million to \$130 million. The Report's analysis then applies a discount rate to these sums to determine value. The Report's analysis confuses the concept of free cash flow with revenue, thus completely ignoring significant operating costs of at least \$5 million per year. ***It appears that the Report understates the cost of operating the System by \$5 million every year***, thus overstating System free cash flow in each year.

These two mistakes combine to overstate annual free cash flow by \$9 million per year. Exhibit 3 (attached) demonstrates the impact that these mistakes have on the value of the System for each of the Report's revenue scenarios.

Discount Rate

Discount rates are applied by investors based upon perceived risk. In determining the applicable discount rate, the Report cites a single study by Partnerships Victoria to determine the applicable discount rate. According to this study, municipal-owned projects fall in one of three risk categories:

- *Very Low*: Discount Rate of 7.06%
- *Low*: Discount Rate of 8.26%
- *Medium*: Discount Rate of 10.4%

The Report states that the System should be placed in the “Very Low” category with a discount rate of 7.06%. However, the Partnerships Victoria study specifically places parking in the Low category, not the Very Low category. Additionally, the System clearly meets the criteria identified by Partnerships Victoria that justify placing the System in an even higher risk category than it would otherwise be placed:

- Project value in excess of \$500 million
- Unique system risks
- Demand risk is fully transferred

Therefore, correctly applying the Partnerships Victoria methodology would result in the System being placed in the “Medium” category with a discount rate of 10.40%.

The Report does not state why it chose to place the System in the “Very Low” category, but there is no stated logic behind that decision. For example, the Partnerships Victoria study places drinking water in the “Low” risk category. Thus the Report implies that the demand for drinking water is more elastic or risky than the demand for on-street parking. This unexplained judgment alone causes a seismic shift in the estimated value of the System. Exhibit 3 demonstrates the impact that this flaw has on the value of the System for each of the Report’s revenue scenarios.

Correcting the Report’s mistakes with regard to confusing revenue with free cash flow and using the improper discount rate creates a valuation range of between \$848 million and \$1.295 billion and clearly reflects the soundness of the winning bid – even when evaluating it using the Report’s selected source.

More on Discount Rates

Again, the Partnerships Victoria report is only one source regarding the proper discount rate for municipal-owned concession projects. We are unaware why the author chose this source. It appears to be an obscure report produced over four years ago by an Australian state government. It is, however, readily available for download on the internet. The truth is, there is no generally accepted approach to determining the applicable discount rate for municipal owned concession projects. The City used discount rates in the range

of 10% to 14% for its valuation analysis. The following is the logic behind the City's approach.

Definition - Discount rate is defined by Investopedia.com as "the interest rate used in determining the present value of future cash flow". Simply put, it is the rate used to convert the value of dollars in the future into the value of dollars today. For any given valuation analysis, the applicable discount rate equals the "risk-free rate" plus a "risk premium." Although the risk-free rate is a hypothetical rate, it is generally accepted by financial analysts to equal the rate of a United States Treasury bond with a maturity equal to the related cash flow stream. The risk premium is specific to the risks attributable to the specific investment being valued and is defined by Investopedia.com as "a form of compensation for investors who tolerate the extra risk - compared to that of a risk-free asset - in a given investment". For example, the risk premium for an internet start-up company is higher than that associated with a well-established company like Microsoft, given the greater risks related to a start-up business.

Risk-free rate - The current yield on a 30-year Treasury bond (i.e. the 30-year risk-free rate) is approximately 4.59¹%. Obviously, the term of the concession is 75 years, which would suggest an even higher risk free rate.

Risk premium – The fact that City has shifted 75 years worth of considerable risk to the concessionaire can not be ignored. Infrastructure investors demand a higher return than investors in bonds and stocks, which means that the risk premium for infrastructure assets is higher. Typically, a diversified stock portfolio has a risk-premium of 3% to 5%. Depending upon the industry, A-rated corporate bonds currently have a risk-premium of 3% to 5%. As a stand alone revenue source, the System would achieve a credit rating of BBB+ at best (compared with the City's "AA" credit rating), requiring a higher premium to compensate for the risks described below.

Conclusion - Even risk-free investments (if there were such a thing) would be valued using a discount rate of at least 4.5%. The appropriate risk premium should be higher than either a diversified stock portfolio or an A-rated corporate bond. Accordingly, a risk premium range of 5.5% to 9.5% would be more appropriate. Based on a risk-free rate of 4.5%, this results in a discount rate range of 10.0% to 14.0%.

Alternative – One way to provide a reality check to the City's discount rate of 10.0% to 14.0% is to ask the following hypothetical question: If the City issued \$1 billion of bonds secured only by the net operating revenue of the System (i.e. no general obligation backing by the City), what interest rate would they pay on those bonds? Those bonds, if they could be sold at all, would surely sell at double-digit yields.

Another way to look at this would be the appropriate discount rate the City would be advised to use if it were bidding on a similar system in another city -- Los Angeles, for

¹ The weighted average of System cash flows is greater than 30 years. 4.59% does not reflect this fact to simplify the analysis.

example. Again, in this theoretical case, Blair would advise the City to use a discount rate of 10.0% to 14.0% given the risk.

More on Risk Transfer

The characterization of the System as a “very low risk” project is simply inaccurate and

Conclusion

For the reasons discussed above, we believe that the System is much more valuable to the City under the Concession. The incremental value resulting to the City from completing the Concession can be expressed in two ways:

- If the estimated value of the System operated by the City is between \$177 to \$276 million (see discussion above), the incremental value to the City resulting from the concession is \$880 million to \$979 million
- The City deposited \$400 million in a revenue replacement fund to generate earnings to replace the net revenues it previously received from the System (increased by inflation each year), resulting in an incremental value to the City of

\$756 million. The City will also benefit from a risk transfer, as the investment returns on the revenue replacement fund will be less volatile and more certain than the cash flow produced by the System

Assuming that the City continued to operate the System, could implement the same rate increases and expanded days and hours of operation included in the Concession and could obtain adequate capital dollars to make required improvements in meter technology needed to support the higher meter rates, the winning bid of \$1.156 billion is at the high-end of the “best case” estimated range of value of the System,. Further, utilizing even the lowest appropriate discount rate of 10.0%, the estimated value of the System if operated by the City is \$845 million to \$1.3 billion.

The winning bid \$1.156 billion represented a very aggressive bid, reflecting the robust competitive bidding process, the trophy nature of the asset and the limited number of American public infrastructure investment opportunities. The winning bid was at the high-end of the estimated range of value of the System to a private infrastructure investor and to the City under continued City operation.

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