

REGULATING THE SAN FRANCISCO
TAXICAB GATE CAP

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CONTENTS

EXECUTIVE SUMMARY	1
Endnotes to Executive Summary	6
I. Regulation of San Francisco Mean Gate Cap	9
A. Introduction	9
B. Mean Gate Cap	9
C. The Problem.....	10
D. The Solution	14
E. Summary of San Francisco Regulatory System.....	16
II. Regulatory Approaches.....	19
A. The revenue requirement approach to ratemaking and setting conditions of service.....	19
B. California Public Utilities Commission.....	22
C. The San Francisco Rent Board	24
D. San Francisco Public Utilities Commission	27
III. Recommendations and Summary	30

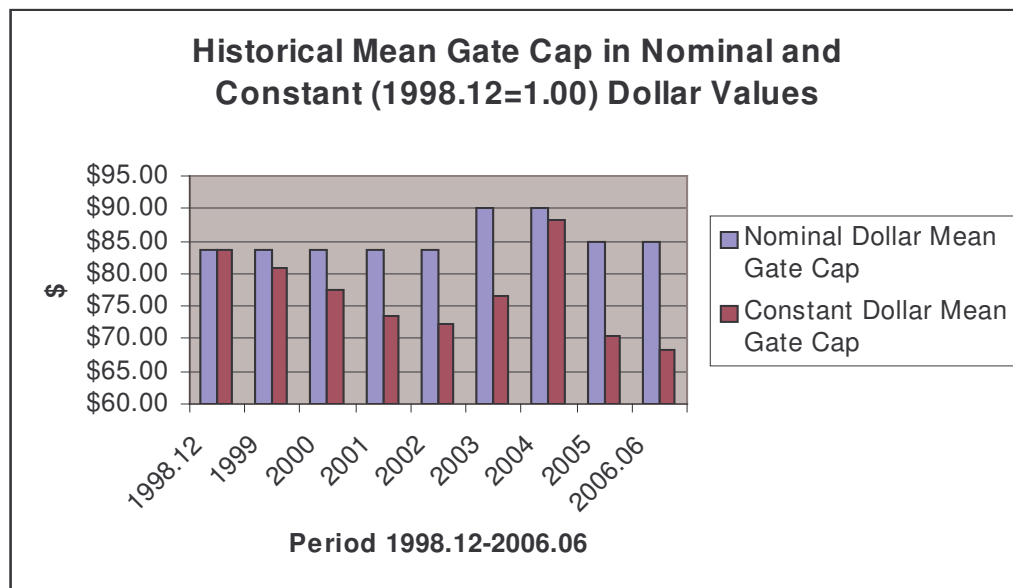
TAXI STUDY III
REGULATORY LAG—THE SAN FRANCISCO MEAN TAXI GATE CAP

EXECUTIVE SUMMARY

In his August 4, 2006, *Taxi Industry Report*, the Controller proposes a \$92.00 mean gate cap for San Francisco taxicabs. A \$92.00 cap, however, will neither stop nor remedy continued inflationary erosion of the value of a taxicab operating permit. Indeed, a \$92.00 gate cap, effective November 1, 2006, is years too late and over ten dollars short of a fair and reasonable regulatory ceiling for taxicabs in the San Francisco transportation market.

Ordinance No. 362-98 (December 18, 1998) set the mean gate cap at \$83.50 for a shift of 10 hours or longer beginning January 1999. According to the Controller, the gate cap as of June 2006 was \$85.00 in nominal (i.e., current) dollars. In adjusted constant dollars, however, a gate cap of \$85.00 in 2006 equates to \$68.29 in constant 1998 dollars. Accordingly, the mean (average) gate cap for San Francisco taxicabs has dramatically failed to keep up with inflation as measured by the CPI for San Francisco-Oakland-San Jose as determined by the United States Bureau of Labor Statistics (BLS).

Figure 1
 Historical Comparison of Average Annual
 Mean Gate Cap, Nominal vs. Constant Dollars



(1998.12=1.00)

Figure 1 illustrates the annual erosion of the gate cap in constant \$1998.12 dollars vs. the nominal (current) dollar gate fee. The inflation-adjusted constant dollar gate cap never regains parity in purchasing power with the initial mean gate of \$83.50 established in December 1998.

Similarly, Table 1 compares the annual real (expressed in \$1998.12 dollars) gate cap vs. the nominal value of the gate cap. The table also calculates at what level the gate cap would have to be set in order to maintain purchasing power equivalency with the original gate cap of \$83.50 in December 1998.

Table No. 1
Comparison of Annual Nominal, Real/Constant and CPI Adjusted Gate Caps

Average Year	Current Nominal	1998.12=1.00 Real	No CPI Lag with Gate Cap
1998.12	\$83.50	\$83.50	\$83.50
1999	\$83.50	\$80.92	86.18
2000	\$83.50	\$77.42	90.08
2001	\$83.50	\$73.49	\$94.87
2002	\$83.50	\$72.39	\$96.31
2003	\$90.00	\$76.66	\$98.03
2004	\$90.00	\$88.33	\$99.25
2005	\$85.00	\$70.37	\$100.87
2006.06	\$85.00	\$68.29	\$103.93

In Appendix B to the *2006 Taxi Industry Report*, the Controller analyzes three alternatives for setting a November 2006 mean gate cap.

- In the first scenario, utilizing the CPI the Controller increases the initial mean gate cap of \$83.50 (1998) through June 2006 for an estimated gate cap of \$104.30.
- In the second scenario, the higher (\$90) of the two mean gate caps referenced in Ordinance No. 228-02 is increased by the CPI through June 2006 for an estimated new gate cap of \$97.41.
- In the third scenario, the lower (\$85) cap mentioned in Ordinance No. 228-02 is increased by the CPI through June 2006 (June 2006.06) for an estimated mean gate cap of \$92.00.

Under Scenario No. 1, a new gate cap of \$104.30 would begin to recover the inflationary erosion of the 1998 gate of \$83.50. Also, \$104.30 in nominal 2006.06 dollars is more or less equal to an \$83.50 gate in constant dollars.

In a standard regulatory framework, where rates and charges are set or limited by the regulator (in this case San Francisco), once rates and charges are initially established, they are then adjusted over time so that the regulated party can recover reasonable operating costs including (in a transportation business) maintenance and repair expenses, depreciation, insurance, workers compensation, and capital investment costs (e.g., purchase of new automobiles). In addition, the rate or charge must allow for a reasonable return on investment capital (i.e., profit). In this way, a taxicab company can operate efficiently over an extended period of time,

providing a quality transportation product to its customers and regular work for its employees and drivers.

Against this background, the Controller's recommended mean gate cap of \$92.00 (Scenario No. 3, above) is a radical departure from the orthodox regulatory model, and it perpetuates persistent "regulatory lag" between actual cost increases in taxicab operations and a company's ability to secure enough revenue to satisfy its obligations and reasonably compensate its investors (i.e., medallion-holders).

In his *2006 Taxi Industry Report*, the Controller discusses what he terms "return on equity" in the taxi industry. How the numbers displayed by the Controller are defined and calculated is not explained in the report, nor does the Controller comment upon the role that the "return on equity" calculation plays in setting a mean gate cap. Again, in a standard regulatory framework, the regulators are required to specifically define terms such as "return on equity," "weighted average cost of capital" (debt/equity capital and related tax implications), and "allowable capital costs" *before* utilizing such concepts to set a rate or charge. The Controller's use of such terms, and evident (yet unexplained) reliance on them in formulating his recommended gate cap, is another departure from the orthodox regulatory model used in many jurisdictions and agencies.

Investors in taxi companies (usually medallion-holders) need to be assured that their continued investment in San Francisco's regulated taxi industry will be subject to a systematic, transparent, and relatively nondiscretionary regulatory process. Their voice must be heard at every step of the regulatory process, along with those of other stakeholders. There is a finite limit to the amount of cost that investors in this sector, as currently structured, can internalize. Opportunistic and politically driven add-ons that promote further erosion of profitability, and the elasticity of rider demand, must be discussed and analyzed through a rigorous give-and-take process within a more structured regulatory process.

The taxi industry has a number of immediate needs: (1) Rate relief (a realistic gate cap and an immediate fuel surcharge) to mirror the changes taking place in the market place, and (2) A real and responsive regulatory process that is rooted in orthodox economics, responsive to all stakeholders, and based on an established and workable regulatory model. As of the writing of this report, neither of these industry needs are or have been met.

The current San Francisco model for regulating taxicabs is dysfunctional and disjointed. It does not utilize orthodox economic analyses, does not require long-term strategic plans, and is not cogent, transparent, systematic, or disciplined. There

is no real system (process) per se. We recommend that the City look to establishing a system similar to those used by the California Public Utilities Commission (CPUC) in regulating investor-owned enterprises.

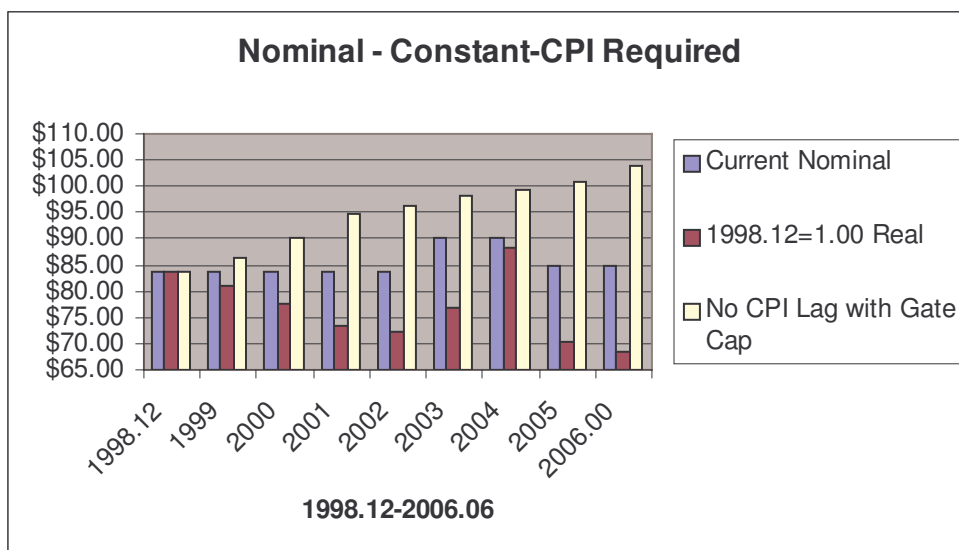
In the meantime, since the industry can never recoup the “lost years” of revenue loss caused by the regulatory lag, at a minimum the mean gate cap should be set at \$104.30, Scenario No. 1 of the Controller’s report. Any other decision seriously threatens the continued viability of the taxi companies that organize and deliver the vast majority of taxi service to San Francisco’s residents and tourists.

Is the taxi-industry unique in the regulatory framework? Are other regulated sectors so mismanaged? To put this gate cap analysis in perspective, other key regulated sectors were studied (rents and utilities). The research (see below) indicated that the regulatory morass of the San Francisco taxi industry is not unique. Other San Francisco regulatory processes are as dysfunctional as the regulatory process for taxis. The results of this research, hopefully, will lead to immediate relief for the taxi sector and catalyze legislators to develop more efficient regulatory processes for the City’s regulated sectors.

Executive Summary Endnotes

Figure 2

Historical Comparison of Average Annual Mean Cap Nominal vs. Constant Dollars and Nominal Dollar Annual Average Amounts to Keep Current Mean Gate Cap Equal to Initial Mean Gate Cap of \$83.50



The Controller's *2006 Taxi Industry Report* presents three scenarios for setting a mean gate cap as of November 2006. The mean gate cap is based on calculating the average or mean gate for a week. The mean gate cap is the average, or mean, that cannot be exceeded during a 14-shift week. Some gates fees will be higher and some gate fees will be lower. Gate caps are not static at the mean gate cap; rather, trades between drivers and companies should yield an average no higher than the mean (average) gate cap.

Figure 3

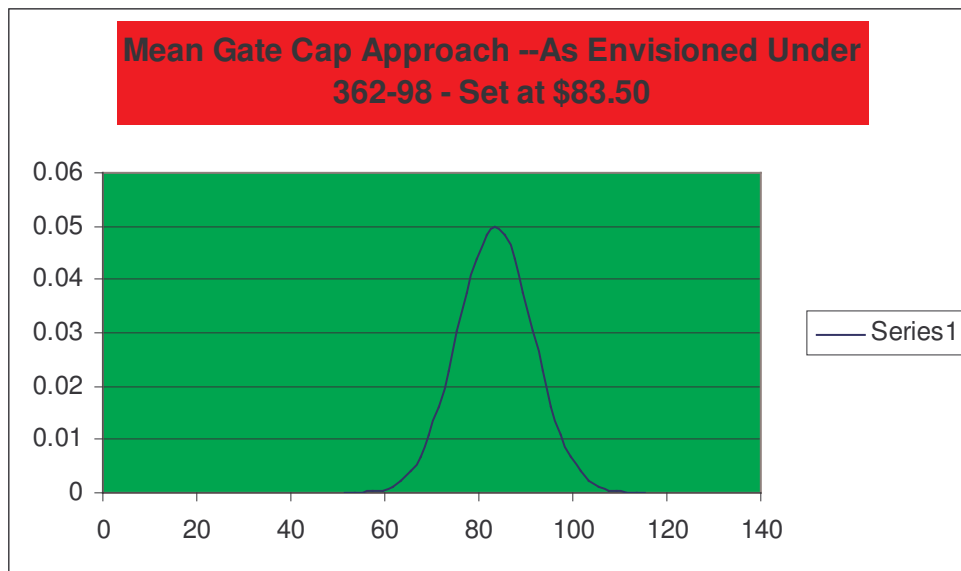


Figure 3 shows a hypothetical bell-shaped distribution around a mean gate cap of \$83.50 with an assumed standard deviation of +/- \$8.00. In the original concept, assuming a normal bell shaped, distribution function, 68% of the gate fees range between \$75.50 and \$91.50. The likelihood of trades (assuming \$83.50 did represent a market clearing price, on average) above or below \$91.50 and \$75.50 would decrease significantly. The curve does not actually touch the X-axis. Using actual data, the curve may be shaped differently. However, the concept of a mean gate cap with distributed higher and lower gate prices expresses the mean/average concept envisioned under Ordinance No. 362-98 is illustrated by Figure No. 3. The mean gate cap is not a static, take-it-or-leave it figure

The use of an inflationary index to express current or nominal prices in constant dollar amounts is helpful in seeing if the regulators have responded to and remedied the inflationary erosion of real purchasing power in a timely manner. This is done by setting a base year index equal to 1, i.e. December 1998 (1998.12=1.00) and thereafter rebasing all future inflation to this new base of 1.00. This is shown in Table 2, in which:

In Table 1:

- Columns 1 and 2 define the year and month.
- Column 3 includes is the CPI series presented by the Controller in Appendix B of his *2006 Taxi Industry Report*.
- Column 4 shows the rebased CPI index created by dividing the entire series in Column 1 by 167.40, the CPI level used by the Controller as of December 2006.
- Column 5 shows the nominal dollar gate required to equate to the initial gate cap of \$83.50 at various future periods. The rebased index is multiplied by the \$83.50.
- The Controller's CPI numbers were used throughout this report, albeit rebased to 1998.12=1.00.

Table No 2
Rebasing CPI Index

Year	Month	CPI	Index 1998.12=1)	\$83.50 in nominal dollars
1998		167.40	1	\$83.50
1999	Feb	169.40	1.01	84.50
	Apr	172.20	1.03	85.89
	June	171.80	1.03	85.69
	Aug	173.50	1.04	86.54
	Oct	175.20	1.05	87.39
2000	Dec	174.50	1.04	87.04
	Feb	176.50	1.05	88.04
	Apr	178.70	1.07	89.14
	June	179.10	1.07	89.34
	Aug	181.70	1.09	90.63
2001	Oct	183.40	1.10	91.48
	Dec	184.10	1.10	91.83
	Feb	187.90	1.12	93.73
	Apr	189.10	1.13	94.32
	June	190.90	1.14	95.22
2002	Aug	191.00	1.14	95.27
	Oct	191.70	1.15	95.62
	Dec	190.60	1.14	95.07
	Feb	191.30	1.14	95.42
	Apr	193.00	1.15	96.27
2003	June	193.20	1.15	96.37
	Aug	193.50	1.16	96.52
	Oct	194.30	1.16	96.92
	Dec	193.20	1.15	96.37
	Feb	197.70	1.18	98.61
2004	Apr	197.30	1.18	98.41
	June	196.30	1.17	97.92
	Aug	196.30	1.17	97.92
	Oct	196.30	1.17	97.92
	Dec	195.30	1.17	97.42
2005	Feb	198.10	1.18	98.81
	Apr	198.30	1.18	98.91
	June	199.00	1.19	99.26
	Aug	198.70	1.19	99.11
	Oct	200.30	1.20	99.91
2006	Dec	199.50	1.19	99.51
	Feb	201.20	1.20	100.36
	Apr	202.50	1.21	101.01
	June	201.20	1.20	100.36
	Aug	203.00	1.21	101.26
2006	Oct	205.90	1.23	102.70
	Dec	203.40	1.22	101.46
	Feb	207.10	1.24	103.30
2006	Apr	208.90	1.25	104.20
	June	209.10	1.25	\$104.30

I. Regulating the San Francisco Mean Gate Cap

A. Introduction

This study focuses on the mean gate cap. Recommendations for a fuel surcharge and a new system for allocating taxicab medallions were covered in two prior studies. Although this study does not address paratransit issues, the Controller believes that a paratransit surcharge on both the gate cap and the meter rate “holds harmless” both drivers and taxicab companies. The analysis of incident (where it falls) and impact (who pays) for such add-ons is not addressed herein. These add-ons should be treated as a supply tax in studying the economics of taxi regulations.

B. Mean Gate Cap

A mean gate cap was first adopted in December 1998 in Ordinance No. 362-98. It was initially set at \$83.50. Ordinance 362-98 states, “The mean gate fee charged drivers by a taxicab company may not exceed \$83.50 for a shift of 10-hours or longer.” This approach was revised slightly in Ordinance 228-02: “The mean gate fee shall be determined by adding together the gate fees charged by the company for all available shifts during the week.”

The mean gate cap is the maximum average that taxi companies may charge operators for a 10-hour (plus) shift. It can be viewed in the form of a bell-shaped curve: some charges will exceed the mean gate cap while others will be less. These plus and minus charges must balance out to the prescribed average, or mean. See Figure 3 above.

Although the mean gate cap is mandated by ordinance, over a week of 14 shifts the cap may change to reflect market shifts based on such factors as time of day, day of week, ambient conditions, time of year, and other factors that impact the supply and demand for taxicabs in San Francisco. Gate charges do vary.

Table No 3, reproduced from the Controller’s *2006 Taxi Cab Industry Report*, summarizes the dates, amounts, and related legislation pertaining to the gate cap from December 1998 through June 2006.

**Table No. 3
History of Gate cap**

Start Date	End Date	Gate Cap Base	Gate Gap Add-On	Gate Cap minus Paratransit	GC Plus Paratransit	Total Gate	Legislation. & Impact
1-18-99	1-1-03	\$83.50		\$83.50		\$83.50	Ord.#362-98
1.04.03	8-1-03	83.50	6.50	\$90.00	1.50	91.50	Ord. #228-02
8.02.03	11.1.03	83.50	6.60	\$90.00	1.50	91.50	Ord.#204-03 3 month. ext. on GC
11.2.03	3.01.04	83.50	6.60	\$90.00	1.50	91.50	Ord.#2256-03 4 month. ext. on GC
3.02.04	9.01.04	83.50	6.60	\$90.00	1.50	91.50	Resolution #173-04, 5 month. ext. on GC
9.02.04	12.31.05	85.00				85.00	Sunset of Gate Cap to \$85.00
1.01.06	6.30.06	85.00				85.00	Ord. #118 – 6 month ext. on paratransit
7.01.06						\$85.00	Sunset of paratransit provisions

C. The Problem

The mean gate cap has not kept up with industry inflation. Nor has it kept up with the CPI. Figure No 3 compares, for the period 1998.12 through June 2006.06, the annual nominal value of the mean gate cap, the annual real/constant inflation-adjusted value of the mean gate cap, and the annual nominal value of the mean gate cap required to ensure that in CPI-adjusted nominal dollars the mean gate cap does not lag behind inflation. These numbers were also presented in Table No. 1 above.

Both Figure 3 and Table 1 illustrate how the mean gate cap has failed to maintain purchasing parity with inflation as embedded in the weighting of the CPI. The column labeled “No CPI Lag with Gate Cap” reflects the required annual adjustments necessary to keep the mandated gate cap on a purchasing parity with changes in the CPI. Ordinance 228-02 mandated that the Controller in every even year make adjustments to the mean gate cap based on the CPI. There was no report in 2004 and in 2006 the Controller’s baseline recommendation was to set the gate cap at \$92.00 as of November 1, 2006. This number utilized the CPI, but it assumed a base cap of \$85 and a beginning date of 2003, both of which bear no relation to economic reality.

Taxicab companies have costs that increase faster than the general consumer inflation index as measured by the BLS-CPI. In the Controller’s 1994 and 1996 Reports, the CSAA auto index was used. Since these reports were written, taxicab companies have incurred many additional and faster-escalating costs including, but not limited to, worker’s compensation, higher liability insurance premiums, the cost of City-mandated newer automobiles and many other costs not included in the CPI.

Clearly with costs such as insurance and worker’s compensation, mandated under law, increasing by multiples of the CPI, the mean gate cap, the source of 96 percent of taxicab company revenues, is probably 50 percent of what it really should be, even assuming a November 2006 mean gate cap of \$92.00. The Controller has not accounted for either the increase in the CPI or the real and special revenue requirements needed to cover normal operating costs of doing business by these taxicab companies.

The confusion regarding the estimation of the gate in the 2006 Controller's report occurs because Ordinance 228-02 authorized a mean gate cap of \$90.00 if certain actions are taken by companies, i.e., financial data are provided by taxi companies, they provide worker’s compensation coverage and acknowledge the need for a universal health plan for drivers. The default, if they refused to do this, was a cap of \$85.00. At this point the matter of sustaining the higher gate cap was taken out of the hands of the companies. It was a discrete relationship: comply and receive the higher gap of \$90.00 or don’t comply and get the lower gate of \$85.00. The sunset provision was a regulatory problem and not a consequence of any action by any complying taxi cab company.

The Controller was mandated by Ordinance 228-02 to report in 2004 as to the feasibility of a driver health plan. The Controller’s October 2003 report, *Health*

Benefits for San Francisco Taxi Drivers, does not specifically delineate a particular health plan and/or state it would be either feasible or infeasible.

The Controller's 2003 study, however, did question whether fare elasticities (revenues generated) would support rate increases to fully fund any such plan. This ambiguity meant that taxi companies that had fully complied with all requirements of Ordinance 228-02, through no failure to act, were required, according to some, to accept a mean gate significantly lower than that set by Ordinance 362-98 in November 1998. This was a problem caused by regulatory inaction and should not be internalized as a wealth loss to companies acting in good faith.

The Controller did not present a taxi driver universal health feasibility plan in 2004 as mandated by Ordinance 228-02. This failure exacerbated the ambiguity of Ordinance 228-02. In real dollar purchasing power, the taxi companies were well aware that even the \$90.00 allowed by 228-02 was less than the first cap of \$83.50 set four years earlier.

Taxi companies that provided financial data as mandated under the Ordinance 228-02, instituted a worker's compensation program and were prepared to cooperate in developing a health plan were then confronted with a claim by some regulators and stakeholders that in September 2004 the mean gate cap of \$90.00 should sunset back to \$85.00. In September 2004 a nominal gate cap of \$90.00 had a constant \$1998.12 value of \$76.92. A mean gate cap in nominal dollars of \$85.00 as of September 2004, had a constant (real) dollar value \$72.65 (\$1998.12).

Thus, in August 2004, the \$90.00 mean gate cap was already \$6.58 below the mean gate cap of \$83.50 established in December 1998. Under the "sunset approach," a mean gate cap of \$85.00 in September 2004 was in inflation adjusted terms \$10.85 below the original gate cap of \$83.50. The regulated did not suspect that the regulators would knowingly inflict such a wealth loss on their good faith investments in the San Francisco taxi industry and thus assumed a continuation, in nominal terms, of the \$90.00 gate cap, while aware this \$90.00 gate cap was well below the value of the initial gate of \$83.50 set in December 1999.

Both major ordinances (362-98 and 228-02) have created problems for operators, taxicab companies and passengers. They do not establish a clear regulatory system for setting and adjusting fares, gate caps and leases. These two ordinances have basically created an industry in search of a regulator. The Controller issues reports, and the Taxi Commission debates. Political forces eventually catalyze the Board of Supervisors to act. As in all political bodies, these actions often lead to

ambiguous laws commingling both social and economic mandates with deference to who will pay and who will bear the costs.

Taxicab companies that complied with all mandates of Ordinance 228-02 now find themselves in jeopardy of being sued for overcharges with respect to gate fees. This come about because the regulators did not provide clear directions as to which companies could have \$85.00 as a cap and which companies could have \$90.00 as a cap. There was no clarifying report by the Controller in 2004 as mandated by Ordinance No. 228-02.

Missed dates for producing reports (Controller's 2004 report on the feasibility of implementing or not implementing a health care program for taxicab operators) and regulatory inaction have a high economic cost in terms of alternatives forgone. Currently there is confusion as to what the present gate and flag-drop are. In the latter case, the City Attorney rationalizes that operators can continue to use \$2.85, but escalation calculations will be based on \$2.75. Years of escalating gasoline price hikes associated with increasing world demand for hydrocarbon products, political instability, and Federal Reserve policy have not yet been addressed via an immediate gasoline surcharge.

The major actors in this regulatory dance are the Controller, Taxi Commission and Board of Supervisors. The Taxi Commission has not exhibited an understanding of the fundamentals for setting fares and conditions of service. Regulated companies have to provide services as defined by the regulators. This is the basic revenue requirement approach to setting tariffs and rule making.

If a health plan is mandated, the regulators must figure out what will be delivered under this plan, how much will it cost, and who will pay and when. Like mandating hybrid-autos, such an action is not a free good. Someone must pay. Unfortunately in San Francisco there is no real formalized process for doing this and the process implodes. The Taxi Commission, like the Rent Board (more formal process) and San Francisco Public Utilities Commission (SFPUC), seems ignorant of the basics of revenue requirements and the presence of real world budgetary constraints.

A degree of difficulty creeps into a two-layered regulatory system such as the San Francisco system where gate caps, leases, and fares are simultaneously regulated. Fares set the ultimate ceiling on mean gate and lease caps. This requires that regulators coordinate their efforts to ensure that the revenues from regulated fares will cover mandated gate cap fees.

D. The Solution

The Controller's even-year reports need to be more comprehensive and based on revenues required by taxicab companies to provide the best quality service at the lowest possible cost. The revenue requirement approach to ratemaking in a utility environment is discussed in Section II. A. and elsewhere. Taxicabs must be allowed to recover all mandated and allowable costs in the rates set by the regulators. Gate fees represent approximately 95 percent of the revenues realized by taxicab companies. Orthodox ratemaking sets rates to cover reasonable costs (including a competitive return on capital) to the provider, while ensuring that the taxi rider receives the best service at the lowest possible fare. The mean gate cap has not kept up with consumer inflation.

We estimate that, in a perfect world, the mean gate cap should be on the order of \$150 and that, simultaneously, a gasoline surcharge of \$1.25 would be implemented immediately. The elimination of regulatory lag and the current eclectic system of ratemaking should be the prime outcome of these hearings, should San Francisco hope to maintain a viable taxicab sector.

The current San Francisco taxicab regulatory process should have mandated action milestones. The Controller's biannual report should be developed in a formalized context, wherein key stakeholders, prior to the report being written, submit written and oral presentations. The Taxi Commission should immediately place the report on its agenda for detailed discussion and recommendations within two weeks of the issuance of the report.

There should be a nexus between economic precepts that guide regulatory processes. This does not appear to be the case with Ordinance 228-02. It offers two mean gate caps \$85 or \$90.00. Prior reports by the Controller and the enabling legislation Ordinance 362-98, et al, all point toward ensuring a level economic playing field in a relatively clear manner.

The Taxi Commission should be mandated to either accept the report or recommend specific changes. This should be done no later than the first meeting after Labor Day. These recommendations should be forwarded to the Board for its consideration. The only way the current regulatory morass can be circumvented is to mandate action milestones in a formalized, transparent, and accessible process. Taxi regulators should set nondiscretionary rates via an established process.

Such a process avoids risks for operators, riders, and companies in making future plans. Regulators should use the economic concept of feasibility, which establishes required spending trade-offs, as a function of budgetary constraints. If social-welfare functions are to be part of a rate structure, the incident and impact of such costs must be studied and quantified prior to regulatory action. Ordinance 228-02 is the poster ordinance for how not to regulate a major sector of the City's economic infrastructure. It muddies up economics and social welfare functions without adequate analysis of either concept.

The taxicab industry of San Francisco requires a systematic approach to setting rates and terms of providing services. Formal rate hearing cases should be heard at specified and mandated times. There must be milestones for gathering input from stakeholders and writing recommendations by both the Controller and Taxi Commission. The Taxi Commission must accept its responsibility as a regulator. In so doing, its recommendations should not be lightly overturned by appeal to the Board of Supervisors. Its decisions must be based on quantitative analysis using a standard regulatory method, which subsumes the use of orthodox economic analysis. Its decisions must not be faith-based, but rather based in disciplined and organized analysis.

Section II of this study considers a theoretical approach to ratemaking and setting terms and conditions of service (rules, regulations, and other tariff attributes) that the Taxi Commission and Board might consider in revisiting the current regulatory morass. Implementing this type process could actually be the solution. Section II also reviews the CPUC, SF Rent Board and the SFPUC.

E. Summary of San Francisco Regulatory System

Figure 4
Current and Suggested Taxicab Regulator Review

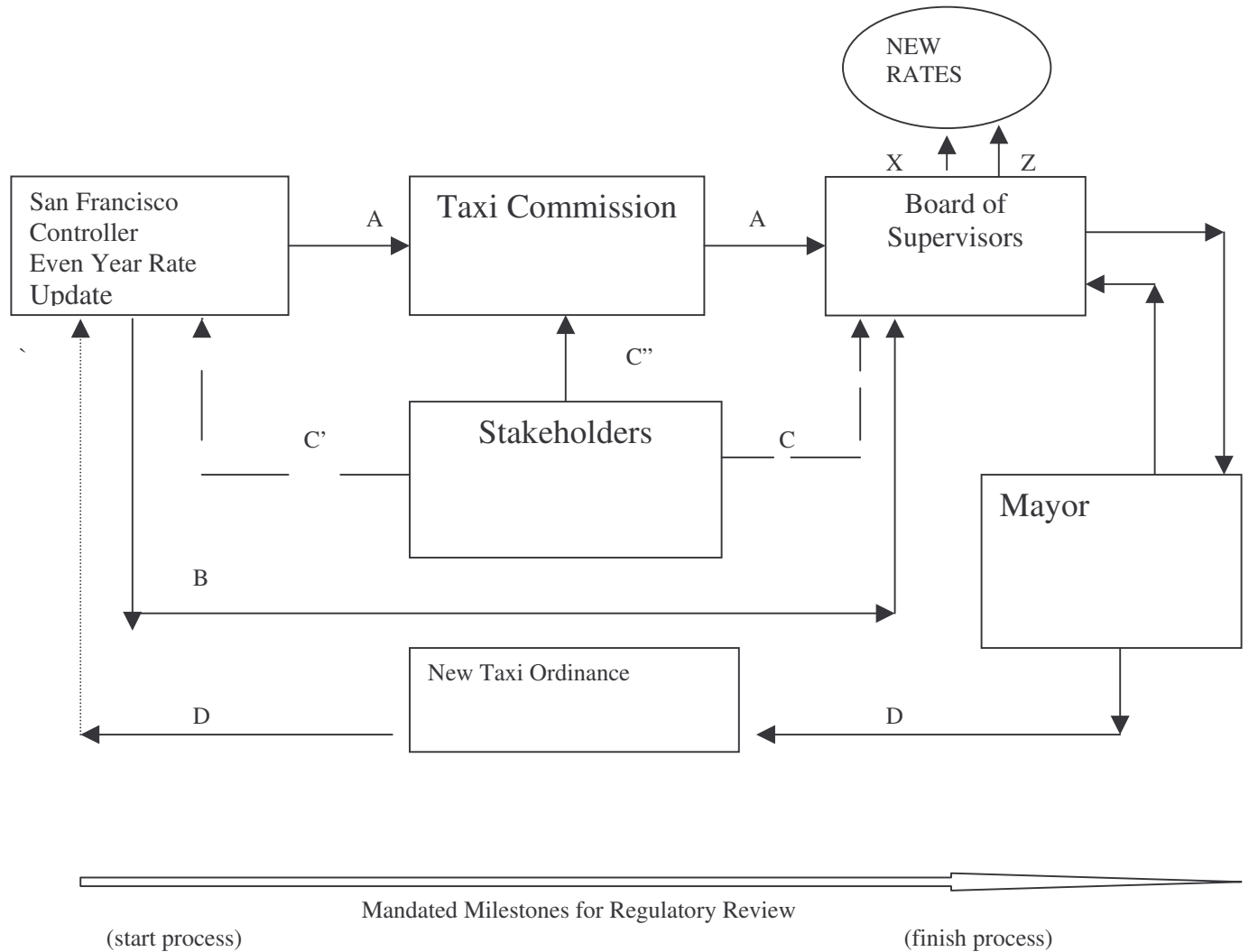


Figure 4 summarizes the current process and highlights possible ways to improve it. It shows the current every-even-year mean gate adjustment process. The main participants in the regulatory process are the Controller, Taxi Commission, Board of Supervisors, and stakeholders. The stakeholders include the public, medallion holders, drivers, taxi companies, and any other interested party.

The Controller issues his *Taxi Industry Report* by September 1. This report is distributed to the stakeholders and Board and Taxi Commission and is available to the public. Without any action by the Board, the Controller's recommended increases become effective November 1.

One possible route for regulatory oversight is that suggested by the line marked A. This line goes through the Taxi Commission and then to the Board. The Taxi Commission hears the Controller's recommendations in public session. They may take action, no action or promise future action.

Line B denotes a situation where the Taxi Commission might not schedule hearings on the Controller's recommendations. In this case Line C from the stakeholders to the Board would be the only method by which stakeholders would have a chance to impact the final rate outcome.

If the Board does not take any action, line Z from the Board to the box marked "New Rates" represents the path to an automatic increase as recommended by the Controller on November 1. The Board may take action, denoted by line X, which may or may not change the nominal value of the mean gate cap (oval).

Line A also represents a way in which the Taxi Commission could take a lead role as a regulator. The Taxi Commission could hold formal hearings and consider written and oral arguments, in the context of the even-year report, as to the merits of the Controller's proposed rate recommendations. The Taxi Commission could then deliberate and make a strong recommendation to the Board in support of the report, and/or some variance, based on an objective and in-depth review of stakeholder concerns.

Line C^{//} represents any strategy wherein the stakeholders appeal directly to the Commission. Line C['] represents any strategy wherein the stakeholders appeal to the Board of Supervisors. This could be done while simultaneously presenting a case to either or both the Controller and/or Taxi Commission.

Line D represents a situation in which a new law is enacted (triggering line Z) which restarts the process in a manner similar to the current biannual review and recommendations by the Controller.

While not advocating a CPUC-type regulatory structure per se, the current process needs to be improved. Some suggestions:

- Stakeholders should meet with the Controller prior to his reports being issued. These stakeholders should present economic and operating data that support their positions as to rate changes required to keep San Francisco's taxi industry viable. These meetings could be both informal and formal. The Controller has made it clear that these exchanges would be welcome. Line C (broken) suggest these exchanges be initiated prior to the writing of the mandated, even-year *Taxi Industry Report*.
- The Taxi Commission should scheduled hearings both prior to the report's issuance and immediately thereafter.
- The Taxi Commission should make a recommendation to the Board based on its perceptions as to the viability of the Controller's recommendations. This report should reflect a normative regulatory approach and show that the regulator (TC) has used the tools of orthodox economics in submitting its report to the Board. This report must subsume the major economic issues raised by the stakeholders.
- A timeline for this process must be established and maintained. During odd-numbered years, the Taxi Commission and Controller should review industry economics and, if necessary, recommend to the Board required rate adjustments. Regulatory lag, such as the delayed implementation of a gasoline surcharge and the inflationary erosion of the real purchasing parity of the mean gate cap, must be avoided.

II. Regulatory Approaches

A. The Revenue Requirement Approach to Ratemaking and Setting Conditions of Service.

Mathematics of regulatory ratemaking for investor-owned utilities uses a revenue requirement approach. Municipalities are self-regulating in most states and often use a similar but modified approach, as shown below.

Briefly, the traditional revenue-requirement approach to ratemaking (setting cab fares) for an investor owned utility (a taxicab company in San Francisco) can be expressed mathematically:

$$R = O + D + rB$$

Where:

B = Rate Base (V-d)

V = Rate Base Evaluation

d = Accumulated Depreciation

R = Revenue Requirements

O = Operation and Maintenance Expenses

D = Annual Depreciation Charges

T = Taxes

r = Permitted Rate of Return (Cost of Capital)¹

Where:

r = rate of return

k = cost of equity capital

E = total equity capital

i = cost of debt capital (a weighted average subsuming tax implications)

I = total debt capital

C = total equity and debt capital

¹ Brian Browne, EPRI – Municipal Water and Wastewater Program "Competition in the Water and Wastewater Industries," Section 3, page 5. See discussion on weighted average cost of capital.

The basic revenue requirement formula for self-regulating municipal utilities (i.e. San Francisco Public Utilities Commission) generally follows a modified revenue-requirement formula as illustrated below.²

$$R = O + T + D + C$$

Where:

R = revenue requirements,

O = operation and maintenance expenses,

T = tax equivalents,

D = debt-service payments (interest charges and principal), and

C = Capital expenditures not financed by debt.

The difference in the two approaches inheres in the way capital expenditures are treated. In the investor-owned model, capital expenditures are handled through depreciation and rate-of-return components. Before allowing fares and gate caps to persist below normal consumer price increases in inflation (CPI), San Francisco taxicab regulators must follow a consistent schema similar to that outlined above. They must also explain their calculations and publish backup data that equate allowable costs to required revenues including equity and debt capital returns.

Capital improvements are ordinarily expensed over time and annualized into the rate structure. For example, Yellow Cab has built a new facility costing \$500,000 to provide alternative fuels for its fleet. This would, in an orthodox regulatory environment, be treated like a mortgage payment. Money expended during construction would be capitalized at a regulatory-determined interest rate, consistent with market conditions, and passed on in the form of an addition to the rate cap over the term of the payback period.

Capitalizing work-in-progress expenditures, and then amortizing them, is consistent with the way the CPUC, SFPUC, and Rent Board treat such pre- approved (mandated) capital improvements. There should be a mechanism within the San Francisco taxicab regulatory system to handles these situations. The laborious tying of all company expenses to a fraction of the largely irrelevant CPI is regulatory

² The National Regulatory Research Institute, Meeting Water Utility Revenue Requirements: Financing and ratemaking alternatives, November 1993, pp. 64-65.

evasion, a situation that must be addressed immediately. This can be done only under the umbrella of a real regulatory system.

The proposed November 2006 gate of \$92.00 is not supported by this type of transparent workup. The proposed \$92.00 cap could not be sustained in a formal regulatory process. At a minimum, it should be \$104.30 with a rider for odd year increases based on the CPI.

The revenue requirement approach to fare setting (ratemaking) should be consistent with how investor owned utilities are regulated in California by the California Public Utilities Commission (CPUC). The CPUC generally has a two-step approach to ratemaking. First, rates are completely reviewed as General Rate Cases (GRC) every few (three plus) years. Second, an interim mechanism is put in place to avoid regulatory lag. The interim, or bridge, mechanism is to tie interim rates to key cost indicators such as those reflected in the CPI.

In the case of taxicabs and other regulated enterprises in the transportation sector, a gasoline cum automobile index should also be used to track the current volatility in insurance risk, worker's compensation, automobile parts, and gasoline prices, allowing for quicker regulatory responses.

During a GRC, a regulated industry is required to provide a long-term strategic plan for its future operations. This plan includes a best effort farsighted forecast of demand for services and reasonable industry costs. An econometric demand model being developed for the San Francisco Taxi Association will provide valuable information to the Taxi Commission, the Board of Supervisors, the Police Department, and other regulatory authorities regarding demand elasticities (price and nonprice variables) to ensure that gap cap and fare increases do not fall behind real-world market conditions. With this model, the taxicab stakeholders (companies, investors and drivers) and regulators will be able to work together to develop demand forecasts for taxicabs under various fare and nonfare scenarios.

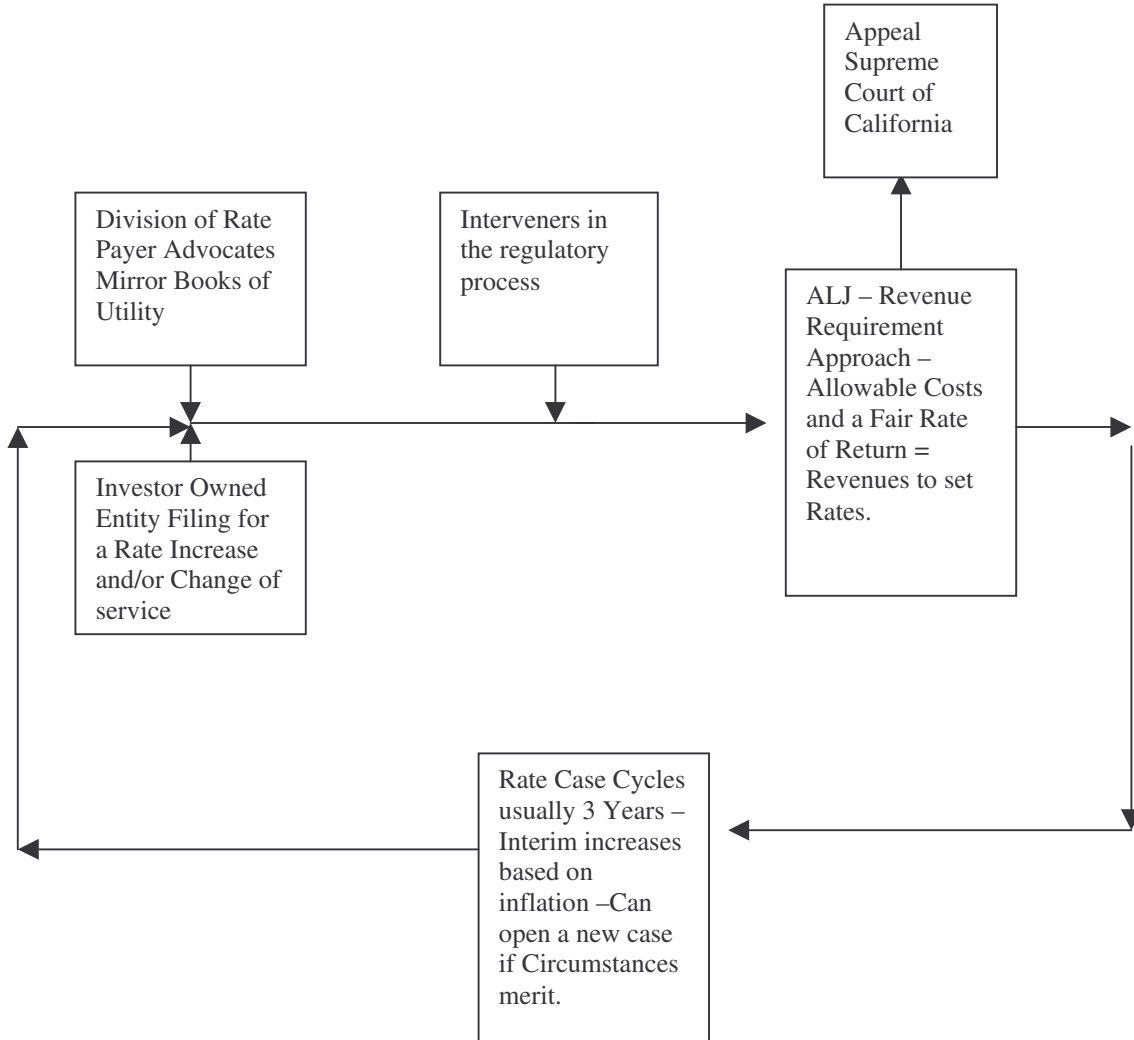
The San Francisco regulatory mechanism for tariff-setting that is noted in Section I of the 2006 Controller's Report states that "automatic increases based on the Consumer Price Index (CPI) that will go into effect on November 1, 2006 unless the Board takes subsequent action."

The role of the Taxi Commission in the San Francisco process seems unclear. At the September 13, 2006 Taxi Commission meeting, when the Controller presented his report, members did not agree on a specific recommendation to make to the Board. The Taxi Commission does not appear to have a formal process for

collecting data, analyzing it and coming up with deterministic recommendations. The axiom “process determines outcome” certainly is applicable in the context of ratemaking for taxicabs in San Francisco.

B. The CPUC approach utilizing the revenue requirement approach

Figure 5
CPUC Regulatory Flow



The CPUC uses the revenue-requirement approach to rate making in the investor-owned utility sectors. General rate cases are approximately three years apart. Interim annual adjustments are often tied to an inflationary index. Figure 5 is a simplified schema of the CPUC regulatory process.

A utility files a comprehensive justification for seeking a rate increase. It must include all costs (capital, O&M, and weighted average cost of capital) and a long-term strategic plan. Additionally it must calculate the fares for each customer class (i.e. residential, commercial, industrial, etc.) Any taxicab company filing for a rate increase under a CPUC-type system would have to calculate the average (mean gate cap) times the number of gates to generate sufficient revenues to keep the company economically viable. Approved capital charges, such as a natural gas facility, would be blended into the rate structure along with other allowable costs. The normal impact of inflationary pressures on allowable costs is a permitted passthrough in a CPUC rate case.

As shown in Figure 5, the State of California has created within the CPUC a Division of Ratepayer Advocates (DRA) that maintains mirror books of the utility and will support, remain neutral, or oppose a regulatory submission by an investor owned company. The DRA normally represents those groups that would otherwise not be represented [An Office of Ratepayer Advocates was funded for San Francisco, but it never became operational]. Others may intervene. Individual interveners are usually significant stakeholders.

The rate cases are decided in a legalistic setting by well-trained administrative law judges (ALJ). Decisions made by the CPUC may be appealed only to the Supreme Court of California. As noted, inflationary pressures that build during an inter-case period are generally calculated in and/or admitted as an annualized rate increase. The CPUC does set a firm rate of return on invested capital and closely meters the weighted-average cost of capital. The return on equity capital is set. The revenue requirement approach does not guarantee a profit. It makes a profit possible under a regulatory umbrella.

The following is a quote from the CPUC mission statement:

PUC Mission:

The California Public Utilities Commission (PUC) regulates privately owned telecommunications, electric, natural gas, water, railroad, rail

transit, and passenger transportation companies. We are responsible for ensuring that customers have safe, reliable utility service at reasonable rates, protecting against fraud, and promoting the health of California's economy.

In pursuing these goals, we:

- Establish service standards and safety rules, and authorize utility rate changes;
- Monitor the safety of utility and transportation operations, and oversee markets to inhibit anti-competitive activity;
- Prosecute unlawful utility marketing and billing activities, govern business relationships between utilities and their affiliates, and resolve complaints by customers against utilities;
- Implement energy efficiency and conservation programs and programs for the low-income and disabled;
- Oversee the merger and restructure of utility corporations, and enforce the California Environmental Quality Act for utility construction;
- Work with other state and federal agencies in promoting water quality, environmental protection, and safety;
- Intervene in Federal proceedings on issues that affect California utility rates or services.

C. San Francisco Rent Board

San Francisco regulates the rents for most dwellings built before 1979. The Rent Board is established along lines similar to the CPUC (discussed above). There seems to be a significant disconnect, however, between enabling ordinances and their implementation. If the ordinances create an unjust wealth transfer from either the renter or landlord, the only remedy, as with taxicab gate caps, is to seek relief through legislation. A big difference between the Rent Board and the Taxi Commission is that the Rent Board has broad powers to interpret what is meant by a “pass-through.”

The Taxi Commission, Controller, and Board use the CPI to adjust fares and rates on an even-year basis. These increases, as noted in the text, are in dispute as to when the increases should apply. The Rent Board has automatic rent increases based on the CPI. It also allows for capital improvement pass-throughs and power pass-throughs. Propositions A and E in 2002 allowed for water and wastewater pass-throughs, based on the current repair Hetch Hetchy capital improvement program, wherein the landlord and tenant would share these pass-throughs on a 50/50 basis.

The following case studies merit attention and are presented to show how San Francisco has difficulty in applying an orthodox regulatory model and using the tools of normative economics to obtain just results.

Section 4.11 – The PG&E power pass-through.

The energy price increases of the early 1980s catalyzed the enactment of a power pass-through. Landlords with master meters were allowed to choose from 2 methods.

Method 1

For the pass-through year (n), the landlords were allowed to apportion their net costs, on a room per dwelling basis, based on the difference between the comparison year (n-1) and the tenant's move-in year.

This system is only used for dwellings without individual metering capabilities. The landlord calculates his/her own common area. The base year is not adjusted for inflation.

Base-Year Calculation:

Assume a tenant moved into a complex in 1980. Assume further that the landlord had a gross master meter-charge of \$229,824.19 and calculated his/her common area charges as \$11,822.50. The base-year amount for use in the above mentioned calculation would be \$218,001.69.

Comparison-Year Calculation:

Assume the landlord is applying for a 2006 pass-through. The landlord must calculate net power costs similar to the net costs calculated for the base year. Assuming that utility power costs increased at the CPI, the gross PG&E cost would be \$616,090.98, the common area costs \$31,692.64, and the net costs for pass-through equal \$584,398.34.

The pass-through amount is the net cost expressed in \$2005 less the net costs expressed in \$1980. The net difference is \$366,396.65. Into this economically irrelevant number, the landlord divides the number of rooms in the building. Assume for calculation purposes this apartment building has 1,273 rooms. The pass-through

per room per month for the 2006 PG&E surcharge is \$25.46 (or \$101.86 for a representative 4-room apartment).

This pass-through mechanism ignores the fact a dollar in 1980 cannot be equated to a dollar in 2005. It also ignores the fact that people, not rooms, throw power switches, the impacted population is long-term and aging and tenants were promised PG&E services in their leases.

Rents, on the other hand, are increased as a function of the CPI. The CPI includes utility services such as those provided by PG&E. If PG&E services increased proportionally to the CPI, and apartment common-area power remain at a stable relationship to tenant use, a person moving into a complex in 1980, with a landlord using Method 1 of Section 4.11, would overpay in capitalized valuation approximately \$37,375.96 at an interest rate of 6.2 percent (Rent Board).

If a tenant moved in at age 45 and died at age 96, under Method 1 (assuming the high correlation with reality of the above assumptions) the tenant would overpay the landlord in capitalized value \$247,260.83. If the objective of the Rent Board is to conceptually misuse the CPI in the context of Method 1 of Section 4.11, it is doing a good job.

For the period 1980 to 2006, rent increased by a factor of 2.48. During that same period, the power bill increased by a factor of 2.48. Leases promised that residents would receive power as part of their embedded rent. The 2006 passthrough for a one-bedroom apartment is approximately \$100 per month. The passthrough for two-bedroom for residents with a move in year of 1980 is \$120. If the landlord received rental increases exactly in proportion to his PG&E charges, these tenants, especially the older residents, cannot understand why any passthrough is allowed.

This rent-regulation example is curiously the same for taxi regulations because companies (gate fees) and drivers (gas surcharge) are being taxed unequally due to regulatory failure. If the City wishes to chase older tenants out, Section 4.11 is doing that effectively. If the City wishes to chase efficient and viable taxi companies out, similarly it is doing an excellent job as a result of regulatory failure.

In Weiss vs. Golden Gateway Center, many of the above economic factors were presented to the Rent Board. The Rent Board is well aware that aging renters are being taxed as a function of living longer. The Rent Board, however, does not make the appropriate recommendations to the Board. Its inaction is similar to that of the Taxi Commission in failing to maintain the purchasing-power parity of the

original mean gate cap for taxi companies. Its imputation of social welfare functions are highly correlated with the political forces driving the process, rather than any semblance of a normative regulatory process and the use of orthodox economics to create equality of treatment under law.

Method 2

This method uses the same approach to calculating net power for pass-through. Method 2, however, uses n-2 as the base year and n-1 for the comparison year, where n is the pass-through year. This is still somewhat illogical, but less lethal than Method 1, which ensures, via ignoring the inflationary adjustment of the base year, double dipping and imposition of a regressive tax on the aged.

Capital Improvement Pass-throughs:

The Rent Board allows for the landlord to begin capitalizing upon approval of a capital-improvement pass-through. If the approval and expenditures are coterminous, this action is neutral. In a recent case, a landlord had a pass-through of \$1.7 million approved but did not begin the capital improvements for nearly a year. During the interim period, while the increased rents accumulated in the account of the landlord, capitalized at 6.2 percent, and then this expanded capitalized amount was amortized and passed through to the tenants.

The warping and morphing of the San Francisco regulatory system merits an immediate overhaul. Older tenants are subsidizing landlords that have found a loophole in the law, limousines capture taxi market share, single folks subsidize corporations and landlords are reselling utility services without regulation. At the same time, taxicab companies, acting in good faith, are being held to gate caps that do not keep up with inflation, and the companies are additionally threatened with punitive legal actions for trying to remain in business under difficult circumstances.

These are just a few issues that show why San Francisco requires a comprehensive review of its entire regulatory system.

D. San Francisco Public Utilities Commission (SFPUC):

The SFPUC issues are immense. The money involved is on a par with the GDP for many small nations. This section is offered to show that the taxicab regulatory morass seems normal rather than an aberration in the way San Francisco approaches regulations.

In its own words, “The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco that provides water, wastewater, and municipal power services to San Francisco. Under contractual agreement with 28 wholesale water agencies, the SFPUC also supplies water to 1.6 million additional customers within three Bay Area counties. The SFPUC system provides four distinct services: Regional Water, Local Water, Wastewater (collection, treatment and disposal), and Power.”

As noted earlier, the CPUC by law must regulate investor owned utilities in California. California self-regulating municipalities may surrender control per section 2901 et seq. of the PU Code. In the August 2004, Reason Foundation Policy Brief, No. 30, “Western Water Wars – Efforts to Take Over the Hetch Hetchy Systems,” it is recommended that San Francisco submit to CPUC regulations, at least during the period of its current capital improvement program (CIP).

If the City’s largest enterprise submitted to a more disciplined regulatory system, such as the CPUC, it could prove an inspiration for other City regulators to get it right, apply a normative regulatory model, and use, not misuse, economic theory and economic indicators.

As noted, California regulates investor-owned utilities. Municipalities are self-regulating with respect to setting rates and conditions of service. San Francisco, however, “owns” the seventh largest multi-utility in the United States, serving over 2.4 million wholesale and local retail customers with water, wastewater and power. San Francisco has historically given water to a number of public entities.

The 29 suburban resellers who in large rely on the SFPUC for a percentage (varies by customer) of their water supply were so frustrated in 2002 that they had passed three major pieces of legislation that are thinly veiled “shape up or we will take you over” laws

- 2002 AB1823 – This law sets two firm milestones for completion of the \$4.3 billion Hetchy Hetch capital improvement system.
- 50 percent by 2010
- 100 percent by 2015
- 2002 AB2058 – This established the Bay Area Water Supply and Conservation Agency, an equivalent to the Metropolitan Water

District of Southern California. SFPUC is invited to join. If it joins, it cedes approximately 67 percent governance of the Hetch Hetchy system.

- 2002 SB1870 – This established the Regional Funding Authority, which is empowered to issue debt, based on bills that the suburban customers must pay the SFPUC. It was designed as a fall back measure in case Proposition E failed in 2002.
- 2002 Proposition E transferred the right to issue revenue bonds from the voters to the Board of Supervisors. Proposition E passed and the Board, as with the Taxi Commission, Rent Board, etc., became the ultimate regulator for SF economic life. AB2058, and Proposition E, probably make the RFA redundant in the grand scheme of running the Hetch Hetchy system.

The SFPUC has the responsibility to set local water and wastewater rates and to also negotiate the Master Water Sales Agreement (MWSA) with its suburban customers.

Water and wastewater rates are set using a revenue requirement approach (as described above) with some unique San Francisco nuances. These nuances include such attributes as a lifeline sewer rate (based on an ascending block rate tied to the size of residential lawns) and separate charges for residential and commercial customers. These charges are not set in any formal hearings analogous to the CPUC system.

One example of this disjointed system was when the SFPUC announced an 11 percent increase in sewer charges to apartment complexes. Apartment complexes had their sewer charges calculated as 90 percent of the water intake, which is metered, while sewer output is not, and thus sewer rates merely are estimated as a percentage of water takes. At the same time as it announced the 11 percent sewer rate increase, the SFPUC increased the output/input ratio from 90-percent to 95 percent.

Clearly the sewer increase was greater. The calculation should have been $(1 + [5/90]) * (1.11) = 1.172$ or 17.2 percent $[(1 - 1.172) * 100]$. The latter number is more indeterminate than it appears in that the conservation-oriented ascending, block, lifeline rate might not be fully used by a consumer. As noted in the Rent Board example, using a commingling of all meters might indeed generate a 17.2 percent sewer rate increase that under the arm's-length billing arrangement used by certain

landlords (wherein all master-meter charges are summed and apportioned to tenants 50/50 on a per footage and number of registered residents basis) would probably represent a full 17.2 percent increase. Failure to subsume these nuances in the regulatory process changes the outcomes from desired policy to skewed policy impacts. Regulators in this loose and poorly structured system that prevails throughout San Francisco do not appear cognizant of the dichotomy between incident (where the charge/tax is levied) vs. impact (who actually pays).

The SFPUC is also commencing a multi-billion dollar sewer restoration and improvement project. The costs of this plan have not been fully quantified. The Hetch Hetchy CIP plan will more than quadruple the cost of water by 2015, the estimated time for completion. This number depends on cost and delivery assumptions.

In 2000 the mayor appointed a multidisciplinary task force to reviews the operation of the SFPUC. The Taskforce deliberated for two years and came up with significant recommendations for developing a better business model and implementing a dynamic long-term strategic plan. The SFPUC did not accept the task force recommendations and instead created its own blue ribbon committee and hired a consultant to counterbalance the Taskforce report (see www.h2oecon.com), which basically said that the SFPUC was not capable, at that time, of planning and implementing a then \$3.8 billion capital improvement program.

III. Recommendations and Summary

It is imperative that the gate cap immediately be adjusted from \$90.00 to \$104.30. This is a stop gap measure at best and understates the revenues required by taxi companies to provide the best service at the lowest cost. The CPI is an inappropriate measure of the costs that must be internalized by cab companies. The CPI should only be used as an interim adjustment between rate cases. Other transportation-specific indicators of inflation should be considered.

The taxi industry is not alone in its insecurity because of the stochastic regulatory processes used in San Francisco. The entire regulatory system requires an overhaul. A CPUC-type process must be implemented. Skilled regulators should be hired to apply normative regulatory processes utilizing the tools of orthodox economics. The current regulatory disarray is causing economic hiccups, stakeholder dismay, economic inertia, and great anxiety among many vital segments of this community.