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Troubled Partnerships:
Problems and Coping Strategies in Jakarta's Water Concessions

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Abstract

Regulation by contract is a common model for private concessions in the water sector. The contract is intended to provide security for both the firm and the government that their interests will be protected throughout the life of the concession. However, regulation by contract is ill suited to cope with shocks.

This paper draws on the experience of the two concessionaires providing water services in Jakarta to demonstrate the risks inherent in relying on a contract to provide regulatory stability. The Jakarta concessions have undergone dramatic changes since their commencement in 1997, including severe macroeconomic crisis and political regime change. The Suharto regime, which had been in place when the contracts were signed, was discredited. Under these circumstances, the contracts did not function as effective restraints on actors opposed to the concessions, notably the former public utility. The absence of primary legislation or clear regulatory principles meant that there was no point of reference for the parties when trying to restore contractual equilibrium. The result has been continuous renegotiation of the terms of the contracts, leading to downward revisions of performance targets, capital investment and tariffs.

These findings have important implications for the current resurgence in contract-based regulation for water and sanitation projects.

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Introduction

The two Jakarta water service concessions are among the largest private sector contracts for the provision of basic services in the world, covering a city with a population of 10 million people. Since they became operational in 1998, Indonesia has undergone dramatic changes in its political and economic conditions. The concessions, too, have been through many changes. The outcome has been slower improvement in water services and weaker returns for investors than initially expected. In this paper, we examine the political economy of private sector involvement in Jakarta's water sector and identify the reasons for the difficulties that the concessions have encountered. Contractual gaps and ambiguities, weak enforcement, the absence of transparency and competition in the contract award process and conflicts of interest in the former public utility are all seen to be important.

Given the performance of the concessions so far, both government and firm would seem to have persuasive reasons to terminate the relationship, yet neither side has so far pursued this option, or even brought a case to arbitration. This paper provides a tentative answer to this puzzle by considering the incentives of the parties and how these affect their strategies in relation to the concession contracts.

Background

The public water utility in Jakarta in the early 1990s was offering poor service at high cost. By 1996, only 41 per cent of the population was served (Lanti 2004) and around 30 per cent of those connected did not receive water for 24 hours a day.¹ Unaccounted for water (UFW)² was more than 55 per cent and demand projections showed that raw water shortages were imminent (Nihon Suido Consultants for JICA 1997). The water coming out of the tap was not potable: it required

¹ Field interviews, Jakarta 2004

² The proportion of water produced that is not billed to customers

boiling before drinking. Unit production costs and tariffs were also high compared to other Asian cities (ADB 2004). From the point of view of service improvement, it is therefore easy to see the potential advantages of involving the private sector in water service provision: better management, greater efficiency and more investment. With tariffs already high enough to deliver a profit for the public utility and huge potential efficiency savings from to be made, Jakarta's water system also had the capacity to interest private sector companies.

In 1998, two 25-year contracts were awarded for the provision of water services in Indonesia's capital city. The contracts, or 'Cooperation Agreements' as they are known, were directly negotiated with two consortia, each made up of an international and an Indonesian company. The West Zone of the city was awarded to a joint venture involving Suez (originally Lyonnaise des Eaux, later Ondeo) while the East Zone concessionaire was majority-owned by Thames Water International. The Indonesian joint venture partners both had strong ties to the regime of President Suharto (Fisman 2001).³ On the government side, the contract signatory was Pam Jaya, the publicly owned water utility company, which also took on the role of monitoring the contract.

Within three months of the concessions becoming operational, Indonesia was hit by political and economic crisis. The value of the Indonesian Rupiah plummeted, inflation rose over 100 per cent and unemployment rose dramatically (Soesastro 2003). After a period of intense social unrest in Jakarta, the authoritarian regime of Suharto was overthrown and replaced with a more democratic system led initially by President Habibie (Bird 1999). These events had a dramatic impact on the water concessions. In May 1998, management control of the water companies was reclaimed by

³ The Indonesian partners of Suez and Thames were, respectively, Garuda Dipta Semesta, part of the Salim Group and Kekarpoala Airindo, partly owned by Sigit Harjojudanto, one of Suharto's sons. More detail on the ownership structures is presented in Table 2. Business groups affiliated with Suharto's children as well as the groups affiliated with Liem Sioe Liong (Salim), Bob Hasan (Nusamba) and Projogo Pangestu (Barito Pacific) are considered to have had very strong 'political connectedness' in the Suharto era (Fisman 2001 and field interviews).

the public utility. This was contested by the firms and control was returned to them after Presidential intervention, although new conditions were imposed on the concessionaires: the Indonesian partners with connections to Suharto would have to leave the concession.⁴ The contracts were examined repeatedly for evidence of corruption and cronyism.

The crisis affected the operational environment in many other ways: demand fell, for water as for all commodities, a credit crunch made it impossible to gain access to local finance, even for the short-term, and the plunging Rupiah drove up the price of imports and construction, as these sectors had been dollarised in the pre-crisis period.⁵ Against this backdrop, the Governor of DKI Jakarta (the Special Capital Region of Jakarta) announced that none of the planned tariff increases for water services would take place before 2000.

In the period 1998-2001, Pam Jaya and the international companies engaged in lengthy renegotiations, finally signing the Restated Cooperation Agreements (RCA) in 2001. The revised contracts addressed the problems that had been created by the tariff freeze and provided for the creation of the Regulatory Body, charged with mediating and monitoring functions (Cooperation Agreement 2001 for the Western Part of Jakarta).⁶ However, within a few months of the revised contracts coming into force, the government once again reneged on its commitments to raise tariffs.

Between 2002 and 2005, the parties were engaged in the periodic review process (Rate Rebasing) to set financial and operational parameters for the second five-year period of the contract. The

⁴ Field interviews, Singapore, August 2004

⁵ Field interview, Hong Kong, April 2004

⁶ The functions of the Regulatory Body are specified in the contract as: arranging coordination among governmental authorities in relation to the concessions; monitoring of implementation of the contract, provision of water to the consumer; enforcement of deep wells closure; tariff rates; monitoring the rights of Pam Jaya in relation to construction; establishing dispute settlement mechanisms; and mediating disputes between the contracting parties (Field interviews, Jakarta, August 2004 and Cooperation Agreement 2001)

process was due to be completed by the end of 2002 but had not been resolved by the end of 2004, with the parties holding to their divergent positions. The Regulatory Body has sought to bring the parties closer to agreement by engaging international consultants, and the Governor of Jakarta has intervened occasionally, but these efforts had not brought the process to a conclusion.⁷

The concession contracts were intended to raise efficiency and investment to increase the coverage and quality of water services in the city. The firms were expected to invest more than US\$100m each in the first five-year operating period. In fact, they had invested about half of this amount by 2004.⁸ Service coverage was expected to rise from 41% in 1996 to 70% in 2002, but by 2002 coverage was only 41% in the Suez concession and 62% in the Thames concession (Lanti 2004). By 2010, all piped water was meant to be of potable quality; this goal now looks unlikely to be met until near the end of the contract period. Below, we look in more detail at performance measures and analyse the reasons for the deviations from the original targets.

⁷ Field interviews with Pam Jaya, Regulatory Body and concessionaires, Jakarta, August 2004

⁸ Palyja (Suez) arranged a loan facility of US\$130m of which they drew down about \$60m by 2004. (Field interview, Palyja, September 2004). TPJ (Thames) had a larger loan facility (Field interview, Pam Jaya, September 2004), including EUR45m from the European Investment Bank, and have invested approximately US\$50m (www.eib.org and www.rwethameswater.com).

Table 1: Key Dates

1989	Water sector opened to foreign direct investment
1993	First discussions on private sector involvement in Jakarta water take place
1997	Negotiations for the water supply Cooperation Agreements concluded
1998 – February	Concessions become operational
1998 – May	President Suharto leaves office, replaced by former Vice-President Habibie Management control of water supply taken over by Pam Jaya Governor of DKI Jakarta announces there will be no tariff increase before 2000 Management control returned to concessionaires with conditions International investors buy out the equity stakes of their Indonesian partners Renegotiations begin between Pam Jaya and the concessionaires
2001	Restated Cooperation Agreements signed Regulatory Body created
2001 (Oct) – 2002 (Sept)	Transition Period during which special contractual provisions apply Preliminary discussions about the periodic review (Rate Rebasing) take place
2003 – Jan	Contractual deadline for completion of Rate Rebasing Discussions between Pam Jaya and concessionaires stalled
2003 – Sept	External consultants contracted to advise on Rate Rebasing
2004	Recommendations of the consultants rejected Negotiations between the parties continue

Source: Compiled from field interviews, Jakarta 2004

Table 2: Key Actors

Institution	Function
Perusahaan Air Limbah Jakarta Raya (Pam Jaya) (<i>Jakarta water supply enterprise</i>)	Party to the contract, owner of the concession assets and liabilities incurred pre-privatisation. Legally responsible for treatment, distribution and supply of water to Jakarta (but not for wastewater) through a decree issued by the Governor of Jakarta. Monitors the firm with regards to technical targets and performance indicators, operating and capital expenditures; negotiates financial and technical parameters in the Rate Rebasing for each 5-year planning period.
Thames Pam Jaya (TPJ)	Concessionaire for the East zone of Jakarta Initially, majority-owned by Thames with a stake held by Kekarpola Airindo (Indonesia) a special purpose company 40 per cent owned by Sigit Harjojudanto, one of Suharto's sons, 60 per cent owned by two Indonesian businessmen, Harisapto and Fachry Thaib. Currently 95% owned by Thames Water International. 5% stake held by a local company, PT Terra Metta Phora
Pam Lyonnaise Jaya (Palyja)	Concessionaire for the West zone of Jakarta Initially 40% owned by Suez (formerly Lyonnaise des Eaux, later Ondeo) and 60% owned by Garuda Dipta Semesta, a company in the Salim Group (Indonesia) Currently 95% owned by Ondeo, 5% owned by a local company, Bangun Cipta Sarana
Jakarta Water Regulatory Body (RB)	Created in 2001. Responsible for monitoring the contract, mediating disputes and proposing tariff adjustments to the Governor
Independent Combined Experts Team (ICE Team)	Consultants who advised on the first periodic review (Rate Rebasing)
Daerah Khusus Ibukota Jakarta (DKI Jakarta) (<i>Special capital region of Jakarta</i>)	Government of Jakarta, which has the status of a province in the Indonesian political structure. Headed by the Governor, an elected official who has the power to approve tariffs (with the agreement of the Assembly).
Dewan Perwakilan Rakyat Daerah Jakarta (DPRD) (<i>Jakarta provincial</i>)	The city legislature, increased in importance since decentralisation laws of 1999. Must approve any tariff increase.

<i>assembly)</i>	
Kimpraswil (Ministry of Settlements and Regional Infrastructure, formerly Ministry of Public Works)	(Central Government) Within the Ministry, the Directorate General of Urban and Rural Settlements is responsible for urban development programmes. It implements programmes to provide water to poor communities; provides technical guidance to local water companies and administers loans from development agencies
Dinas Pendapatan (Mines Department)	Department of the Central Government. Regulates and supervises drilling and abstraction of groundwater in Jakarta in accordance with provincial regulations; recommends charges for groundwater extraction.
Perum Otorita Jatiluhur (POJ)	Company that manages the Jatiluhur dam and canal which is the main source of raw water for the city
Tangerang, Bogor and West Java regional governments	Neighbouring provinces to Jakarta, responsible for delivering local water services. Sell treated water to the concessionaires.
Ministry of Finance (MOF)	Responsible for loans from development agencies; distributes these to the relevant implementing authorities

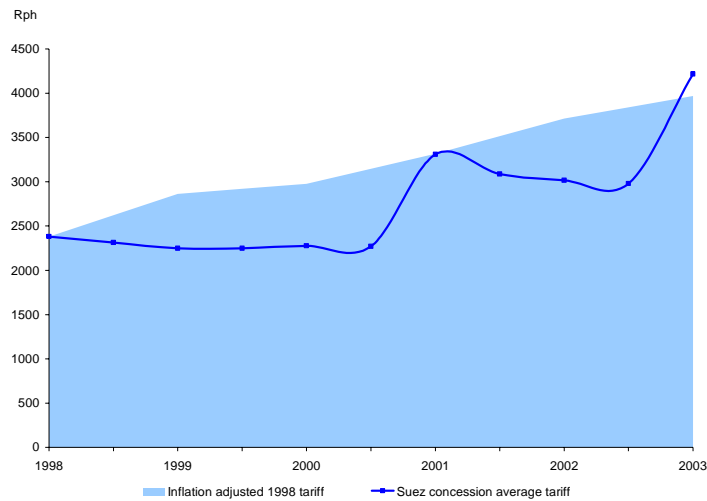
Source: Compiled from various sources

I. Contract Provisions and Performance

Tariffs

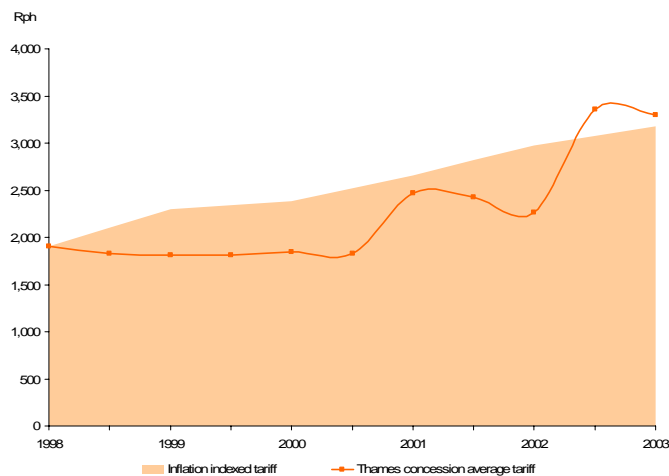
There has been a wide divergence between the tariff increases for water set out in the original and restated cooperation agreements and the tariffs that have in fact been implemented. Regular tariff increases were envisioned in the contracts in order to keep pace with inflation, but only three tariff increases had been implemented by the end of 2004, in April 2001, April 2003 and January 2004. As a result, average tariffs have not consistently kept up with inflation, as Figures 1 & 2 demonstrate. The figures compare the actual average tariffs applicable in the two concession areas with a hypothetical inflation-indexed 1998 tariff.

Figure 1: Average tariff for Palyja (Suez concession) 1998-2003



Source of data: Pam Jaya

Figure 2: Average tariff for TPJ (Thames concession) 1998-2003



Source of data: Pam Jaya

Consistent with Indonesian law, tariffs are set by the Governor of Jakarta, with the approval of the local assembly. As a result, there is a gap between the powers of the contract signatory on the government side, Pam Jaya, and the ability of Pam Jaya to deliver one of the most important elements in the success of the concession, setting tariffs. The question of responsibility for tariffs proved to be a source of conflict between the concessionaires and Pam Jaya in the early years of the contract. The RCA of 2001 states clearly that Pam Jaya is not responsible for tariffs, but does not assign a legal obligation to the local government to set tariffs consistent with the RCA,

leaving this key issue unresolved.⁹ Instead, the concessionaires are given the flexibility to adjust their expenditure plans to restore financial equilibrium when tariffs are not high enough to meet the payments due to all the parties.

The Jakarta concessions employ the contractual innovation of separating the revenue received by the firms and the revenues collected from consumers. The firms receive a flat rate of revenue for each cubic metre of water delivered (the ‘Water Charge’) while customers pay differentiated tariffs (the ‘Water Tariff’) according to the tariff schedule. The water charge is set according to the financial projections of the firms on a cost-plus basis, which include projections of operating and capital expenditures and financing costs, with a fixed rate-of-return of 22 per cent to the investors over the life of the concessions. The underlying components of the basic charge are reviewed at five-year intervals in the Rate Rebasing, but the charge is adjusted every semester to account for fluctuations in the exchange rate and interest rate. The Rate Rebasing exercise establishes a revised financial plan, the water charge and indicated the appropriate tariffs for the subsequent five-year period (although it cannot oblige third parties to implement the tariffs indicated).

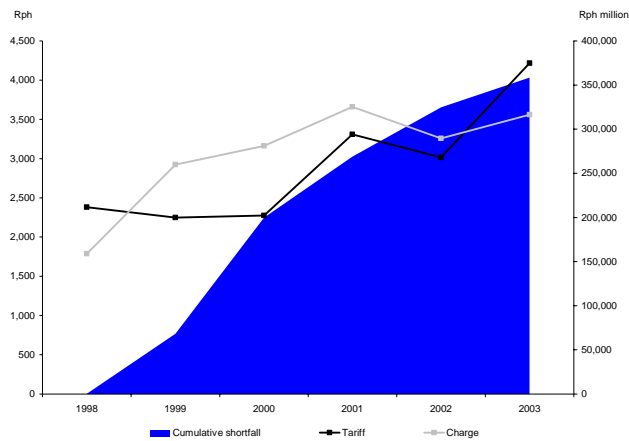
This system of separating the Water Tariff and the Water Charge offered two main advantages: it helped to balance out revenues between the concessionaires, given the differences in land-use and social economic characteristics of the two zones which affected both costs and revenues; and it allowed the government greater flexibility in the timing of tariff increases.

⁹ Clause 26 of the Cooperation Agreement 2001 states: “The Parties acknowledge that the authority to set the level of Tariffs is not in the First Party [Pam Jaya] but in the Provincial Government of DKI Jakarta and the Regional House of Representatives of DKI Jakarta and therefore the First Party cannot guarantee that the level of Tariffs to be paid by Customers in the Cooperation Region during the Term will always be sufficient to pay [the requirements of all the Parties].”

The level of the tariffs was to be set such that the average tariff exceeded the water charge by a margin sufficient to cover administrative costs of Pam Jaya and the Regulatory Body and to cover the repayments due on Pam Jaya’s previously incurred loans from the Ministry of Finance. Thus the total revenues received from customers would exceed the revenues to be paid to the firm. However, a few months into the operations of the concessions, the Governor of Jakarta announced that there would be a freeze on water tariffs until 2000. At the same time, the water charge rose dramatically because of the fall in the exchange rate and soaring inflation. The Charge soon exceeded the Tariff, leaving inadequate revenue to pay the firms. This gap, or ‘shortfall’ was treated as a debt to the firms from Pam Jaya, to be paid back when tariffs could once again be raised above the level of the water charge.

Figures 3 & 4 show how the divergence between the tariff and charge between 1998 and 2003 have created the ‘shortfall’ accruing to the two concessionaires. During this period, the firms have had to accept reduced cashflows, while Pam Jaya has experienced deteriorating net worth as a result of a massive increase in its liabilities to the concessionaires to Rp990b (US\$100m) by the end of 2003.¹⁰

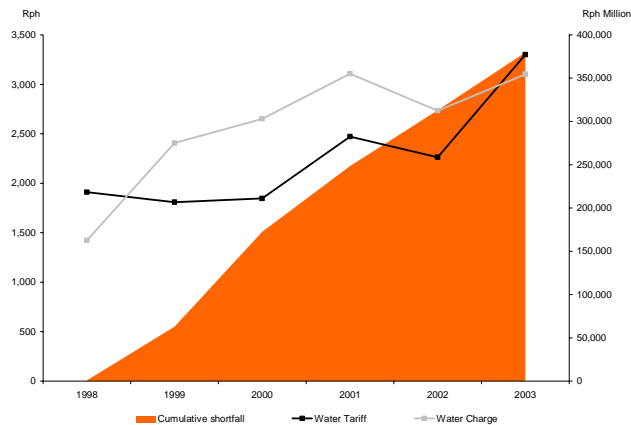
Figure 3: Shortfall for Palyja (Suez concession) 1998-2003



Source of data: AKAINDO (Association of Indonesian Water Works Contractors, Jakarta)

¹⁰ Field interviews with Pam Jaya, August and September 2004

Figure 4: Shortfall for TPJ (Thames concession) 1998-2003



Source of data: AKAINDO (Association of Indonesian Water Works Contractors, Jakarta)

Tariffs were not raised again until April 2001, when they were increased 35% at the conclusion of the contract renegotiations under pressure from the firms. As part of the RCA, the Governor had committed to increasing tariffs again in January 2002 and January 2003. Neither of these tariff increases were delivered, and the Water Charge once again rose above the Water Tariff, adding to the debts of Pam Jaya to the concessionaires. Tariffs were eventually raised in April 2003 (by 40%) and in January 2004 (by 30%), but again this was only under pressure from the firms who were threatening to withdraw from the concessions if action was not taken on the issue of tariffs.

Until 2004, the Governor did not recognise his responsibility to increase tariffs in order to ensure the financial sustainability of the concessions. Finally, in 2004, the Governor and local Assembly approved a proposal for automatic tariff increases to take place each semester to keep the average tariff above the water charge. However, it is yet to be seen whether this mechanism will in fact be implemented.

This discussion illustrates how the failure to raise tariffs in accordance with the financial and operating plans agreed between the concessionaires and Pam Jaya has led to the build up of the shortfall. Higher tariff increases in the future are needed as a result to restore the financial

imbalance. The firms have reacted to this uncertainty by reducing capital expenditure, leading to smaller improvements in coverage and quality.

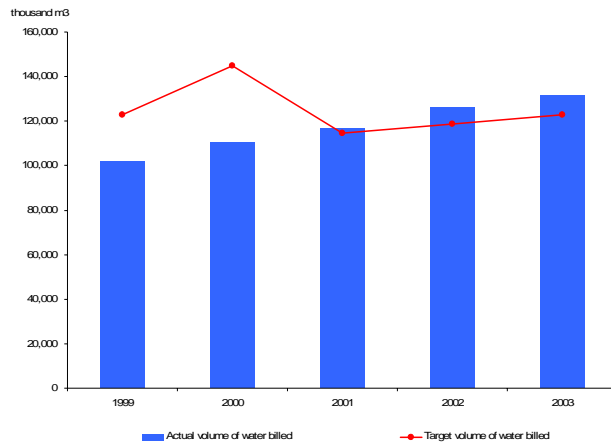
Targets and Standards

The concession contracts set out requirements for:

- Volume of water billed
- Volume of water produced
- Unaccounted For Water
- Number of connections
- Service coverage
- Quality of water supplied
- Pressure
- Response time to customer complaints, requests for connection etc.

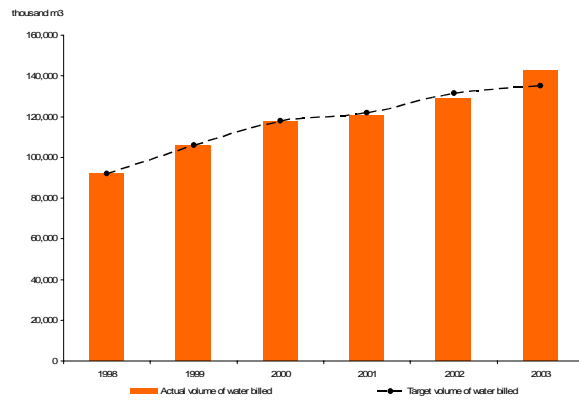
The priority target is the volume of water billed: if the volume billed falls below 70% of the target set in the contract, this government authority can trigger the termination of the contract. Failure to meet any of the targets should incur penalties. Water billed was set as the priority target because it directly determines the revenues received from customers which are then shared between the contracting parties. Even so, the concessionaires have not always managed to meet the targets. While TPJ (Thames) has been successful in meeting its obligations, Palyja (Suez) has only managed to do so since 2001, as Figures 5 & 6 show.

Figure 5: Volume of water billed Palyja (Suez concession) 1999-2003



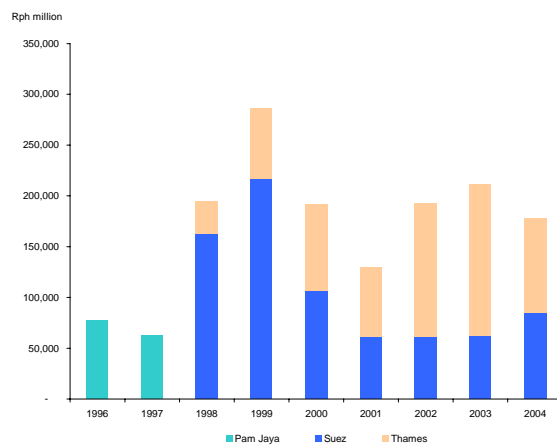
Source of data: Regulatory Body

Figure 6: Volume of water billed TPJ (Thames concession) 1998-2003



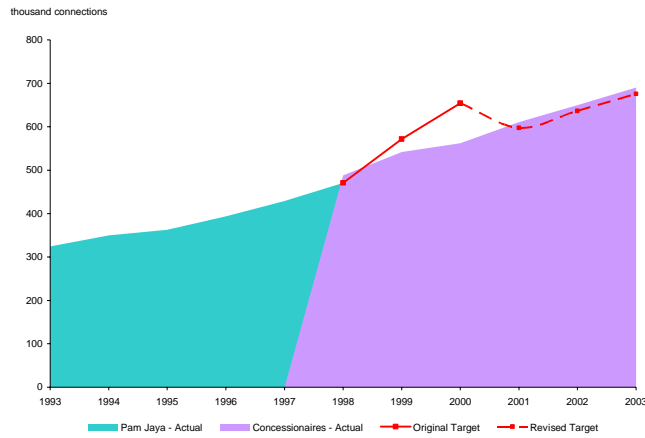
Source of data: Regulatory Body

Figure 7: Capital expenditure (1996-2004)



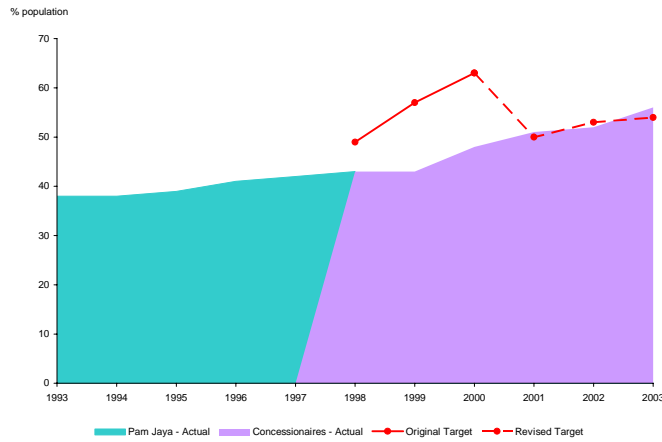
Sources of data: Regulatory Body, Palyja

Figure 8: Number of connections 1993-2003



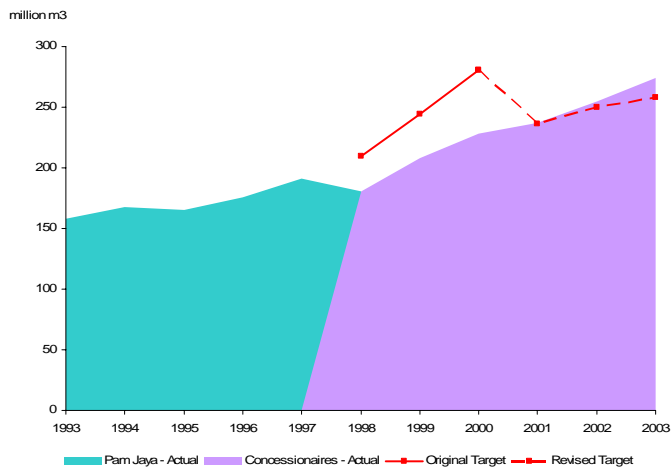
Sources of data: Pam Jaya (1993-1997) Regulatory Body (1998-2003)

Figure 9: Coverage 1993-2003



Sources of data: Pam Jaya (1993-1997) Regulatory Body (1998-2003)

Figure 10: Sales 1993-2003



Sources of data: Pam Jaya (1993-1997) Regulatory Body (1998-2003)

It is important to note that there is no target for investment set in the contract. The level of investment is jointly agreed by the parties for each five year planning period, but in the contract the final decision about how much to invest and how to allocate the investment lies with the firms. The firms are in principle able to decide how best to allocate balance expenditure between capital and operating expenditure in order to meet the performance targets. However, the firms' investment plans are indicated in the financial plans that they developed and agreed with Pam Jaya before the commencement of the concessions and again for the restated agreement of 2001 but, since 2001, the firms are given the right to adjust their spending plans without the consultation of Pam Jaya when tariffs are too low. This is exactly what the firms have done in practice: they have radically reduced their capital expenditure.¹¹ The firms have invested only half of what they had planned to in the first operating period and have drawn down about half of the loan facilities that they agreed in 1998. However, this has constituted a significant increase in the annual investment levels of the public utility, as Figure 7 shows.

As a result of lower investment, the firms have not reached many of the targets set out in the original agreements. These targets were then revised in the RCA of 2001 and the firms have been able to meet up these up to 2003. However, it was becoming more difficult for the firms to meet their targets as the Rate Rebasing process dragged on through 2004 and further decreases in the targets were expected at the conclusion of the review.¹² Figures 8, 9 & 10 show how the original targets for the number of connections, coverage and volume of sales were missed and then revised. The parties were meant to agree a new set of targets for the second operating period beginning in January 2003 as part of the Rate Rebasing process but the parties had not managed to agree on new targets by the end of 2004.

¹¹ Interviews with Pam Jaya and Palyja (Suez concession), August and September 2004

¹² Field interviews, Jakarta, August 2004

There is a clear link between the suppression of tariffs, through lower investment on the part of firms, to the reductions in targets and standards that have been seen over the life of the concessions so far. Until 2001, any reduction in the targets as a result of lower tariffs had to be agreed with Pam Jaya, but the restated cooperation agreements provided for the firms to reduce capital expenditure to restore their financial equilibrium automatically if tariffs were too low. The repeated renegotiation and adjustment of targets and standards weakens their enforceability and results in a tendency towards a lower level equilibrium, with lower tariffs and lower targets.

Third Party Agreements

Many of the operational difficulties encountered by the concessionaires were caused by the absence of clear agreements with third parties, in particular the Department of Mines (Mines), which is responsible for regulating the extraction of groundwater; the POJ, a publicly owned company that runs the Jatiluhur dam and canal that is the source of most of Jakarta's raw water; and the Ministry of Finance, which is the creditor of Pam Jaya for loans incurred in the pre-privatisation period.

- Agreement with Mines was needed to ensure that deep wells would be closed in areas with piped water supply, particularly those used by industrial and large commercial users. The extraction of groundwater undermines demand for the water services offered by the concessionaires, as well as being harmful to the environment.
- An agreement with the POJ was essential for the firms in order to have a reliable flow of raw water of an adequate quality to be used in their treatment plants. Raw water shortages and the poor quality of raw water supplies have been particular problems in Jakarta as the city's population has grown.
- Agreement with the Ministry of Finance to reschedule Pam Jaya's debts was necessary for the concessionaires' financial plans to be viable.

Under the original contracts, it was the responsibility of the firms to secure agreement with these parties as ‘conditions precedent’ that had to be met before the concessions would become operational. Neither Pam Jaya nor the local government took on the responsibility for ensuring that these other government agencies cooperated with the companies to reach such agreements. After six months, only the agreement with the Ministry of Finance to reschedule debts had been concluded and the contracting parties decided to go ahead with the concession even though the conditions had not been met. This has proved to be a continuing problem for the companies.

Agreement with Mines and POJ proved elusive throughout the renegotiation period from 1998-2001 but these gaps were not adequately addressed in the RCA. The revised contract merely states that Pam Jaya is *not* responsible for the conclusion of these agreements and does not have the authority to enforce the closure of deep wells or the provision of raw water, although there are several ‘best endeavour’ type clauses that commit Pam Jaya to assisting the concessionaires in making agreements with these bodies.¹³

These arrangements have proved no more helpful to the conclusion of the agreements. The agreement for raw water was meant to be signed within three months of the restated contract, but this had still not been achieved by the end of 2004. The negotiations have foundered over POJ’s requirement of a guarantee from the firms to ‘take-or-pay’ for an agreed quantity of water, while the firms insist on a guarantee of the quantity of water that will be supplied that POJ is unwilling (or unable) to provide.¹⁴ Similarly, no binding agreement had been made with Mines by 2004.

¹³ Cooperation Agreement 2001 Clauses 9, 11 and 12 among others

¹⁴ Interview with Palyja, August 2004

The contracting parties have therefore agreed to adjust the targets or standards downwards where necessary to account for the absence of these agreements, although the contract provides no guidance on how the impact of raw water shortages or groundwater extraction should be quantified in order to calculate the appropriate level of target adjustment. Where sufficient raw water is not available, the contract requires the firms to attempt to meet their targets “to the extent reasonably possible,” a provision that would be extremely difficult to enforce.¹⁵

The inability of Pam Jaya to secure the cooperation of other governmental authorities could have been overcome in the Suharto era through pressure from the central government. However, as a result of the regime change in 1998, the central government’s role in the concessions has decreased, leaving a gap in coordination on the government side.

Sanctions and Penalties

A system of penalties for the failure to meet targets is built in to the Jakarta contracts to provide incentives for the firms to meet their commitments. No sanctions or penalties are applicable to Pam Jaya or any other governmental agency. However, despite the failure of the firms to meet targets on numerous occasions, no fines have ever been successfully levied. The firms have received demands from Pam Jaya for penalties to be paid to the tune of millions of Rupiah, but the firms have contested all these claims.¹⁶

Pam Jaya has been unable to enforce these claims because of two interlinked factors: ambiguity in the contract and weak enforcement. The contract specifies that penalties are only applicable if the failure to meet a target is due exclusively to the fault of the concessionaire. In practice, the concessionaire can easily put forward the argument that failure to reach production, billing or sales targets is due to insufficient supplies of raw water. If the concessionaires had signed an

¹⁵ Cooperation Agreement 2001 Clause 11.1

¹⁶ Interview with Palyja, August 2004

agreement with POJ for their raw water supplies, then the concessionaires would impose penalties on POJ if they failed to meet their commitments. These penalties would then pay the concessionaires' fines due to Pam Jaya. But as no such agreement has ever been signed, this system of penalties does not function. Instead, the contract provides for the parties to discuss appropriate adjustments to the targets given the amount of raw water available. However, the contract does not define the principles for calculating these adjustments.¹⁷

Pam Jaya has proved reluctant to pursue these claims for fines in the courts and has restricted itself to an exchange of letters, perhaps to avoid the concessionaires bringing a case against Pam Jaya for failure to meet some of its contractual commitments and because the variable quality of the Indonesian judicial system makes the outcome of a court case indeterminate.

Weak enforcement of penalties reduces the incentives for the firms to comply with their contractual commitments, potentially leading to poorer performance outcomes in the long-run.

Dispute Resolution

Among the weakest aspects of the Jakarta contracts is the treatment of dispute resolution, which leaves great ambiguity about the process to be followed and the principles according to which disputes should be resolved. This is particularly important given that until 2004, there was no national law concerned with the water sector that could provide a legal point of reference in a case.¹⁸ Similarly, as the concession was agreed through direct negotiation before rules on competitive tendering were introduced, and before the government had introduced laws governing concession-type contracts for infrastructure services, the contract operated in a partial legal vacuum.

¹⁷ Cooperation Agreement 2001 Clause 11

¹⁸ Indonesia's Water Resources Law, passed in February 2004, addresses the distribution of scarce water resources and clarifies the role of the private sector in the water sector.

The contract acknowledges a large number of possible causes of disagreement between the contracting parties, among which:

- Achievement of health and other service standards
- The imposition of penalties or sanctions
- Adjustments to technical targets when the Water Tariff is below the Water Charge
- Adjustments to technical targets when there are inadequate supplies of raw water
- Review of financial and operating plans in annual reviews and periodic Rate Rebasing
- Review of reasonableness of expenditure in previous operating periods
- Calculation of the shortfall (debts owed to the concessionaries by Pam Jaya)

In all of these cases, the contract provides for initial discussions between the parties to resolve the issues. It does not specify the length of time that these consultations can go on for, nor the principles on which the decision should be taken, nor the process that the discussions should follow. In practice, this has led to long periods during which the contracting parties have held meetings with no clear outcome.

The most striking example of this is the Rate Rebasing discussions that began at the end of 2002 and continued through 2003 and 2004. The firms had presented a business plan for the 2003-2007 operating period to Pam Jaya in 2002, somewhat behind schedule. This plan was to be discussed and agreed with Pam Jaya for implementation at the beginning of 2003. Pam Jaya approached the Rate Rebasing discussions by examining the details of the plans, scrutinising and contesting the information provided by the firms line by line and questioning the need for certain expenditure categories. The parties were unable even to agree to accept a single set of financial information about the concessions. The discussions made very little progress and by summer 2003, the meetings had come to a halt as the firms did not see the value in devoting time and resources to

engaging in this type of process.¹⁹ This outcome is typical of the interaction between Pam Jaya and the concessionaires throughout the contract.

Under the restated contracts of 2001, if the parties are not able to find a compromise through discussion, they may call on the Regulatory Body (RB) to act as a mediator. The contract specifies a number of dispute types in which the parties are required to approach the RB, while in others the role of the RB is undefined and therefore, presumably, optional. However, the RB has few resources available to draw on in its role as mediator. As a young institution, it is not able to rely on its reputation or experience to broker solutions. Its legal foundation is a Governor's decree, and the decree does not give the RB the power to impose any penalties or rewards on the parties. Furthermore, the RB is a small agency with a very limited budget so it does not have the specialist expertise that would give it authority to develop new proposals.

Given these limitations, it is perhaps not surprising that the parties have not employed the offices of the RB in settling their disagreements. On two occasions, though, the RB has taken the initiative in resolving a dispute, with mixed reactions from the contracting parties: firstly, towards the end of 2003, when the discussions on the periodic review had ground to a halt, the RB approached the Asian Development Bank, through the central government, for a grant to hire external consultants as a way to break the deadlock. This effort was undermined by the rejection of the findings of the consultants by all the parties, including the RB itself. The RB subsequently made a second effort to move forward the discussions by chairing a series of high-level meetings, but these also met with limited success.²⁰

¹⁹ Field interviews with Palyja, August and September 2004

²⁰ Field interviews with Pam Jaya, Regulatory Body and Palyja, August and September 2004

The contract also provides for the parties to engage external experts in the resolution of disputes. There is some ambiguity in the contract about whether the parties should approach the RB before engaging an expert; on certain matters the contract provides for an external expert to be consulted in the first instance. The expert should be 'suitably qualified' and selected jointly by the parties. In contrast to legal proceedings, the contract does not bind the expert to strict rules of law. Perhaps surprisingly, the parties have not used this contractual provision to call in an expert to assist in the resolution of their disagreements. The only time in which external consultants were used was in the case of the International Combined Experts Team, who were engaged at the behest of the RB. In this case, their engagement was initially met with resistance by both concessionaires, who only agreed to their involvement on condition that it should be an internationally reputable firm of consultants and that the recommendations of the team should not be binding. Subsequently, Suez supported the consultants while Thames continued to take a broadly uncooperative stance throughout the process, failing to provide the information requested by the consultants and not engaging constructively with the recommendations of the team. The resistance of the contracting parties to the engagement of outside experts may be explained by their lack of confidence in any external party to understand the complexities of the contracts in a short period of time. They therefore express a preference for the internal resolution of difficult issues.

The provisions of the contract specify that any dispute not resolved by the expert within 60 days will proceed to arbitration, which is to take place under international rules (UNCITRAL²¹) with the arbitrator appointed by the Chairman of the Singapore International Arbitration Centre. The contract states specifically that the arbitrators are only entitled to render a decision based on the strict rules of law and not on any extra-contractual principle. No dispute relating to the Jakarta contracts has so far been taken to arbitration. The concessionaires consider that they would only

²¹ Arbitration Rules of the United Nations Commission on International Trade Law

pursue arbitration if they had already decided to terminate their role in the concession.²² In circumstances where they would prefer to continue to operate, they consider arbitration to be too damaging to the working relationship of the parties to be a viable way to settle a dispute. Suez in particular is aware of the risk of an indeterminate outcome after their experience of arbitration in their Manila concession. Thus despite the often acrimonious relations between the contracting parties in Jakarta, they have not taken advantage of the dispute resolution mechanisms offered by the contract.

The contract provides for termination either by the government or by the firm under specified conditions.²³ In the event that the concessionaire is justified in terminating the contract due to the failure of the government side to meet its contractual commitments, the concessionaires are entitled to the 'Early Termination Payment'²⁴ The amount due would depend heavily on the decisions made by the arbitration panel and would need to be enforced in Indonesia.

As a result of uncertainty about the quality and outcomes of external dispute resolution mechanisms, the parties have tended towards bilateral, internal approaches to resolve disagreements. However, as there are no rules in the contract that specify how these discussions should be structured, there has been a tendency towards long, drawn-out and often inconclusive interactions between the parties.

²² Interviews with Thames and Suez, Hong Kong (March 2004), Singapore (August 2004) and Jakarta (August and September 2004)

²³ Termination may be justified by force majeure, failure of one or both parties to meet contractual commitments and to remedy these failures within a reasonable period of time, or the failure to adjust the contract appropriately for a change in the law that materially affects the concessions etc. (Cooperation Agreement 2001 Clauses 41.2, 42 and 49.3)

²⁴ The Early Termination Payment is equivalent to the net present value of the concessionaires' projected pre-tax profits for 50% of the remaining years of the concession based on historical and forecasted profits (Cooperation Agreement 2001 Clause 42.6)

Returns

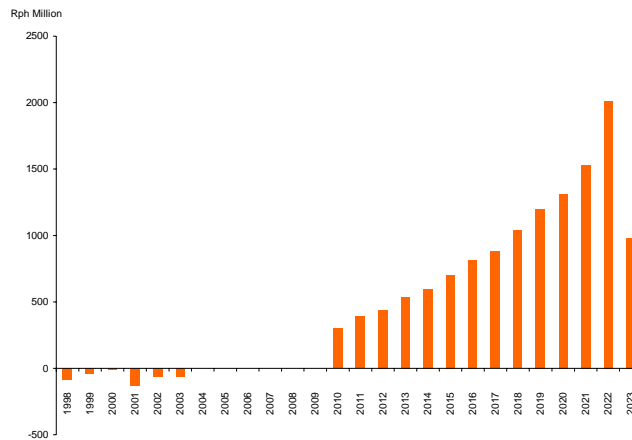
By the end of 2004, neither of the concessionaires had drawn a dividend from the concession. Although this is not unusual for a long-term infrastructure contract, earnings have been disappointing. Data for TPJ for 1998-2002 shows a net loss (after interest, tax and depreciation) in three of the five years. In the period 1998-2003, Palyja has had a net loss in two years.²⁵ Both firms experienced an improvement in the last year for which data was available, but subsequent delays in the Rate Rebasing may have caused net income to deteriorate once more.

Given the performance of the first six years, the projected profile of returns has become even more concentrated in later years in order to achieve an average rate of return of 22 per cent over the life of the concession, as the contract specifies. A projection for TPJ foresees dividends rising dramatically towards the end of the concession term, as Figure 11 shows, up to 48% of revenues in 2022. If this profile was maintained, this would make it possible for the firms still to meet the contractually targeted 22% rate of return. However, the firms are concerned that when they start to draw dividends, the government may seek to modify the rate in the contract. Even if this did not occur, the very high dividends in later years could also stimulate a public backlash, and possible retroactive action by the government.²⁶

²⁵ Data for TPJ comes from the Regulatory Board; data for Palyja comes from Palyja. Neither set of financial statements have been independently audited.

²⁶ Interviews with Palyja, August and September 2004

Figure 11: Equity Injections and Projected Dividend Pay-Outs to TPJ (Thames Concession) 1998-2023



Source of data: Cooperation Agreement for the Eastern Part of Jakarta 2001 (Schedules)

II. Analysis

Between the commencement of the concession contracts in 1998 and 2004, the parties have been continuously engaged in discussions or negotiations about the future of the contract. Given the high transaction costs that this has implied, it is surprising that the parties have not made more use of the dispute settlement mechanisms provided for in the contracts. Even more surprising is the fact that the foreign investors are still engaged in the concessions, despite low returns up until now and uncertain prospects of earning higher returns in the future. Why have the concessionaires not proceeded to arbitration and termination? It is also interesting to ask why the government has chosen to continue with the concession, given the dramatic political changes that have occurred in the country since the contracts were agreed. The regime change that took place in 1998 brought with it a powerful backlash against the corruption and cronyism associated with Suharto that had been building up over many years (Bertrand 1997). In these circumstances, the cancellation of the Jakarta water concessions would have had strong popular support, yet the government chose to continue with the contracts.

In this section we examine the interests of the contracting parties and the related costs and benefits of the possible courses of action to show how these puzzles can be explained. We

examine the four main actors with direct involvement in the implementation of the concession contracts: Pam Jaya, the DKI Jakarta Governor (representing the regional government) and the two concessionaires. In the analysis, the concessionaires are represented by their parent companies as the staff taking strategic management decisions are expatriates who hold on short-term contracts with the local concession companies. We therefore assume that their interests are shaped principally by their relationship with the parent firm.

Table 3: Jakarta Concession Actors and their Interests

Actor	Interests
Pam Jaya	Maximise status/ employment/ budget/ scope of responsibility Reduce financial indebtedness Minimise chances of intervention by local or central government
Governor	Maximise political support domestically Minimise chances of intervention by central government Maintain international reputation
Thames & Suez	Maximise returns over the life of the contract Comply with firm's international strategy Minimise current losses Minimise financial risk

We discuss the incentives of these actors in turn.

Pam Jaya

Pam Jaya was initially very resistant to the concession contracts: one story recounts how the head of Pam Jaya, President Director Rama Boedi, announced that he would not attend the signing ceremony of the contracts on the evening before they were due to take place, and had to be pressured to do so by the central government.²⁷ The central government set a clear deadline for the completion of the original contractual negotiations, which Pam Jaya objected to, but was ultimately forced to comply with.²⁸ Pam Jaya's rejection of the sanctity of the contracts is amply reflected in their resumption of management and operational control during the May 1998 crisis.

²⁷ Field interviews, Singapore and Jakarta, August 2004

²⁸ Field interviews with Pam Jaya, August and September 2004

Again, it was only the intervention of the central government that restored the concessions to the private companies.

Pam Jaya's attitude is not surprising: it was certainly the biggest loser of the concession contracts, losing responsibility and status, as well as access to revenue streams from customers and to financial resources from development banks and donors. There is also good circumstantial evidence to suggest that Pam Jaya managers and staff benefited from revenue streams from corruption, which they lost access to as a result of the concession contracts.²⁹ On the other hand, the involvement of the private sector also offered Pam Jaya a possible solution to its mounting debts to the Ministry of Finance that were coming due, as their grace periods came to an end.

Pam Jaya sought to defend its interests within the context of the contracts, trying to preserve a role in the city's water services. This is demonstrated in some features of the contract like the ambiguity over the principles and process to be followed in deciding issues like the appropriate level of capital expenditure, or the 'reasonableness' of past expenditure, which allow Pam Jaya to maintain an extensive monitoring role. As a result of these contractual attributes, Pam Jaya has retained the ability to intervene in the concessionaires' management decisions, despite the contractual assignment to the firms of "full discretion as to methods" of achieving the agreed targets declared in the contract.

²⁹ A common pattern in the water sector is for public managers to allow the illegal sale of water from utility pipes to small-scale water providers at prices well above the official tariff which is sold on to households not connected to the piped network. This water is classified as non-revenue water and the funds generated by this activity are shared privately between the utility's managers and local officials in charge of the sites of the illegal connections
McIntosh, Arthur (2003). Asian Water Supplies: Reaching the urban poor. Manila, ADB.
The World Bank has found evidence that water utilities in Indonesia engage in this practice
World Bank (2003). Indonesia Water and Sanitation Background Sector Review. Averting an Infrastructure Crisis: A Framework for Policy and Actions, World Bank. The performance of Pam Jaya over time, with consistently low coverage and high non-revenue water, despite a positive net income, is consistent with this pattern of widespread illegal connections being intentionally exploited by the management. Further evidence is the jump in the number of connections and official revenues recorded by Pam Jaya in the months directly preceding the privatisation, which could be due to the rapid legalisation of illegal connections that had been tolerated.

This explains why Pam Jaya has approached its monitoring role in the concessions at such a detailed level in both technical and financial aspects and these activities help to justify its large staff of 120 people. It also explains why Pam Jaya has been resistant to the creation and strengthening of the Regulatory Body, which plays an overlapping role in monitoring the concessions and would therefore weaken the arguments for the organisation's large staff, or to the intervention of experts, who similarly would undermine the status of Pam Jaya as the primary entity responsible for decision-making on water service matters. On the other hand, Pam Jaya must be careful to balance its actions in order to avoid intervention by the central government or the Governor, as occurred in May 1998 or in the course of the Rate Rebasing, which again reduce its status and autonomy.

Pam Jaya expected that the concession contracts would improve its own financial position by increasing revenues that would allow it to cover its debt service payments to the Ministry of Finance on loans from the World Bank and the Japanese government, but lower than expected revenues from the concessions have made it necessary to reschedule the debt repayments. In addition, Pam Jaya has incurred a further \$100m debt, this time to the concessionaires, as a result of the divergence between the Water Tariff and the Water Charge. While there is some discussion about the exact size of the shortfall, it makes Pam Jaya's financial position more precarious and makes it more vulnerable to intervention and perhaps reorganisation by the local or central branches of government.

Thus a key priority for Pam Jaya is to reduce its indebtedness. This is reflected in its efforts to reduce the concessionaires' operating and capital expenditures, which reduces the Water Charge accruing to the firms and therefore also reduces the risk that the Water Charge and Water Tariff will diverge once more. Pam Jaya's recommendations for the periodic review involved a

dramatically lower level of capital investment than that proposed by the firms or by the external consultants (the ICE team), resulting in a much lower average tariff to be required by the firms.³⁰

The concessionaires complain that Pam Jaya has tried to undermine the concessions since the commencement of operations, with the ultimate goal of terminating the contracts and resuming management control of water services. However, representatives of Pam Jaya discount the possibility of the resumption of management control by the public sector, and the Governor has publicly announced that no such step would be taken.³¹ In the event of termination, the contracts would most likely be transferred to other private companies. Thus, at this stage, it seems more plausible to interpret Pam Jaya's actions as an attempt to preserve status, employment and budget in the context of private sector participation.

Governor

The Governor of DKI Jakarta does not have a major financial interest in the concession contracts as the concessionaires do not pay a fee to the local government. The concessions are liable for tax but as profits from the concessions have so far been minimal, the regional government has not benefited significantly from these flows. Under public ownership, by contrast, the regional government was entitled to 40% of the profits owned by the public utility, although the utility only generated profits intermittently. Nor does the Governor hold a contingent liability for the debts incurred by Pam Jaya in the pre-concession period, as the liability for these debts lies with the central government.

The Governor's interests in the concessions are therefore mainly political. A key concern for him is the resistance of influential consumer groups to tariff increases, which would result in a decrease of political support for the Governor. This was a particularly important factor during the

³⁰ Interviews with Pam Jaya, August and September 2004

³¹ Interviews with Pam Jaya, August and September 2004

peak years of the crisis when the social situation was extremely unstable and there were clear links between social unrest and the prices of basic commodities (Bird 1999). This accounts for the Governor's decision not to raise tariffs in the period 1998-2003.

As Governor Sutiyo had been appointed by former President Suharto, it was also important for him to demonstrate that he was on the side of the reformers after Suharto had fallen from power in order to protect his own position. Social unrest in 1997-1998 coalesced around the 'reformasi' movement, reflecting a long-term resentment against the concentration of wealth and power in a small group of Suharto family members and cronies, summarised in the 'KKN' slogan of the protesters against *korupsi*, *kolusi*, *nepotisme* or corruption, collusion and nepotism. The public called in particular for the massive business interests of Suharto's children and key allies to be dismantled. This helps to explain why the Governor was quick to approve Pam Jaya's resumption of management control in May 1998, which could be presented to the public as a step towards reversing the corrupt contracts signed by the Suharto regime.

In subsequent years, as the economy has recovered, the connection between utility pricing and political support seems to have weakened. When tariffs were raised by 75% in the 2003-4, there was little public protest or media attention devoted to the increases.

While the Governor's first priority is to preserve his own base of political support, he also needs to maintain cooperative relations with the central government. The central government has no direct role in the provision of water services which are devolved to local governments, but it is concerned with flows of foreign direct investment in the context of overall macroeconomic management. Thus the central government would be likely to intervene in the contracts in so far as they have an impact on broader foreign investment issues. Since the Asian crisis, one of the main priorities of the central government has been to restore macroeconomic stability and stem

the outflows of foreign capital. The central government has sought to restore the confidence of foreign investors in the country by committing to uphold the contracts signed by the previous regime, albeit with contract modifications.

The withdrawal of the foreign investors from the Jakarta water contracts would send a signal to other foreign investors about investment conditions in Indonesia and perhaps dissuade potential investors. We can therefore account for the central government's intervention in 1998 to restore the concessions to Thames and Suez when the outflow of foreign capital was at its height. Latent pressure from the central government can also account for the Governor's interventions in the concession contracts in response to threats of termination from the firms, notably in 2003. However, threats of termination by the firms will have a decreasing impact on the Governor over time, if he begins to doubt the firms' intentions to carry out their threats.

Thames & Suez

The interests of the firms may be usefully separated into long-term and short-term interests. In the long-term, the objective of the firms is to earn a return on their investment commensurate with the risks of the project and the global investment strategy of the firm, as defined by the Head Office. The concessionaires originally adopted a typical strategy for a long-term contract, planning to take on debt in the early years of the contract to carry out their capital investment programme, in the expectation that revenues in later years would cover debt repayments and dividend payments. In the short-term, the firms seek to minimise losses given the current operating and regulatory conditions by adopting a coping strategy.

Turning first to the long-term interests of the firm, we can see that the original contracts provided an attractive risk-return pay-off for the firms. Revenues to the firm were calculated on a cost-plus

basis, with a 22 per cent rate of return to the firms over the life of the contract.³² The tariffs were calculated on the basis of full pass-through of fluctuations in interest and exchange rates minimising the risks to the firms from input pricing and macroeconomic changes. The firms did take on demand and supply risks, but population and economic growth in the city generated predictions of strong future growth. Given the prevailing economic conditions in Indonesia at the time, of stable inflation and strong GDP growth, this rate of return would be above the hurdle rate for a project of this kind (see Appendix). The firms were also protected from political risk through their connection with the Suharto regime, which strongly favoured the business interests of the President's close family and friends.

Strong political support can help to explain why the firms were willing to sign contracts which gave Pam Jaya such a large discretionary role, even though they had argued for the dissolution of Pam Jaya after the transfer to private management. During the negotiations, it was clear that the central government was capable of forcing Pam Jaya to agreement if necessary, and the firms probably believed that the same would be true over the life of the concessions. Counting on supportive political intervention in the event of difficulties, they therefore accepted a continuing role for Pam Jaya and a considerable degree of contractual ambiguity in how disagreements would be resolved.

At the time, both firms were pursuing aggressive strategies of international expansion. Thames had recently acquired interests in Australia and in Malaysia, and was exploring further opportunities in Thailand, while Suez had bid for, and won, two of the largest and most high profile water projects in developing countries, for the cities of Buenos Aires and Manila. Thus the

³² This compares with an average rate of return for a water company in the US and Europe of 6%. (Sirtaine, Pinlgo et al. 2004)

Jakarta concessions offered an attractive investment prospect for the firms fully in line with their global corporate strategy.

However, the macroeconomic and political crises, that began in 1997 and culminated in 1998 with Suharto's fall from power, radically changed both risks and expected returns for the firms. Expected revenues fell as demand dropped while the US dollar value of revenues in Rupiah plummeted with the exchange rate. On the political side, the firms' connections with the Suharto regime became a severe liability as public attention focused on KKN. The firms then faced a choice of terminating the concession or continuing with a modified contract under the new operating conditions. Both firms chose to stay, accepting the conditions imposed on them by the government, including the withdrawal of their Indonesian Joint Venture partners and the 3-year freeze in tariffs.

The decision of the firms to stay on under less propitious conditions may be explained by a combination of the high transactions costs of termination and expectations of improvement in operating conditions in the future. Given the severe strain on the public finances caused by the macroeconomic crisis and the public backlash against Suharto, the firms may have doubted the ability or willingness of the government to pay out compensation to the firms according to the termination provisions in the contract. Thus by withdrawing the firms risked losing the full value of their investment to date. Instead, the firms adopted a strategy of cooperation with the government in order to increase the possibility of an attractive resolution in the renegotiation.

However, as we have seen above, the renegotiation did not resolve the firms' operating difficulties. Instead, the firms entered another period of uncertainty in relation to tariff increases and the business plan for the second five-year operating period. At this time, the firms reduced their expectations of future returns and adopted a 'coping strategy' in order to minimise short-

term losses. When tariff increases were not delivered, the firms engaged lawyers to assess the options for termination and approached the Governor directly with the threat of termination. At the same time, the firms radically reduced their capital expenditure and did not take on any more debt in the 2002-4 period. On the other hand, the firms have not made efforts to decrease operating expenditure, as this provides the basis for the calculation of the Water Charge in the second operating period.³³ Thus the objective of private sector participation is undermined on two counts: injections of investment are suppressed and efficiency has not improved.³⁴

A further element in the coping strategy is for the concessionaires to seek to extract revenues from the concessions without drawing dividends. They can do this in three ways: through a management fee or royalties; by paying consultancy fees to staff of the parent company who advise the concession company; and through procurement from and contracting out to other firms within the same business group at inflated prices, equivalent to transfer pricing. The concession companies in Jakarta use some, and perhaps all, of these methods. They charge a management fee which amounts to around 4-5% of operating expenses each year, a cost which is fully passed through to the water charge; they also pay consultancy fees for the time and expertise of the Head Office. Use of advantageous transfer pricing is extremely difficult to demonstrate as the relevant data is confidential; we can only note that this is a widespread practice among firms of this kind (Sirtaine, Pinglo et al. 2004).

The firms are aware, though, that this is merely a temporary strategy. Political threats will weaken in effectiveness the more often they are used and further antagonise Pam Jaya who remains their

³³ Interview with Palyja, August 2004

³⁴ Pam Jaya's analysis of the concessionaires' operating expenditure finds that the firms have higher costs than Pam Jaya had on all line items and have added new line items to the operating budget. While this can partly be accounted for by changes in operating conditions that have raised the prices of inputs and services like insurance, we would expect a private firm to show some efficiency savings over a publicly owned firm. (Interviews with Pam Jaya, August and September 2004)

main counterpart in discussions. Furthermore, minimising capital expenditure at this stage will make it more difficult for the firms to earn the higher returns in the future that will generate their dividends.

Changes in the operating environment in Jakarta have occurred concurrently with major changes in both firms' global investment strategies. Thames Water International, under the ownership of German utility RWE, has declared its intention to reduce its presence in all markets outside Europe and North America and has engaged in discussions to sell its existing assets. In 2003, it withdrew from a major contract in China, Shanghai Da Chang. Suez has declared a similar strategy of focusing on 'core' markets in Europe. The company has faced difficulties in a large number of its emerging market investments: it has withdrawn from contracts in Puerto Rico and La Paz, and pursued arbitration proceedings for its contracts in Manila and Buenos Aires.

The two companies have reacted to changes in corporate strategy in different ways. Suez's disappointing arbitration case in Manila, which judged that neither side had a case for termination, has made it wary of pursuing this approach. Losses in other contracts have made the management more inclined to try to find a cooperative solution in Jakarta, looking for a local partner to take on part of the equity and the related risk in the company. This explains why Suez was willing to cooperate with the ICE team and was able to move close to a solution in the Rate Rebasing process by the end of 2004.

Thames' strategy of withdrawal from existing investments in emerging markets has been demonstrated in its willingness to use threats of withdrawal in its discussions with the Governor about the Rate Rebasing and in its refusal to cooperate with the ICE team. As a result, Thames and Pam Jaya have not been able to move towards an accommodation in setting the parameters for the second operating period.

The firms have shown a mixed attitude towards the Regulatory Body since its creation in 2001. Reference to an independent regulatory body had been included in the original contracts at the behest of the firms, but without a fixed timeframe for its creation. Again, it was the firms who pushed for the regulator to be included in the Restated Cooperation Agreements, yet since it was set up, the firms have shown an ambivalent attitude towards it. Neither firm initially sought the involvement of the RB in the Rate Rebasing discussions. It was only when the RB took the initiative in bringing in external consultants that one of the concessionaires – Suez – began to engage seriously with it. Thames, on the other hand, has been less supportive of the RB's efforts. Suez has recognised the value of the RB's mediating role as a way of avoiding more open confrontation with the other parties, and appears to have used its relationship with the RB successfully in moving towards agreement over the Rate Rebasing.

Given that the firms were instrumental in its creation, and that the firms have an often acrimonious relationship with Pam Jaya, how can this sceptical attitude to the role of the RB be explained? The answer lies in the restricted power and influence of the RB in relation to the other key actors: Pam Jaya and the local government. As the RB has no decision-making powers and has not yet built up a reputation for competence in its analysis, the firms can reduce the costs of negotiation by focusing their efforts on the parties that do have the power to take decisions. As the role of the RB and the resources provided to it to carry out its tasks, as set out in the contracts, are so restricted, it has been seen as a source of interference rather than a potential ally for the firms in their negotiations. This explanation is further supported by the firms' demand for greater independence for the Regulatory Body in the future (Palyja letter to the Governor July 2004). The firms may be pursuing this in the expectation that their influence over the RB will be strong, and that a more powerful RB will help to undermine the role of Pam Jaya in the concessions.

Conclusion

The experience of the international investors in Jakarta's water concessions offers useful lessons for other contracts of this kind.

First and foremost, the Jakarta concessions demonstrate the risks of relying on political support rather than a clear institutional and regulatory framework. To the firms, the authoritarian regime of Suharto seemed an attractive place to invest because of the security provided to businesses linked with the regime. At the same time, the centralisation of power in the Presidency may have encouraged the firms to think that the government would secure the cooperation of the different agencies and branches of government involved in the contracts, including Pam Jaya, the raw water provider and the Department of Mines. However, Suharto's regime turned out to be much more fragile than the firms – and most observers – expected. The new regime, which moved towards greater democracy and greater decentralisation, weakened the power and interest of the central government in the concessions, leaving the companies to deal with an uncooperative partner, an ambiguous contract and limited bargaining power.

Secondly, the absence of competitive tendering and transparency in the award of contracts emerges as an important factor behind their weak enforceability. In Jakarta, the contracts were negotiated directly between the parties. This suited the firms, as they were able to avoid costs of bidding and they were able to shape the structure of the contracts. The government had little experience in dealing with foreign investors for this type of contract and had not developed clear ideas about how the contracts would work before the negotiations began, so they benefited from the input provided by the firms. Direct negotiation was also entirely consistent with the pattern of government-business relations under the Suharto regime. But problems arose after the regime change, when the firms found themselves severely criticised by politicians, the media and the

public for their connection with corruption and cronyism. This strengthened the position of the key groups opposed to the concessions: Pam Jaya's management, its employees and Pam Jaya's network of contractors. The contracts were probed for KKN, the concessionaires were taken to court on charges of corruption and operations were severely disrupted by strikes and more violent actions perpetrated by employees. While some sort of backlash might well have been expected after the fall of Suharto, the concessionaires would have been able to build their legitimacy with key groups and defend themselves against accusations much more easily if they had won the contracts through a transparent and competitive process.

Finally, the multiple roles of the former public utility as contract signatory, owner of the concession assets and contract monitor has been extremely problematic for the concessions. Yet this kind of role for the former public utility is seen in several other concession contracts around the world, notably in Manila. The public utility will generally be the biggest loser from the privatisation, in terms of revenues, prestige and power. Thus its interests are likely to be diametrically opposed to those of the private investors. The public utility may also face conflicts of interest between its different roles as contract signatory and contract monitor. In this set-up, there is no institution responsible for monitoring the extent to which the contracting party on the government side meets its commitments. The case of Jakarta's concessions also demonstrates how difficult it is to change the regulatory institutions later in the contract: Jakarta's Regulatory Body has had to struggle to find its role among the other actors who had already established their roles.

The Jakarta contracts were intended to raise investment and to increase efficiency by bringing in the private sector, but the local political economy and ad hoc regulatory framework have generated the opposite results, discouraging investment and providing weak incentives for efficiency. The key emerging recommendations are: a clearly specified contract based on a sound

regulatory framework, competitive tendering and the creation of an autonomous regulator. None of these conclusions is new or inconsistent with the mainstream of policy advice given to governments considering private sector participation in utility services. However, the justification for implementing these principles is often couched in the terms of economic theory, despite the decisive role played by politics in the provision of a basic service like water. This paper has examined the full political economy context of a single case and demonstrated the formidable risks of ignoring these fundamental points.

Annexe: Hurdle Rates

In this section, we consider whether the contractually defined 22 per cent IRR, if it is actually achieved by the end of the concession, constitutes a reasonable, inadequate or excessive return for the shareholders, given the risks associated with the investment. It may seem to be a high rate of return for an investment in the water sector. However, the Shareholder IRR measure for the Jakarta concessions need to be seen in a comparative context of returns on investments of a similar nature in countries with a similar risk profile.

Following the methodology of Estache and Pinglo (2004) and Sirtaine, Pinglo, Guasch and Foster (2004), comparative rates of return are calculated that reflect a level of return to the shareholder commensurate with the level of risk being taken, known as a ‘hurdle rate.’ The methodology is based on the Capital Asset Pricing Model (CAPM) and the key insight of this model, that investors prefer less risky projects to more risky ones and will require a higher rate of return on higher risk projects. If a project is more risky, investors will need to have a higher expected return if they are to invest in the project. There is no single ‘appropriate’ return across a sector or across a country. The appropriate return will be determined by project-specific risks. However, as information on project-specific risks is not available, it is necessary to estimate the risks of this project with information on risks associated in particular with the sector and with the country.

Any investment has two types of risk associated with it: unique risks, which can be reduced through appropriate portfolio diversification, and market risks, which affect all investments in an economy. According to the CAPM, the return on the project should be equal to the return that the company can earn on a risk-free investment plus a premium reflecting non-diversifiable risk.

The investor is interested in how sensitive a particular investment is to fluctuations in the overall market. The measure of sensitivity is known as the beta. According to CAPM, the risk premium that investors demand over the return to a risk-free asset varies in direct proportion to the asset beta. Although the accuracy of the CAPM as a method for calculating the cost of capital is contested by some recent work which has found that returns are not (very) closely correlated with the beta. However, the CAPM is still used as the primary model in many regulatory systems, including the UK, and is therefore used here to calculate hurdle rates for the Jakarta concessions.

The formula below is used to calculate the hurdle rate:

$$R_a = R_f + \beta * (R_m - R_f) + R_c$$

Where:

R_a = hurdle rate (minimum required return for investment to take place)

R_f = rate of return on a risk-free investment

β = beta of the asset (the asset's sensitivity to market fluctuations)

R_m = return on the market as a whole (i.e. a fully diversified portfolio)

$R_m - R_f$ = market risk premium

R_c = country risk

The risk-free rate of interest is a theoretical interest rate associated with an asset that was entirely free of risk. Government bonds are considered to be low risk investments, but some countries clearly have risks associated with them. The US government has a track record of no default and is therefore considered to be an approximation for a risk-free entity. Thus the rate for the US 3-month Treasury Bill can be used as an approximation of the risk-free rate. In May 2004, this was 0.98.

The beta is a measure of the volatility of a stock against the market as a whole (unique risk as opposed to market risk). A beta above 1 means that the stock is more volatile than the market as a whole, while a beta below 1 means the stock is less volatile than the market. The unique betas for the projects in question are not available and so it is necessary to use a proxy. Following Sirtaine et al (2004), average predicted betas for American companies in the same sector is used. These betas are adjusted according to the average level of leverage (debt: equity) in the sector and to the nominal corporate tax rate. The resulting leveraged beta for the water sector in Indonesia is 0.71.

The market risk premium represents the additional return that investors require to hold the extra risk associated with shares over risk-free bonds. Using data for the period 1960-2004, the market risk premium is estimated at 5 per cent.

The risk associated with investment in a particular country is assessed by credit ratings agencies. The level of risk is associated with a country risk premium, the extra return investors would expect to earn given the level of risk. Moody's ratings agency gives a rating of B2 for Indonesia (February 2005). A rating of B2 is associated with a country risk premium of 10.9 per cent.

Table 9: Summary of Parameters

Rf	0.98
β	0.71
Rm	5.0
Rc	10.9

Using the formula above for the hurdle rate generates a result of 14.73. On this basis, the return of 22 per cent specified for the firms in the contract looks well above the necessary level to make this an attractive investment to a private sector player.

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Field Interviews

HONG KONG				
	Name	Position	Organisation	Date
1	Carey Anderson	Chairman	China Water Company Former Asia Business Director, Thames Water International	07/04/2004
JAKARTA				
1	S Poltak H Situmorang	Spokesman	AKAINDO (Association of Indonesian Water Works Contractors, Jakarta)	18/08/2004
2	Salusra Widya	DG of Human Settlement and Housing	Bappenas	07/09/2004
3	Achmad Lanti	Chairman	Jakarta Water Regulatory Body	11/08/2004; 23/08/2004
4	Alizar Anwar	Consultant	Jakarta Water Regulatory Body	06/08/2004
5	Benny Chatib	Finance Officer	Jakarta Water Regulatory Body	09/09/2004
6	Shigeru Yamamura	Analyst	Japan Bank for International Cooperation	03/09/2004
7	Rina Agustin	Department of Urban Settlements	Kimpraswil	10/09/2004
8	Hilwan	Department of Construction and Investment	Kimpraswil	31/08/2004
9	Achmad Djiddan Safwan	Founder	KOMPARTA	18/08/2004
10	Thierry Krieg	President Director	Palyja	24/08/2004
11	Christian Bouvier	Finance Director	Palyja	10/09/2004
12	Kumala Siregar	Customer Relations Director	Palyja Former Director, Perpamsi, Director, Medan PDAM	24/08/2004
13	Ibu Roswita	Consultant	Pam Jaya (retired)	01/09/2004
14	Lis Novari	Head Planning Division	Pam Jaya	26/08/2004
15	Kris Tutuko	Technical Director	Pam Jaya	12/08/2004
16	Werner Brenner	Management and Financial Advisor	PERPAMSI (Association of Indonesian Water Supply Enterprises)	25/08/2004
17	Sjahrun Sikar	Thames Water Country Representative, Indonesia	Thames Water International	25/08/2004
18	Jim Woodcock	Water and Sanitation Specialist	Water and Sanitation Program	06/08/2004
19	Risyana Sukarma	Water and Sanitation Specialist	Water and Sanitation Program	10/09/2004
20	Indah Suksmaningsih	Chairperson	YLKI	04/08/2004
SINGAPORE				
1	Terry Rogers	Former Asia Business Director	Thames Water International (retired)	16/08/2004
2	Gary Skelcher	Asia Business Director	Thames Water International Former Director, TPJ	16/08/2004