

Chicago Metered Parking System Concession Agreement
An Analysis of the Long-Term Leasing of the Chicago Parking Meter System

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Introduction

On Thursday, December 4, 2008, the Chicago City Council voted 40 to 5 to approve a 75 year concession agreement to lease the city's metered parking system for \$1.157 billion to Chicago Parking Meters, LLC. This makes the city's metered parking system, made up of approximately 36,000 parking spaces the first major publicly-owned system in the country to be subject to a long-term concession agreement (Mayor's). Under this deal, the concessionaire will be entitled to all revenues from the parking meter system for the term of the contract in return for the one-time payment.

Private investments in infrastructure were common in the US as early as the 18th century, but there has been a recent resurgence in the privatization of public assets as cash-strapped local and state governments are discovering that many of their assets and revenue-generating operations are worth far more than assumed (Malanga 1). Chicago has been leading the charge with the lease of the Chicago Skyway in 2005 and other long-term concession agreements including downtown parking garages and Midway Airport. The city is also considering privatizing part of its mass transit system and waste hauling services. This paper will attempt to weigh the benefits and costs of relinquishing long-term control of a major city asset, the metered parking system, for a one-time, up-front payment.

Infrastructure Privatization Overview

Though infrastructure investing is once again gaining ground in the US, it is not as common here as in Europe, Canada or Australia. In the US, well-developed municipal bond markets allow local and state governments to fund large infrastructure projects without the need for external financing (Jacobius 1). Therefore, there is less need to reach out to the private sector to finance the initial outlays for these projects. Worldwide, the US Department of Transportation figures that over 1100 public-private deals have taken place in the transportation field in the last twenty years with an approximate value of about \$360 billion. Little of that has taken place in the US (Malanga 2). However, David Osborne, coauthor of *The Price of Government*, predicts "a perfect storm' of fiscal stress as the population ages and fewer taxpayers must support bigger government"

(Malanga 3). This is precisely what is making politicians more and more interested in privatization. It is further evident as more and more privatization deals are done with the idea of financing pensions in mind.

However, as private investors are willing to deploy much more capital than there are public assets to sell, investors are now approaching governments to form public-private partnerships to help build and operate new infrastructure. Funds are attracted to these type of assets as they provide relatively stable returns. Infrastructure also serves as an inflation hedges as most contracts are linked to inflation. Yet, as analysis of these types of investments are typically conducted for long periods of time, fluctuations in revenues may have large impacts on the asset's final price (Malanga 3). Overall, these types of investments are much less risky, as long as cash flows are steady, or easily forecastable.

Proponents of privatization argue that assets function more efficiently in private hands. Private enterprises have more incentive to reduce costs while government operations are seen as wasteful, especially if patronage hiring is common-place. To break through any skepticism, stakeholders need to be assured that they are being compensated appropriately for trading away a long-term revenue stream and that revenues from privatization are spent or invested wisely. In some cases, privatization money is used to finance short-term budget items where the proceeds are used to cover fiscal problems or buy short-term political gain (Malanga 8). Therefore, any privatization of public assets needs to be conducted under close scrutiny to ensure that not only are those assets valued correctly by the selling party, but that funds from these sales are reinvested in programs, which have long-term benefits, and not used to cover structural budgetary deficits.

Chicago's Other Major Privatizations

Chicago's first major privatization was that of the Chicago Skyway, a 7.8-mile stretch of highway running from the city's South side to the Indiana border. The 2005 deal gave control to Cintra Concesiones de Transporte and Australia's Macquarie Infrastructure Group of a 99-year lease to the right to run and receive tolls from the skyway for an up-front payment of \$1.8 billion (Jacobius 2).

In 2006, the City Council and Chicago Park District approved a 99 year lease of four parking garages in the lakefront Grant Park area to Morgan Stanley's Investment Management Division for \$563 million. Roughly half the funds, \$278 million went to pay off debt associated with the garages, \$122 was earmarked for park improvements and \$120 million set aside for an annuity which would pay out \$5 million annually to replace lost revenues from the sale. In this case, even though parking fees in the garages were slightly under the market prices, occupancy was low and irregular – between 30% and 70% (Washburn). This was an unequivocal example of a beneficial sale to the city, as low occupancy resulted in low parking revenues and made it difficult for the city to pay off its bond obligations. With this lease, the city was able to pay off the debt associated with the garages and LAZ Parking, the garage operator, was able to increase rates, occupancy and revenues simultaneously through more efficient operations and increased marketing.

Another more recent, yet also more controversial privatization involved the leasing of Chicago's Midway Airport to the Midway Investment and Development Co. (MIDCo), a consortium, for \$2.5 billion. The 99-year lease gave the company the right to operate the airport and retain all revenues from operations subject to maintaining airport operations such as safety and security, runway maintenance and upkeep of the terminal. MIDCo also took over the city's 25-year use agreement with the airlines operating at the airport (Wilson).

Parking Meter Concession Agreement

According to the December, 2008 Aldermanic Briefing materials regarding the parking meter lease, the city will receive a one-time, up-front payment of \$1,156,500,000 for leasing the Metered Parking System to Chicago Parking Meters, LLC for a period of 75 years. The current system comprises of approximately 34,500 on-street metered parking spots and approximately 1,240 spots in 18 metered parking lots. The concessionaire will be responsible for the operation and maintenance of the entire system (2).

The City and City Council will maintain their rights to: perform enforcement and to collect and retain all enforcement revenues; revise meter rates, locations and hours of operations; add additional on-street parking spaces in the future and to eliminate any existing on-street parking spaces; and restrict metered parking for

special events or activities, festivals, construction and when concerns for public safety arise. However, according to the concession contract, if the concessionaire's revenues are negatively impacted through any of these actions, the city will be financially responsible for the loss of revenue (Volpe 3).

Approximately 19 unionized employees from the Department of Revenue will be impacted by the sale, although none will be laid off as a result of the transaction (Volpe 3).

Furthermore, the Concessionaire will be responsible for capital improvements to the system. According to the contract, the operator will have 180 days to provide cashless payment options where any parking fee exceeds \$1.50 per hour (52). The concessionaire is also responsible for the implementation of cashless payment options for all meters by mid 2011 (Volpe 4). Technological upgrades to the system are expected to cost approximately \$30 million (Volpe 6).

The proceeds from the sale will be subdivided into four major categories:

- Revenue Replacement Fund – in the amount of \$400 million from which the invested earnings will be transferred each year, starting in 2009, to the city's main fund, in the amount of \$20 million a year in order to replace lost revenues from the parking meter system concession.
- Human Infrastructure Fund – in the amount of \$100 million to support programs, which help low-income and senior individuals.
- Mid-Term Fund – in the amount of \$325 million, which will be used to supplement the 2009-2012 budgets.
- Stabilization Fund – in the amount of \$324 million, which can be used at the discretion of the City Council, particularly to bridge future budget deficits due to reduced revenues.

\$8 million from the sale will be used to cover transaction costs (City, Authorization 3-4). This information is summarized in Table 1.

Table 1

Concession Transaction Funds Appropriation

Human Infrastructure Fund	\$ 100,000,000
Mid-Term Budget Relief Fund	\$ 325,000,000
Perpetual Reserve/Revenue Replacement Fund	\$ 400,000,000
Budget Stabilization Fund	\$ 323,500,000
Transaction Cost	\$ 8,000,000
	\$ 1,156,500,000

(Volpe 7)

Table 2 provides a summary of the funds from the transaction, which will be allocated to future budgets.

Table 2

Relief Funds Applied to Upcoming Budgets

	2008	2009	2010	2011	2012	2013 On
Midterm Budget Relief	\$100 M	\$50 M	\$50 M	\$50 M	\$100 M	\$0
Interest on Perpetual Reserve	-	\$20 M	\$20 M	\$20 M	\$20 M	\$20 M
Annual Total	\$100 M	\$70 M	\$70 M	\$70 M	\$120 M	\$20 M

(Volpe 7)

The concession agreement also specifies a timetable for parking meter fee increases, where in some cases, meter rates will quadruple next year and will increase according to the schedule shown in Table 3 until 2013, after which meter rates will increase with inflation (Dardick). The parking meter system is divided into six zones, depending on traffic density. Each zone number is assigned a corresponding fee schedule. Starting in 2009, the fee types for each zone will be consolidated into three meter rate types.

Table 3

Parking Meter Rates per Hour

Zone	Current		Updated Rates				
	Rate	Spaces	2009	2010	2011	2012	2013
6	\$ 0.25	23,877	\$ 1.00	\$ 1.25	\$ 1.50	\$ 1.75	\$ 2.00
5	\$ 0.50	6,280	\$ 1.00	\$ 1.25	\$ 1.50	\$ 1.75	\$ 2.00
4	\$ 0.75	558	\$ 1.00	\$ 1.25	\$ 1.50	\$ 1.75	\$ 2.00
3	\$ 1.00	3,992	\$ 2.00	\$ 2.50	\$ 3.00	\$ 3.50	\$ 4.00
2	\$ 1.50	12	\$ 2.00	\$ 2.50	\$ 3.00	\$ 3.50	\$ 4.00
1	\$ 3.00	895	\$ 3.50	\$ 4.25	\$ 5.00	\$ 5.75	\$ 6.50

(Dardick)

Analysis of the Parking Meter Concession Agreement

This privatization agreement affects a broad scope of the community. City employees, tax-payers, residents who use the meter system and receive city services, businesses whose clients use the meter system and financial institutions are all stakeholders in the sale. This study will assess the efficacy of the parking meter system concession based on the present value of the contract. As not all data is available for this analysis, some numbers will be noted as based on estimates or assumptions.

Table 4 shows the adjusted revenue for 2009 as calculated from the rate increases and number of parking meters in each zone type from Table 3. A total revenue of \$23 million is projected for 2008 from parking meter collection. This is a conservative estimate as revenues for 2007 were \$22.9 million (Shields, Parking). Each meter zone's share of the total revenue is calculated by measuring the revenue that would be collected if each meter in the zone was used once for one hour in a given year. Each zone's share of the total revenue (the ratio of a zone's revenue to the revenue from all the zones) is labeled as "Share of Single Use Revenue" and is then used as the share of the projected total revenue. To calculate the actual share of revenue for each zone, specific revenue breakdowns for meter collections would need to be provided. As downtown, higher-rate meters have a higher frequency of use, this estimate gives disproportional weight to lower-rated meters, which will experience the highest percentage rate increases, therefore biasing the final contract value estimate upwards. Projected 2009 Revenue is calculated by multiplying the Share of Projected 2008 Revenue by the percent increase for each zone based on Table 3.

For example, Zone 6 has a current rate of \$0.25 per hour and consists of 23,877 meters in the city. If each of these meters was to be used once for one hour in 2008, the total revenue would be \$5,969 and the ratio of that total to the total from all meters would be 36.8%. 36.8% of \$23 million is approximately \$8.4 million. Zone 6 rates will triple in 2009 to \$0.75, so the Projected 2009 Revenue from metered parking is \$33.8 million.

Finally, an elasticity factor is applied to the rate increases to account for the subsequent decrease in demand as a result of higher prices. Zone 6 will experience the highest rate increase and use is factored to fall

by 30%. Zone 1 meters, on the other hand, are typically located in the densest areas of the city so the effect should be minimal. Reduction in metered parking usage in other zones is assumed to be either 5% or 10%, depending on the rate increase. These numbers are estimates, however, and further studies would have to be conducted to evaluate the price elasticity of demand with regard to parking meter usage and rates. This factor is also applied only at this one point in the calculations. Part of the rationale is that as the city expands and demand for parking increases, rate increases will have a diminishing negative effect on parking meter demand.

Finally, the Projected 2009 Revenue for each zone is multiplied by the Elasticity Factor to calculate the 2009 Adjusted Revenue, which would total approximately \$47 million (figure in bold).

Table 4

2008-2009 Revenue and Meter Rate Increase Comparison

Zone	6	5	4	3	2	1	
Current Rate Per Hour	\$ 0.25	\$ 0.50	\$ 0.75	\$ 1.00	\$ 1.50	\$ 3.00	Total
Number of Meters	23,877	6,280	558	3,992	12	895	35,614
Single Use Revenue	\$ 5,969	\$ 3,140	\$ 419	\$ 3,992	\$ 18	\$ 2,685	\$ 16,223
Share of Single Use Revenue	36.80%	19.36%	2.58%	24.61%	0.11%	16.55%	
Share of Projected 2008 Revenue of \$23M	\$ 8,462,976	\$ 4,451,773	\$ 593,333	\$ 5,659,706	\$ 25,520	\$ 3,806,691	
2009 Increase	\$ 0.75	\$ 0.50	\$ 0.25	\$ 1.00	\$ 0.50	\$ 0.50	
% Increase on 2008	300%	100%	33%	100%	33%	17%	Total
Projected 2009 Revenue	\$ 33,851,906	\$ 8,903,546	\$ 791,111	\$ 11,319,413	\$ 34,026	\$ 4,441,140	\$ 59,341,141
Elasticity Factor	0.7	0.9	0.95	0.9	0.95	0.98	
2009 Adjusted Revenue	\$ 23,696,334	\$ 8,013,191	\$ 751,556	\$ 10,187,471	\$ 32,325	\$ 4,352,317	\$ 47,033,194

To forecast the projected revenue for the length of the lease, the parking meter rates from Table 3 are applied to each year through 2013, after which, rates are to be increased at the rate of inflation, per the concession contract (Schedule 6). This analysis assumes the long-term inflation rate of 3%. Rate increases are rounded to the nearest \$0.25 as it is unlikely that the concessionaire will increase rates at the true rate of inflation as this would complicate the payment process. Table 5 on the following page represents an abridged

version of the revenue cash flows per year. The first three years of operation also include an annual Capital Improvement outlay. The city estimates that the capital improvement costs will amount to approximately \$30 million as required by the contract (Volpe 6). As it is unlikely that this amount will be invested immediately, \$10 million is applied each year until the deadline for the capital improvements of 2011. Values in this table are not discounted.

Table 5

Parking System Meter Projected Revenue

Year	Zones 6, 5, 4			Zones 3, 2			Zone 1			Total Revenue*	
	Meter Subtotal	Share of Total Revenue		Meter Subtotal	Share of Total Revenue		Meter Subtotal	Share of Total Revenue			
	30,715	58.73%		4,004	24.72%		895	16.55%			
2009	1	\$	32,461,081	2	\$	10,219,796	3.5	\$	4,352,317	\$ 37,033,194	
2010	1.25	25%	\$ 40,576,351	2.5	25%	\$ 12,774,745	4.25	21%	\$ 5,284,956	\$ 48,636,053	
2011	1.5	20%	\$ 48,691,621	3	20%	\$ 15,329,694	5	18%	\$ 6,217,596	\$ 60,238,911	
2012	1.75	17%	\$ 56,806,892	4	33%	\$ 20,439,593	6.5	30%	\$ 8,082,874	\$ 85,329,358	
2013	2	14%	\$ 64,922,162	4	0%	\$ 20,439,593	6.5	0%	\$ 8,082,874	\$ 93,444,629	
2014	2	0%	\$ 64,922,162	4	0%	\$ 20,439,593	6.75	4%	\$ 8,393,754	\$ 93,755,508	
2015	2	0%	\$ 64,922,162	4.25	6%	\$ 21,717,067	7	4%	\$ 8,704,634	\$ 95,343,863	
2016	2.25	13%	\$ 73,037,432	4.25	0%	\$ 21,717,067	7	0%	\$ 8,704,634	\$ 103,459,133	
2017	2.25	0%	\$ 73,037,432	4.5	6%	\$ 22,994,542	7.25	4%	\$ 9,015,514	\$ 105,047,487	
2018	2.25	0%	\$ 73,037,432	4.75	6%	\$ 24,272,016	7.5	3%	\$ 9,326,393	\$ 106,635,842	
2019	2.5	11%	\$ 81,152,702	4.75	0%	\$ 24,272,016	7.75	3%	\$ 9,637,273	\$ 115,061,992	
2020	2.5	0%	\$ 81,152,702	5	5%	\$ 25,549,491	8	3%	\$ 9,948,153	\$ 116,650,346	
2025	12.5	2%	\$ 405,763,511	25	3%	\$ 127,747,453	40.75	3%	\$ 50,673,405	\$ 584,184,369	
2026	13	4%	\$ 421,994,052	25.75	3%	\$ 131,579,877	41.75	2%	\$ 51,916,924	\$ 605,490,852	
2027	13.25	2%	\$ 430,109,322	26.5	3%	\$ 135,412,301	43	3%	\$ 53,471,323	\$ 618,992,945	
2028	13.75	4%	\$ 446,339,862	27.25	3%	\$ 139,244,724	44.5	3%	\$ 55,336,601	\$ 640,921,188	
2029	14	2%	\$ 454,455,132	28.25	4%	\$ 144,354,622	45.75	3%	\$ 56,891,000	\$ 655,700,755	
2030	14.5	4%	\$ 470,685,673	29	3%	\$ 148,187,046	47	3%	\$ 58,445,399	\$ 677,318,118	
2031	15	3%	\$ 486,916,213	29.75	3%	\$ 152,019,470	48.5	3%	\$ 60,310,678	\$ 699,246,361	
2032	15.25	2%	\$ 495,031,484	30.75	3%	\$ 157,129,368	50	3%	\$ 62,175,957	\$ 714,336,808	
2033	15.75	3%	\$ 511,262,024	31.75	3%	\$ 162,239,266	51.5	3%	\$ 64,041,235	\$ 737,542,525	

Note: Scheduled increases in meter rates with 3% inflation rate rounded to nearest \$0.25 after 2013. Analysis does not take into account the creation of additional metered spaces.

* \$10 million is subtracted from revenues for 2009-2011 to reflect capital improvement expenditures as required per contract.

Another important factor in determining the value of the contract is an analysis of how much of the parking meter revenue is normally kept by the city and how much is expensed as part of operating expenses. In 2006, the city collected \$21.9 million in revenues and generated an income of \$16.6 million, and in 2007, the city collected \$22.9 million and generated an income of \$18.9 million (Shields, Parking). Table 6 represents these figures as well as calculations of operating expenses and the amount of income generated as percentage of all revenues collected – the projected profit margin for the private operator. Interestingly enough, as revenues rose in 2007, operating expenses fell, possibly due to more efficient operations by the Department of Revenue. Though, it is unclear what kind of operating expenses the concessionaire will face, it is unlikely that its operating expenses would be more than those of the city. Furthermore, as parking meter rates will increase while the number of meters will remain the same, the operator can expect an even greater profit margin. Additionally, since it is unlikely that union employees will be hired, as in the case of the Department of Revenue, the operator can expect even lower operating expenses. A very conservative estimate of the profit margin would be 85% considering that the operator may not be completely familiar with the all the operating procedures. This percentage may increase as the concessionaire gains experience and increases operating efficiency through the use of technology. Cashless payment options will also limit the need to collect from individual parking meters and decrease operating expenses further.

Table 6

Revenue Margin Calculation (in Millions)

	2006	2007	2009*	2009*
Operating Revenue	\$ 21.9	\$ 22.9	\$ 48	\$ 48
Funds Generated	\$ 16.6	\$ 18.9	\$ 44	\$ 42
Operating Expense	\$ 5.3	\$ 4	\$ 4	\$ 6
Income as % of Revenue	75.8%	82.5%	91.7%	87.5%

*Revenues for 2009 are projected based on meter rate increases and operating expenses are estimated.

Lastly, in order to calculate the present value of the contract, a discount rate needs to be established. As this analysis aims at establishing the value to the City of Chicago if it raised parking meter rates according to

the schedule set out in the agreement, but did not enter into the agreement, the most appropriate discount rate to use would be the long-term rate of inflation of 3%, as cash flows would appear each fiscal year.

Applying a discount rate of 3% and a profit margin of 85%, the present value of the revenue cash flows is \$5.19 billion. Table 7 on the following page provides values based on varying discount rates and profit margins, with the estimated value emphasized.

Table 7

Margin & Discount Rate Net Present Value Matrix (in Billions)

		Profit Margin						
		50%	60%	70%	80%	85%	90%	
Discount Rate	2%	\$ 4.50	\$ 5.40	\$ 6.30	\$ 7.20	\$ 7.65	\$ 8.11	
	3%	\$ 3.05	\$ 3.66	\$ 4.27	\$ 4.88	\$ 5.19	\$ 5.49	
	4%	\$ 2.16	\$ 2.60	\$ 3.03	\$ 3.46	\$ 3.68	\$ 3.90	
	5%	\$ 1.60	\$ 1.92	\$ 2.25	\$ 2.57	\$ 2.73	\$ 2.89	
	6%	\$ 1.24	\$ 1.48	\$ 1.73	\$ 1.98	\$ 2.10	\$ 2.23	
	7%	\$ 0.99	\$ 1.19	\$ 1.38	\$ 1.58	\$ 1.68	\$ 1.78	

Conclusion

It seems that even by conservative estimates the City of Chicago is only receiving about one fifth of the true value of the contract for its concession of the metered parking system. The impetus for the privatization have been the recent budget deficits caused by the slowing of the economy. In the press release announcing the lease agreement, Mayor Richard Daley is quoted as saying: "During the toughest economy our nation has faced in over fifty years, it is more important than ever that we manage our budget in ways that are both responsible and creative" (2). However, \$325 million of the funds from the concession agreement are being used to finance short-term budget deficits. A recent *Crain's Chicago Business* article titled "Meter money won't cure city's fiscal ills" states: "Relying on one-time asset sales to finance ongoing city operations underscores the mayor's basic budgetary problems: Chicago spends more than it takes in." A further \$324 billion in a Budget Stabilization Fund can be utilized at any point to further plug budget deficits and less than half of the lease

revenue is going to provide future revenue streams. Furthermore, the \$20 million annuity does not consider inflation as its real value is going to diminish over time.

Granted, the economy is in recession and many of the revenue sources the city depends on are not meeting projected estimates. It is also unclear what the city would do if the \$150 million was not available for the 2008-2009 budgets. Most likely, further cuts in services and layoffs of city employees would be possible, prevention of which must add to the benefits associated with leasing the parking meter system, but whose effects are not considered in this analysis. However, the infusion of funds may be beneficial at this time, but it is at the cost of future revenue streams, which may be substantial. A lack of those funds in the future bears a cost as well.

Finally, one of the biggest arguments of proponents of this lease agreement is that, where, during this economic crisis, is the city to find such an enormous infusion of funds. However, a different perspective might lead one to consider for what kind of investment would a fund be willing and able to put up a billion dollars in a time when credit markets are near frozen and banks are so illiquid they are struggling to finance day-to-day operations. As the finance director for Harris County, TX is quoted as saying when the county declined to auction of its roadway system: "If anyone comes in and gives you a billion dollars, they certainly expected to make twice or three times that" (6). This analysis goes on to show that this is exactly what Morgan Stanley and its investors are getting.

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