The Role of the Creditor in the Debtor's Management: The Case of the World Bank's Loans to Japanese Private Electric Power Companies (1953-1961)

Takashi Kitaura
Faculty of Economics, Meiji Gakuin University

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This paper demonstrates that the loans provided by the World Bank encouraged the recovery of Japanese electric power companies' profitability. At the request of the World Bank, the electricity rate grew, causing the companies to experience depreciation. Further, the World Bank compelled electric companies to construct thermal power stations, which are more efficient than hydroelectric stations. The loans provided by the World Bank generated improvements in the power companies' profitabilities because the increased depreciation incited by the rising rate benefitted the companies' financial conditions.

Keywords: World Bank; Japanese private electric power company; Electricity rate; thermal power station; hydroelectric power station; Debt/equity ratio

1. Introduction

This paper shows that loans offered by the World Bank facilitated the recovery of profitability among Japanese electric power companies. More specifically, to improve their waning profitability, the World Bank gave Japanese government suggestions to increase the electricity rate[1] and construct efficient thermal power stations in the 1960s. Four Japanese electric power companies—Kansai, Chubu, Hokuriku, and Kyushu—raised funds through the World Bank to finance the construction of new power plants. By providing funds to these companies, the World Bank facilitated improvements in their profitabilities.

The current electric power system in Japan was established in May of 1951 and consisted of nine private companies:[2] Hokkaido Electric Power Company, Tohoku Electric Power Company, Tokyo Electric Power Company, Chubu Electric Power Company, Hokuriku Electric Power Company, Kansai Electric Power Company, Chugoku Electric Power Company, Shikoku Electric Power Company, and Kyushu Electric Power Company.[3] Following World War II, the Japanese economy underwent a significant period of growth, particularly between 1955 and 1973. Rapid economic

[1] Electricity rate means electricity charge or power rate.

[2] One of the primary characteristics of the current Japanese electric system was that electricity was provided by private companies. Japanese government established the government-managed electric power companies to prepare for war between 1939 and 1942. After World War II, General Headquarters ordered the dissolution of the government-managed companies and the establishment of nine private companies for Japanese economic democratization in 1951.

[3] Bellow called Hokkaido, Tohoku, Tokyo, Chubu, Hokuriku, Kansai, Chugoku, Shikoku and Kyushu.

development in this period increased demand for electric power within Japan. To address this sudden increase in demand for electricity, Japanese electric power companies constructed more efficient power stations. The companies turned to the World Bank for loans to finance the construction of these stations. In this way, the financial loans provided by the World Bank did not only provide the companies with more substantial monetary resources, but also encouraged the construction of more efficient power stations, allowing the companies to improve profitability on their own.

At the World Bank's request, the rate at which Japanese power companies sold electricity increased after 1953, causing the companies to experience increased depreciation. However, the Japanese government restrained the electricity rate, thereby negatively affecting managerial objectives associated with increased electricity rates. These restrictions on electricity rates caused the deterioration of the companies' financial situations. Because of these restrictions (and the negative effects on profitability they incited), the World Bank often required the Japanese government to increase the rate at which the electric power companies sold electricity, when the World Bank tendered money to the electric companies. The rise of the sale electricity rate means the improvement of the electric power companies' financial situation because the Japanese electric power companies supply the electricity dominantly.

To prevent the deterioration of the financial conditions of the debtors to which they loan money, creditors typically supervise the management practices of debtor companies.[4,5] Therefore, as a creditor, the World Bank sought to improve the financial situations of those to whom they loaned funds. As such, the World Bank's requirements for the companies' improvements were normal stipulations associated with the loans they provided to the electric power companies.[6] As a result of these requirements, Japanese electric power companies increased their rate, thereby increasing depreciation. This increased depreciation allowed the companies to tap the internal reserve fund to construct more efficient power stations.

Another of the World Bank's stipulations dictated that the companies were to maintain a debt-to-equity ratio below 2, as further borrowing may have proven to damage their ability to repay their debts.[7] Because of the degree to which the World

[4] Michael C. Jensen and William H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3 (1976): 305-360.
[5] Paul Milgrom and John Roberts, *Economics, Organization and Management* (Upper Saddle River, New Jersey, 1992), 183-84.
[6] World Bank Tokyo Office, "Segin shakkan kaiso [The recollection of the World Bank's Loans]," (Tokyo, Japan, 1991).
[7] Milgrom and Roberts, 183-84.

Bank affected the management practices of the electric companies that borrowed from it, the electric companies' accounting methods took a great role in both the rate at which electricity was sold and the stipulations of the loan agreements made with the World Bank.

A number of researchers have argued that creditors often use the debtor's accounting to supervise the management of the debtor's operations.[8, 9, 10, 11, 12] Specifically, these scholars have examined how creditors' use of debtors' accounting affects the debtors' behaviors (particularly accounting behaviors). Because (a) most public utility commissions establish prices and calculate revenues according to the sum amount of operating expenses, depreciation, taxes, and the fair return of assets, and (b) that rate system affects the company's operational practices and accounting behavior, debtor accounting methods are particularly important in the public utility industry.[13, 14, 15, 16, 17] The Japanese electricity rate was decided by the Japanese government and calculated by the fully distributed cost method. As a result, the Japanese electricity rate system affected the accounting behaviors of Japanese electric power companies.

2. A synopsis of the World Bank loans to Japanese electric power companies

Table 1 provides a summary of the World Bank's loans to Japanese private electric power companies from 1953 to 1961. As shown by the figures in Table 1, four Japanese electric power companies borrowed a total of USD $143 million from the World Bank for seven projects in 1953, 1958, and 1961. This amount represented

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[8] Chee W. Chow, "The Demand of External Auditing: Size, Debt and Ownership Influences," *The Accounting Review* 57 (1982): 272-91.
[9] Ilia D. Dichey and Douglas J. Skinner, "Large-Sample Evidence on the Debt Covenant Hypothesis," *Journal of Accounting Research* 40 (2002): 1091-123.
[10] Joanne C. Duke and Herbert G. Hunt III, "An Empirical Examination of Debt Covenant Restriction and Accounting-Related Debt Proxies," *Journal of Accounting and Economics* 12 (1990): 45-63.
[11] Richard Leftwich, "Accounting Information in Private Markets: Evidence from Private Lending Agreements," *The Accounting Review* 58 (1983): 23-42.
[12] Ross L. Watts and Jerold L. Zimmerman, *Positive Accounting Theory* (Englewood Cliffs, New Jersey, 1986), 210-17.
[13] Steven F. Cahan, "The Effect of Antitrust Investigations on Discretionary Accruals: A Refined Test of the Political-cost Hypothesis," *The Accounting Review* 67 (1992): 77-95.
[14] Jennifer J. Jones, "Earning Management during Import Relief Investigations," *Journal of Accounting Research* 29 (1991): 193-228.
[15] Kimberly Gilligan Key, "Political Cost Incentive for Earnings Management in the Cable Television Industry," *Journal of Accounting and Economics* 35 (1997): 309-37.
[16] Shyam Sunder, *Theory of Accounting and Control* (Nashville, Tenn, 1997).
[17] Watts and Zimmerman, 231-33.

roughly 17% of the total value of all loans provided to Japan from the World Bank between 1953 and 1966. In 1953 and 1961, the World Bank invested in Japanese projects geared towards constructing thermal power stations. In contrast, the loan in 1958 was intended to promote the construction of hydroelectric power stations. The interest on the loans ranged from 5% to 5.75%, and the redemption period ranged between 20 and 25 years. Four companies did not borrow money directly from World Bank. Instead, the World Bank loaned money to the Japanese Development Bank, which in turn, loaned money to the four electric power companies.

Table 1. World Bank's loan to Japanese private electric power companies

Date Signed (DD/MM/YY)	Beneficiary	Project	Loan Amount (1,000 US$)	Interest	Redemption Period (Year)
15/10/1953	Kansai	Tanagawa thermal power station	21,500	5%	20
15/10/1953	Kyushu	Karita thermal power station	11,200	5%	20
15/10/1953	Chubu	Yokkaichi thermal power station	7,500	5%	20
13/6/1958	Kansai	Kurobe No.4 hydroelectric power station	37,000	5.625%	25
27/6/1958	Hokuriku	Arimine hydroelectric power station	25,000	5.625%	25
10/9/1958	Chubu	Hatanagi No.1 & .2 hydroelectric power station	29,000	5.75%	25
16/3/1961	Kyushu	Shin-Kokura thermal power station	12,000	5.75%	20

Source: World Bank Tokyo Office, Segin shakkan kaiso.

In 1953, Hokuriku, Kansai and Kyushu had dividends equal to 12% per year[18]. Chubu, Kansai, and Kyushu had this same dividend rate in 1958[19]. In 1961, however, Kyushu's dividend rate dropped to 10%[20]. The interest rates associated with the corporate bonds issued by the four companies in 1953, 1958, and 1961 ranged from 7.408% to 8.934%.[21] The redemption period for these corporate bonds was between

[18] Hokuriku Electric Power Company, "Yukashoken Hokokusyo," (Toyama, Japan, 1953), Kansai Electric Power Company, "Yukashoken Hokokusyo," (Osaka, Japan, 1953) and Kyushu Electric Power Company, "Yukashoken Hokokusyo," (Fukuoka, Japan, 1961).

[19] Chubu Electric Power Company, "Yukashoken Hokokusyo," (Nagoya, Japan, 1958), Kansai Electric Power Company, "Yukashoken Hokokusyo," (Osaka, Japan, 1958), Kyushu Electric Power Company, "Yukashoken Hokokusyo," (Fukuoka, Japan, 1958).

[20] Kyushu Electric Power Company, "Yukashoken Hokokusyo," (Fukuoka, Japan, 1961)

[21] Industrial Bank of Japan, "Shasai Ichiran," Complete List of Bonds, (Tokyo, Japan, 1970).

five and seven years. The terms of the World Bank's loans provided a more advantageous method of funding the electric companies' construction projects than stock and corporate bonds in terms of both financial costs and redemption period.

Given the strengths of the terms of the World Bank's loans to electric companies, a question emerges. Although World Bank loans represented the most advantageous funding method, why did only four (of nine) companies borrow funds from the World Bank? The answer to this question may lie in the tendency for the World Bank to intervene in the management of the companies that have borrowed from it. World Bank intervention into the companies' affairs may dissuade some of the companies to seek funding from it.

Historically, when the World Bank has loaned money to companies, it has required the guarantee of the government. Case in point, when the World Bank provided funds to the Japanese electric companies, the repayment of the loans was guaranteed by the Japanese government. Furthermore, the World Bank has tended to carefully evaluate a potential borrower's financial capacities, the market in which it operates, and other factors that may affect its ability to repay the loans it borrows. In the case of the Japanese electric power companies, the World Bank evaluated Japanese electricity rates, and required the Japanese government to raise those rates.[22] The Japanese government was compelled to raise the electricity rates because only it (and not the individual companies) had the legislative power to set the rates at which electricity is sold. As a result of the agreement between the Japanese government and the World Bank, the Japanese government was forced to establish appropriate rates with relative promptness and maintain those rates for sufficient time that the companies would be able to finance their construction projects.[23]

After borrowing funds from the World Bank, some companies may look to borrow more funds from other banks, causing their financial condition to deteriorate and affecting their ability to repay their loans from the World Bank. To mitigate the likelihood of this possibility, part of the agreement between the World Bank and Japanese electric power companies stipulated that the latter's debt-to-equity ratio must remain below 2.[24] To determine this ratio, the electric power companies and their

[22] Technical Operations Departments, "Technical Report on the Chubu, Kansai and Kyushu Thermal Power Projects in Japan," Technical Report, (Washington, DC, 1953): 14-15.
[23] World Bank, "Guarantee Agreement (Kansai Power Project) between Japan and International bank for Reconstruction and Development," (Washington, DC, 1953).
[24] World Bank, "Project Agreement (Kansai Power Project) between International Bank for Reconstruction and Development and the Kansai Electric Power Company, Inc.," (Washington, DC, 1953): 8.

subsidiaries included "bonds and debentures," "long-term loans," and "short-term loans" in their calculation of debt. Equity was comprised of "provision for drought," "provision for retirement allowance," "capital stock," "surplus," and "next term."[25]

To illustrate, Hokuriku calculated its debt-to-equity ratio in March of 1970. According to Hokuriku's calculations, the company had roughly 100 billion yen in debt and 56 billion yen in equity. Its subsidiaries had about 14 billion yen in debt and 4 billion yen in equity (Hokuriku Electric Power Company, 1970). [26,27] Its subsidiaries' debt and equity consisted of 12.2% and 7.7% in consolidated debt and equity. As a result, the ratios of the non-consolidated and consolidated balance sheet were 1.8 and 1.9. Given the small difference between the debt-to-equity ratios reported on the non-consolidated and consolidated balance sheets, and because Japanese companies disclose only non-consolidated financial information, I calculate the debt-to-equity ratio using the non-consolidated balance sheet in this paper. Using Hokuriku from March of 1970 as an example, there would be little difference in the calculation using the non-consolidated relative to the consolidated balance sheet.

In addition, because the World Bank, the Japanese electric companies, and the Japanese government were all parties to the agreements that facilitated the construction of new power stations, negotiations between these entities were quite lengthy. Tough negotiations such as these prevent the provision of loans to other companies. For example, Tokyo planned to borrow money from the World Bank between 1959 and 1961, but was unable to for two reasons.[28] First, despite planning the construction multiple hydroelectric power station projects, the World Bank judged the construction projects to be risky and inefficient. Ultimately, the World Bank determined that thermal power stations provided a cheaper alternative to hydroelectric power stations.[29] Second, around 1960, the World Bank began to limit loans to Japanese companies. At that point, the World Bank determined that Japanese companies could be trusted and were more

[25] "Revaluation reserve" was included in "surplus." "Next term" represents retained earnings carried forward.
[26] Hokuriku Electric Power Company, "Segin Hiritsu Shisan, [Trial Calculation of World Bank's Ratio]" (Toyama, Japan, 1970).
[27] Materials from the World Bank Archives and Hokuriku Electric Power Company (1970) were received from Professor Takeo Kikkawa, Hitotsubashi University. I would like to express my deepest gratitude to Professor Kikkawa for these materials.
[28] "6.4okudoru no syakkan zosho buseginsousai to kosho [The Minister of Finance negotiated USD 640 million with Mr. Black, World Bank President]," *Yomiuri Shinbun*, Sept. 13, 1959.
[29] "Shorui shinsa toru kyuden shinkokura no segin shakkan [An applicant screening was pass in the World Bank's loan to Shinkokura thermal power station of Kyushu]," *Yomiuri Shinbun*, June 17, 1960.

able to secure loans from foreign private financial institution.[30]

3. The 1953 loan

Chubu, Kansai, and Kyushu secured loans from World Bank on October 15, 1953 for the construction of a thermal power station (see Table 1). These loans represented the first of the World Bank's loans to all Japanese companies. These loans were specifically meant to fund issues related to these construction products, and could be used for foreign exchange settlement when the companies bought the thermal power station facilities from GE or Westinghouse.

Initially, these companies planned to borrow from Export-Import Bank (EXIM). However, after Japan became a member of the organization in 1952, the Japanese electric companies shifted their focus to the World Bank for its long-term financing needs.[31]

Following the request for financing, World Bank staff members travelled to Japan to determine whether it would be useful for World Bank to lend. On October 28, 1952, these staff members instructed the electric power companies to demonstrate whether the current electricity rate could financially support the replacement of the old plants with new ones.[32] The companies responded to World Bank staff determinations by claiming that depreciation to the plants was less than desirable for paying off their debt. In a report based on their research on the Japanese power companies, the World Bank's Technical Operations Department[33] argued that "the power rates charged will have to be increased fairly substantially over the next few years if the companies are to cover costs, attain financial stability and raise adequate equity capital, in appropriate ratio to debt financing, to meet new capital requirements."[34]

In accordance with the judgments of the World Bank, the government was forced to establish increased rates for the sale of electricity relatively quickly. However, the World Bank remained unconvinced that the rate problem resolved by the Japanese government's actions. Its report indicated that the companies' methods for calculating the electricity production rate were flawed. At that time, the electricity rate was

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[30] "Shinki shakkan ni nanshoku Rosen segin kyokuto bucho [Mr. Rosen, Director Department of Operation Far East, is against the new loan]," *Yomiuri Shinbun*, Feb. 23, 1961.
[31] World Bank Tokyo Office, 18-20.
[32] Electric Utility Enterpriser's Forum, "Sekai ginko chosadan to taisuru denkijigyosha no teishutu shorui," 1952, 1.
[33] Technical Operations Departments, "Technical Report on the Chubu, Kansai and Kyshu Thermal Power Projects in Japan," (Washington, DC, 1953).
[34] ibid., 14.

computed on the basis of overall cost, including all operating expenses, depreciation, taxes, interest charges, and dividends on capital stock of 15%.[35] The Technical Operation Department,[36] however, insisted that "this method didn't consider the revaluation reserve as capital for rate making purposes, although its assets counterpart is recognized for depreciation purposes."

In any event, the Japanese government raised the electricity rate in October of 1954. The new rates were 18.1% in Chubu, 3.9% in Kansai, and 12.4% in Kyushu. These rate changes affected the depreciation behavior of the electric power companies. Table 2 summarizes the depreciation behaviors adopted by the electric power companies. At that time, the depreciation of the electric power companies was between the amount calculated by the straight-flat method and the fixed-rate method. Specifically, Table 2 shows the ratios of actual depreciation to depreciation calculated via the straight-flat method or the fixed-rate method. Chubu and Kansai's ratio of actual-to-calculated increased from 1953 to 1955. Kensai's ratio of actual-to-calculated depreciation grew 108% of using the fixed-rate method in 1955. Kyushu's ratio fell from 1953 to 1955.

Table 2. The depreciation behavior of electric power companies

Company	Depreciation Method	1953	1954	1955
Chubu	straight-flat	106%	120%	156%
	fixed-rate	58%	64%	84%
Kansai	straight-flat	134%	144%	194%
	fixed-rate	76%	80%	108%
Kyushu	straight-flat	150%	133%	128%
	fixed-rate	83%	78%	67%

Source: The Public Utilities Bureau of MITI and the Federation of Electric Power Companies of Japan, denki jigyo junen no tokei

As noted above, as a term of their loan agreement, the World Bank mandated that Japanese electric power companies maintain debt-to-equity ratios lower than 2. As demonstrated by the figures in Table 3, Chubu, Kansai, and Kyushu had debt-to-equity ratios well below the threshold (0.27, 0.28, and 0.57, respectively). Why, then, did the World Bank add this stipulation to the loan agreements? The answer to this question

[35] ibid., 14-15.
[36] ibid., 14.

rests on World Bank predictions of the firms' debt-to-equity ratios. According to Table 3, the Technical Operations Department estimated that the debt-to-equity ratios for Chubu, Kansai, and Kyushu would respectively increase to 1.52, 0.82, and 1.71 by March of 1958. Technical Operations Departments predicted that the ratio of three companies would be deteriorated less than 2 even in March 1958, but especially the ratio of Kyushu would be deteriorated rapidly. The World Bank determined that the financing for the construction caused this deterioration. In addition, the World Bank estimated that Chubu, Kansai, and Kyushu would respectively raise the 63%, 63%, and 73% of money needed for their construction project from new loans between 1952 and 1957 (see Table 3). Given this, the World Bank required an increase in the electricity rate to increase company reserves and improve their respective debt-to-equity ratios. In response to this request, Kansai issued new shares up to 50% of its present capital. As a result of these steps, Chubu, Kansai, and Kyushu were able to maintain debt-to-equity ratios in March of 1958 that were lower than those predicted by the Technical Operation Department (1.30, 0.71, and 1.42, respectively; see Table 3).

Table 3. World Bank's estimation of the debt and equity of the Japanese electric power companies (Unit; Billion Yen)

	Chubu			**Kansai**			**Kyushu**		
	Debt(a	**Equity(b)**	**(a)/(b)**	**Debt(a)**	**Equity (b)**	**(a)/(b)**	**Debt (a)**	**Equity (b)**	**(a)/(b)**
March 1952	7.8	29.3	0.27	21.2	75.8	0.28	12.6	22.2	0.57
March 1958 (estimation)	54.5	35.9	1.52	69.8	84.8	0.82	55.1	32.2	1.71
March 1958 (actual)	80.9	62.4	1.30	92.4	129.3	0.71	76.8	54.0	1.42

Sources: Technical Operations Departments. "Kansai Hydroelectric Project Japan." Technical Report, Washington, DC: World Bank, 1958, Chubu Electric Power Company. "Yukashoken hokokusyo." Semi-Annual Report, Nagoya, Japan, 1958, Kansai Electric Power Company. "Yukashoken hokokusyo." Semi-Annual Report, Osaka, Japan, 1958 and Kyushu Electric Power Company. "Yukashoken hokokusyo." Semi-Annual Report, Fukuoka, Japan, 1958.

4. The 1958 and 1961 loans

4.1 The loans in 1958

In 1958, Kansai, Hokuriku and Chubu again secured loans from the World Bank

(see Table 1). Although the companies were borrowing funds from the same lending organization, there were two distinct differences between the loans from 1953 and 1958. First, the terms of the loans were somewhat different. Whereas the 1953 loans were intended to assist in the construction of thermal power stations, the 1958 loans were intended to assist in the construction of hydroelectric power stations. Given the different costs associated with these projects, the average loan amount was USD $13.4 million in 1953, and roughly USD $30 million in 1958.[37] Moreover, the average interest rate for the 1958 loans was about 5.7%. This was approximately 0.7% higher than the loans the companies received in 1953. The redemption period for the 1958 loans was also longer (25 years). Another difference between the loans is that in 1953, the loans were used for the settlement only by the foreign currency. In 1958, however, the loans were used for settlement not only by the foreign currency but also by the Japanese Yen.[38]

The latter of these differences was attributable to a change in the World Bank's view. The electric power companies initially sought to borrow from EXIM because the conditions and procedures associated with EXIM loans were far more flexible than those offered by the World Bank. World Bank personnel understood this proclivity, and President Eugene Black came to Japan in May of 1957 for the first time to promote the World Bank's loans to Japanese electric power companies.[39] In discussions with Hayato Ikeda, the Financial Minister of Japan, Black said that the loan amount to Japanese electric companies would increase USD $300 million from 1958 to 1960. This announcement was of great interest to Kansai, as the company needed substantial funding for the construction of the Kurobe No. 4 hydroelectric power station. Despite the promise of the World Bank loans to Kansai, Hokuriku, and Chubu, they were not easily implemented. This was largely attributable to differences of opinion about how the electricity rate should be calculated according to the World Bank and the Japanese government. Ultimately, the World Bank insisted that its calculation method be implemented between 1957 and 1960.

4.2 New rate system

Discussions related to the calculation of the electricity rate began on July 14, 1957, when Tohoku and Hokuriku raised the rate at which they sold electricity. In

[37] In particular, Kansai's Kurobe No.4 hydroelectric power station project was one of the biggest projects during the era of high growth. This project was the subject of a movie entitled "Kurobe no Taiyo" (the sun of Kurobe).
[38] World Bank Tokyo Office, 1991, 32.
[39] ibid., 31-32.

December of that year, the Japanese government established "the Power Rate Investigation Council" to discuss the new rate system. The World Bank paid close attention to these discussions, as the new rate system would likely become a key element of the negotiations for the World Bank's loans.[40]

As a result of their compulsory discussions, the Council delivered a report on the electricity rate in December of 1958[41]. In the report, the Council argued that the electricity rate should be increased to permit the companies to finance an increasing proportion of the costs associated with future development.[42] In addition, the report explained that business rewards were calculated through the addition of dividends, surpluses, and interest expenses according to the electric power company's actual capital structure prior to the revision. However, this calculation was modified to reflect a fair return basis. In a fair return basis, business rewards are calculated in accordance with the value of business assets and the weighted average cost of capital (WACC) for debt and net assets. The conventional method for calculating business rewards kept down electricity rates and prevented exertion by the companies. However, the fair return basis incentivized companies keep their capital costs low. According to MITI, if the electricity rate for the nine companies was recalculated in 1960, their collective costs would increase by 19 billion yen, representing 4.7% of comprehensive costs for generating electricity.[43,44]

However, the World Bank did not think highly of the change in calculation method or the report of the Power Rate Investigation Council. Sigesaburo Maeo, a MITI minister, sent a letter to World Bank President Eugene Black in May of 1958,[45] indicating that the Council was expected to reveal its findings in a report to be released later that year. Further, the letter indicated that government hoped to increase power companies' revenues within the 1959 fiscal year. Therefore, the World Bank loaned to Kansai in June of 1958, before the Power Rate Investigation Council released their

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40 World Bank, "Office Memorandum 8th January 1958." Washington, DC: World Bank.

41 The Public Utilities Bureau of the Ministry of International Trade and Industry. "Shin denki ryokin seido no kaisetsu [The explanation about new electricity rate system]." (Tokyo, Japan, MITI, 1960): 7-8.

42 World Bank, "Japan- Power Rates 10th April 1959," (Washington, DC, 1959).

43 Shin denki ryokin seido no kaisetsu [The explanation about new electricity rate system]." (Tokyo, Japan, MITI, 1960): 45-46.

44 The rise in each company's electricity rate was not practiced simultaneously, but occurred as each company applied to the government after 1960.

45 Ministry of International Trade and Industry, "A Letter from Shigesaburo Maeo Minister of International Trade & Industry to Eugene R. Black, President International Bank for Reconstruction and Development on 27th May 1958," (Tokyo, Japan, 1958).

report.

After the findings in the report were formally announced, the World Bank internally discussed the report from April to May of 1959, determining its findings to be weak[46] and claiming that "the Council recommended little change in current practices."[47] In the World Bank's estimation the report ''emphasized the stabilization of electric rates rather than the necessity of a proper return to the industry."[48] These comments reflected the World Bank's continued concern about the deterioration in the respective financial positions of the power companies to which it loaned money.[49] Most notably, the World Bank was concerned about financial deterioration resulting from increasing construction costs, greater expenses for developing a new area, and perhaps the most importantly, an unrealistic depreciation policy that made it impossible for companies to generate sufficient reserves, forcing them to rely on debt financing.[50] Given these concerns, in a letter to the MITI, the World Bank stressed that substantial improvement in the financial positions of the companies would not be achieved without fundamental changes in their power rate systems. Ultimately, in March of 1959, the World Bank already informed the Japanese government that it "would not feel justified in concluding negotiations for any further power project in Japan until appropriate action has been taken to ensure that the power companies will be able to finance their continued expansion while maintaining a sound financial position."[51] The World Bank's position on this matter was reflected in its negotiations related to the loan to Kyushu in 1961, which was the last loan provided to a company of the Japanese electric power industry.

4.3 The Kyushu loan of 1961

To finance the construction of the Shin-Kokura thermal power station, Kyushu borrowed funds from the World Bank on March 16, 1961 (see Table 1). The negotiations were quite difficult. According to Japanese newspaper, Kyushu applied for the loan in 1958,[52] and the president of Kyushu travelled to Washington D.C. to

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[46] World Bank. "13th April 1959 the letter from Martin M. Rosen to Tatsunosuke Takasaki." (Washington, DC, 1959).
[47] ibid.
[48] ibid.
[49] World Bank, "1st May 1995 Letter from Martin M. Rosen to Tatsunosuke Takasaki," (Washington, DC, 1959e).
[50] World Bank, "13th April 1959 the letter from Martin M. Rosen to Tatsunosuke Takasaki." (Washington, DC, 1959).
[51] World Bank, "Re: Power Rate Policy March 1959." Washington, DC: World Bank, 1959.
[52] "70okuen no shakkan Kyuden segin ni yosei [Kyushu asked World bank for a seven billion yen

negotiate the terms of the loan on February 11, 1960.[53] Kyushu initially planned to finance the construction of a hydroelectric power station using a loan from the World Bank, but the World Bank rejected that project because the construction of a thermal power station was a cheaper alternative. To construct the hydroelectric station, Kyushu planned to borrow USD22 million (8.1 billion yen), which would have covered 40% of the total cost.[54] However, the thermal power station project would have required Kyushu to borrow only 5.1 billion yen from the World Bank. Moreover, because the Kyushu region produced substantial amounts of coal, the World Bank determined that a thermal power station would prove a more suitable project to finance.[55] For these reasons, Kyushu was forced to change its project; rather than construct a hydroelectric power station, it built a thermal power station instead.[56]

Although Kyushu fundamentally changed its project focus in May 1960, it had to nonetheless wait until March 1961 for World Bank's decision to provide the loan. The delay was primarily attributable to World Bank's request that the electricity rate be raised in the Kyushu area.[57] As a result of this request, the electricity rate in Kyushu increased 10.5% in March of 1961. This was the first raise that was calculated using the new rate-base system adopted in 1960.

Between 1958 and 1973, the electricity rate was increased only seven times (see Table 4).[58] The reason for the relatively low number of rate increases was the relatively stable profitability enjoyed by the electric power companies over a long period of time. Still, the World Bank's request related to the construction of thermal power stations encouraged companies to build these stations, thereby increasing their profitabilities further.

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loan]," *Yomiuri Shinbun*, August 1, 1958.

53 "Seginshakkan kosho ni konya shuppatsu sato kyuden shacho [Mr. Sato, Kyushu President, will travel tonight to negotiate the World Bank's loan]." Asahi Shinbun, February 11, 1960.

54 "Kyuden no seginshakkan huridashi ni modoru [The World Bank's loan to Kyushu is going back to square one]," *Asahi Shinbun*, March 5, 1960.

55 ibid.

56 "Shinkokura karyoku de segin gawa to sessho Kyuden shacho [Kyushu President will Negotiate the Loan to Shinkokura Thermal Power Station to World Bank," *Asahi Shinbun*, March 11, 1960.

57 "Kyuden shakkan niha neage ga joken [The terms of a loan to Kyushu is to rise the rate]." Asahi Shinbun, February 22, 1961.

58 Chubu, Kansai, Hokuriku, and Kyushu, each of which borrowed from World Bank, raised their electricity rate one time between 1958 and 1973. In contrast, Chugoku cut its rate in 1966 (see Table 4).

Table 4. The revised situation of electricity rates from 1955 to 1973[59]

Date (DD/MM/YYYY)	Company	The raised percent
14/7/1957	Tohoku	17.80%
14/7/1957	Hokuriku	18.14%
21/3/1961	Kyushu	10.50%
5/8/1961	Tokyo	13.70%
1/12/1962	Tohoku	12.60%
1/4/1965	Chubu	7.89%
9/8/1966	Hokuriku	6.38%
15/10/1966	Chugoku	-3.91%
29/9/1973	Kansai	22.23%
29/9/1973	Shikoku	17.75%

Source: Federation of Electric Power Companies of Japan, Denki jigyo binran heisei 24nen ban [A handbook of electric power industry in 2012 version] (Tokyo, Japan, 2012), 134-136

4.4 The financial covenant in the loan in 1958 and 1961

As noted above, one of the stipulations of the loan agreements between the Japanese electric power companies and the World Bank in 1958 and 1961 was the company's maintenance of a debt-to-equity ratio lower than 2. The debt-to-equity ratios of Kansai, Hokuriku, and Chubu in September 1958 were 0.75, 1.67, and 1.28, respectively.[60,61,62] In March of 1961, Kyushu's debt-to-equity ratio was 1.95.[63] Over time, the companies' debt-to-equity ratio gradually increased. Most notably, Kyushu's debt-to-equity ratio grew until it nearly reached the threshold set by the World Bank. In response, World Bank requested that Kyushu's electricity rate increase to reduce the ratio. World Bank predicted that Kansai, Hokuriku and Chubu would have debt-to-equity ratios equal to 1.70, 2.33 and 1.78 by 1964 and that Kyushu would have a debt-to-equity ratio of 1.38 by 1966.[64,65,66,67] The actual ratios for Chubu, Hokuriku,

[59] Federation of Electric Power Companies of Japan. Denki jigyo binran heisei 24 nen ban. [A handbook of electric power industry in 2012 version], (Tokyo, Japan, 2012).
[60] Chubu Electric Power Company, "Yukashoken Hokokusyo," (Nagoya, Japan, 1958).
[61] Hokuriku Electric Power Company, "Yukashoken Hokokusyo," (Toyama, Japan, 1958).
[62] Kansai Electric Power Company, "Yukashoken Hokokusyo," (Osaka, Japan, 1958).
[63] Kyushu Electric Power Company, "Yukashoken Hokokusyo," (Fukuoka, Japan, 1961).
[64] World Bank, "Kansai Hydroelectric Project Japan, 11th April 1958," (Washington, DC, 1958).
[65] World Bank, "Hokuriku Hydroelectric Project Japan, 9th June 1958," (Washington, DC, 1958).

and Kansai were 1.97, 1.98, and 1.05, respectively, in March of 1965. In March of 1967, Kyushu's actual ratio was 1.34.[68,69,70,71]

Table 5. Ratio of the World Bank's loan to the debt in Hokuriku and Kansai

Year	Hokuriku	Kansai
1961	15.5%	21.1%
1962	14.6%	19.4%
1963	13.5%	15.9%
1964	12.3%	14.7%
1965	12.2%	13.9%
1966	12.9%	12.6%
1967	12.5%	
1968	12.4%	
1969	12.1%	
1970	12.0%	

Sources: Hokuriku Electric Power Co. Inc., Yukashoken hokokusyo, and Kansai Electric Power Co. Inc., Yukashoken hokokusyo

The loan provided to Kyushu in 1961 was the last offered to Japanese private electric power companies by the World Bank. The World Bank determined that the Japanese economy had developed well, leaving the Japanese electric power companies the credit needed to borrow funds from foreign private banks.[72] Although the Japanese electric power companies did not borrow from World Bank after 1962, the balances associated with outstanding loans remained.

5. The friction in 1969 and 1970

As time passed in the 1960s, the ratio of World Bank loans to total loans for four electric power companies decreased (see Table 5).[73] This reduction reflected a

[66] World Bank, "Appraisal of the Hatanagi Hydroelectric Project Chubu Electric Power Co.-Japan, 31st July 1958," (Washington, DC, 1958).
[67] World Bank, "Appraisal of the Shinkokura Thermal Power Project," (Washington, DC, 1961).
[68] Kansai Electric Power Company, "Yukashoken Hokokusyo," (Osaka, Japan, 1965).
[69] Hokuriku Electric Power Company, "Yukashoken Hokokusyo," (Toyama, Japan, 1965).
[70] Chubu Electric Power Company, "Yukashoken Hokokusyo," (Nagoya, Japan, 1965).
[71] Kyushu Electric Power Company, "Yukashoken Hokokusyo," (Fukuoka, Japan, 1967).
[72] "Segin 14 nichi ni shonin Kyushu denryoku no syakkan [World Bank will agree a loan to Kyushu on 14th]," *Asahi Shinbun*, March 9, 1961.
[73] The World Bank's loan amount was written into the annual reports of Hokuriku from 1960 to 1969 and the annual reports of Kansai from 1960 to 1965. However, it was not written into the

diminished importance of the World Bank's loans for Japanese electric power companies.

Although the World Bank provided less funding than it had prior to the 1960s, the World Bank determined that Chubu violated the debt-to-equity ratio covenant in March of 1969.[74] To improve the ratio, World Bank determined that Chubu should issue stock.[75] In accordance with this determination, Chubu issued its stock on 13 March 1970, receiving cash payments from shareholders worth 16.2 billion yen. Chubu also transferred 4.05 billion yen worth of Revaluation Reserves into Capital Stock.[76] As a result, Chubu's debt-to-equity ratio fell below 2 by March of 1970.[77]

A similar situation occurred for Hokuriku in 1970. Specifically, World Bank sent a letter to Hokuriku on July 28, 1970, indicating that as of March 31 of that year, the company's debt-to-equity ratio was roughly 2.2:1.[78] Although this letter failed to indicate how the ratio was calculated, if the World Bank considered (a) equity to consist of capital stock, surplus, and next term, and (b) debt to consist of bonds and debentures, long-term loans, short-term loans, provision for drought, and provisions for retirement allowance from Hokuriku's material, the debt-to-equity ratio would have equaled 2.24:1. This figure is consistent with the figure reported by the World Bank.

Despite the World Bank's claims, Hokuriku insisted that its debt-to-equity ratio was only 1.78:1, and therefore, did not violate the covenant.[79] Hokuriku argued that the confirmation signed between the Bank and Japanese Development Bank commented on the scope of indebtedness, capital, and surplus as follows: Indebtedness will include bonds and long- and short-term borrowings. Capital and surplus will include not only capital, but also provision.

World Bank argued that provision was to be included in the calculation of debt; Hokuriku claimed that it should be included in equity. The provisions of Hokuriku were

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annual reports for Chubu (1960 to 1969), Kansai (1966 to 1969), or Kyusyu (1960 to 1969).

[74] World Bank, "Japan- Loans 91-JA and 205-JA Chubu Electric Power Co. (Chubu) on 27th July 1969," (Washington, DC, 1969).

[75] World Bank, "Japan- Loan 91-JA and 205-JA Chubu Electric Power Co. (Chubu) Results of the First Half of Fiscal Year 1969/1970 (April 1-March 31) on 10th December 1969," (Washington, DC, 1969).

[76] Chubu Electric Power Company, "A Letter from Chubu to World Bank on 14th March 1970," (Nagoya, Japan, 1970).

[77] World Bank, "Japan-Loan 91-JA and 205-JA Chubu Electric Power Co. (Chubu) Financial Statement for Fiscal Year Ended March 31, 1970 on 13th August 1970," (Washington, DC, 1970).

[78] World Bank, "A Letter from World Bank to Hokuriku on 28th August 1970," (Washington, DC, 1970).

[79] Hokuriku Electric Power Company. "A Letter from Hokuriku to World Bank on 4th November 1970." (Toyama, Japan, 1970).

related to drought and retirement allowance. As of March of 1970, these provisions equaled roughly eight million yen. This represented about 8% of the sum amount of bonds and debentures, long-term loans, and short-term loans. In contrast, it represented about 16% of the sum amount of capital stock, surplus, and next term. Given this, the inclusion of a provision in calculations for debt or equity was critical for determining the ratio.

There had been an agreement between the World Bank and Japanese Development Bank in 1959.[80, 81] According to the Japanese Development Bank, the treatment of provisions had been evaluated in Japan, but had not been conclusively determined. However, in Japanese accounting practices, it was considered reasonable to regret provision as retained earnings since they served as an adjustment account at the settlement of accounts. In particular, the provision for drought was quite similar to "reserve for price fluctuation" of ordinary manufacturing enterprises.[82] World Bank agreed with this determination on September 22, 1959.[83]

In reality, the provision for drought was used to adjust profits. More substantial rainfall yields greater profit for electric power companies, as the operating cost of hydroelectric power stations was cheaper than that of thermal power stations; thermal power stations require more work if there is less rain. As such, electric power companies were supposed to save the provision for drought when there was more rain and they earned more profit. Similarly, they were supposed to demolish the provision for drought when there was less rain and they earned less profit. Although Hokuriku demolished all provision for drought in 1954, its flow rate in 1954 was 102.7% of the average of the previous ten years.[84] In other words, although there was plenty of water in 1954, Hokuriku demolished all provisions. For this reason, Hokuriku's actual electricity sales were lower than anticipated.[85] This demonstrated that the provision served to effectively control profits.

The conflict between the World Bank and Hokuriku was eventually resolved through the World Bank's acceptance of Hokuriku's insistence that Hokuriku did not

[80] Japan Development Bank, "Re: Basis of Calculating Financial Ratio (Indebtedness/Capital and Surplus Ratio) of Electric Power Companies," (Tokyo, Japan, 1959).
[81] World Bank, "Re: Basis of Calculating Financial Ratio (Indebtedness/Capital and Surplus Ratio) of Electric Power Companies," (Washington, DC, 1959).
[82] Japan Development Bank, "Re: Basis of Calculating Financial Ratio (Indebtedness/Capital and Surplus Ratio) of Electric Power Companies," (Tokyo, Japan, 1959).
[83] World Bank, "Re: Basis of Calculating Financial Ratio (Indebtedness/Capital and Surplus Ratio) of Electric Power Companies," (Washington, DC, 1959).
[84] Hokuriku Electric Power Company, "Yukashoken Hokokusyo," (Toyama, Japan, 1954).
[85] ibid.

violate the covenant.[86] During the conflict between Hokuriku and the World Bank, Hokuriku's debt-to-equity ratio increased. In March of 1961, Hokuriku's debt-to-equity ratio was 1.62, but by September of 1965, it had grown to 2.02.[87] At this same time, Kyushu was characterized by a debt-to-market ratio of 1.94. By March of 1965, Chubu had a debt-to market ratio 1.97. Taken together, these figures illustrate that all the Japanese electric power companies (except Kansai) narrowly averted violating the debt-to-equity ratio covenant established by the World Bank.

Following years of being subjected to this covenant, in October of 1971, the Japan Development Bank required the World Bank to rescind this element of the loan agreement for four of the borrowing companies: Chubu, Hokuriku, Kansai, and Kyushu.[88] Specifically, the Japan Development Bank argued that four of the electric power companies financed expansion programs primarily with borrowed fund, making it difficult for them to maintain a 2:1 debt-to-equity ratio.[89] The Japan Development Bank further explained that it would continue to supervise the power companies under other provisions of the loan agreements.

This covenant was abolished in October of 1971. Following the dissolution of the 2:1 debt-to-equity ratio stipulation, the World Bank entrusted the Japan Development Bank with the supervision of the Japanese power companies. Following the stipulation's abolition, the debt-to-equity ratios of the four electric power companies grew rapidly. Before the covenant was abolished, the respective ratios for Chubu, Hokuriku, Kansai, and Kyushu were 1.89, 1.98, 1.54, and 1.73 in September of 1971. By March of 1974, these ratios had respectively risen to 2.42, 2.20, 2.85, and 2.46 (see Figure 1).

[86] World Bank, "A Letter from World Bank to Hokuriku on 24th December 1970," (Washington, DC, 1970).
[87] The ratio was calculated from the non-consolidated annual report.
[88] Japan Development Bank, "Re: Loans Nos. 196 JA, 200 JA, 205 JA, and 278 JA," (Tokyo, Japan, 1971).
[89] ibid.

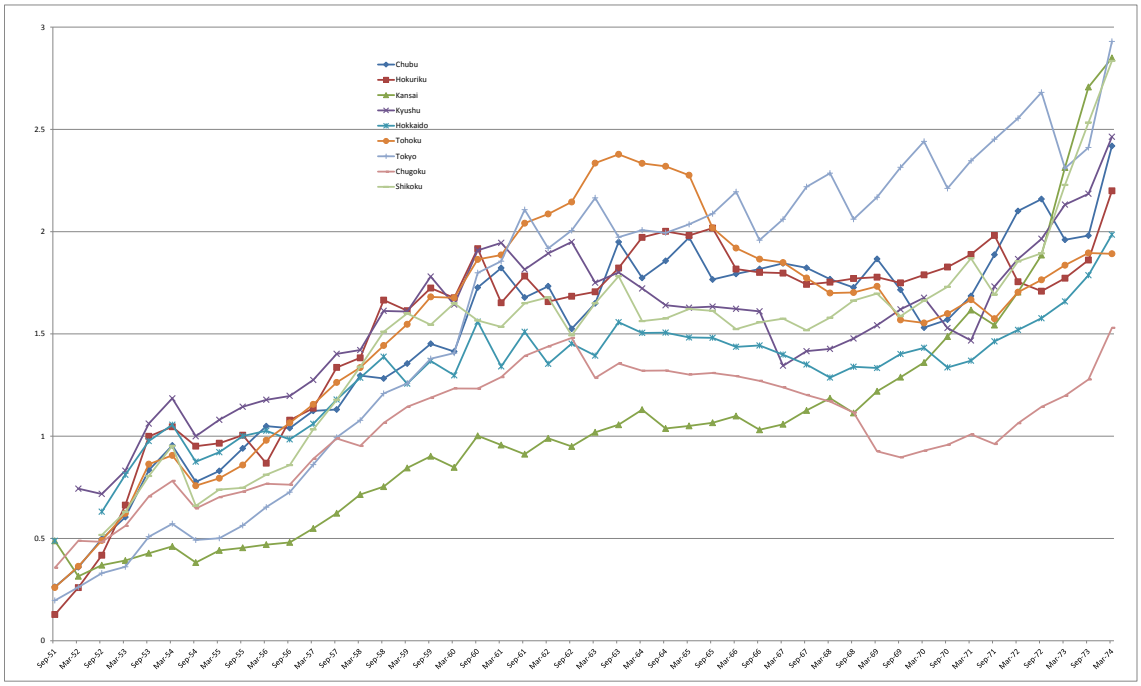

Fig 1 The debt/ equity ratio of nine companies

Sources: Nine electric power companies, Yukashoken hokokusho.

6. Policy Implications

6.1. The capital structure and capital cost

This section demonstrates the role the World Bank's Loans played in the ways in which Japanese electric power companies were managed from 1953 to 1973. Figure 1 shows the debt-to-equity ratios of nine Japanese private electric power companies between September of 1951 and March of 1974.[90] The lists from 1960 and 1970 show that the ratios associated with four companies that borrowed money from the World Bank were not always lower than those of the other five companies. However, by analyzing these data at the company-level, a key difference emerges. While the debt-to-equity ratios for the four companies that borrowed from the World remained below 2 until the financial covenant was abolished, the ratios of other companies (e.g., Tokyo, Tohoku) exceeded 2 for different periods of time prior to the covenant's dissolution. In addition, the debt-to-equity ratio grew more rapidly than that of the other companies after the financial covenant was abolished in October 1971.

Figure 2 also illustrates the average debt-to-equity ratios for all companies. These

[90] The ratio is calculated from the non-consolidated annual reports in Figure 1, and deviates from the consolidated based ratio. However, it is expected that the deviation is not substantial.

data demonstrate that the average ratio for the four companies that borrowed from the World Bank was lower than that of the other five companies from September of 1961 to September of 1968. In contrast, the average ratio for the four borrowing companies was higher than the average ratio for the other five companies after October of 1971. After October of 1971, the difference between the two groups of companies in terms of average debt-to-equity ratio continued to increase. This suggests that the covenant prevented the deterioration of four companies' capital structures.

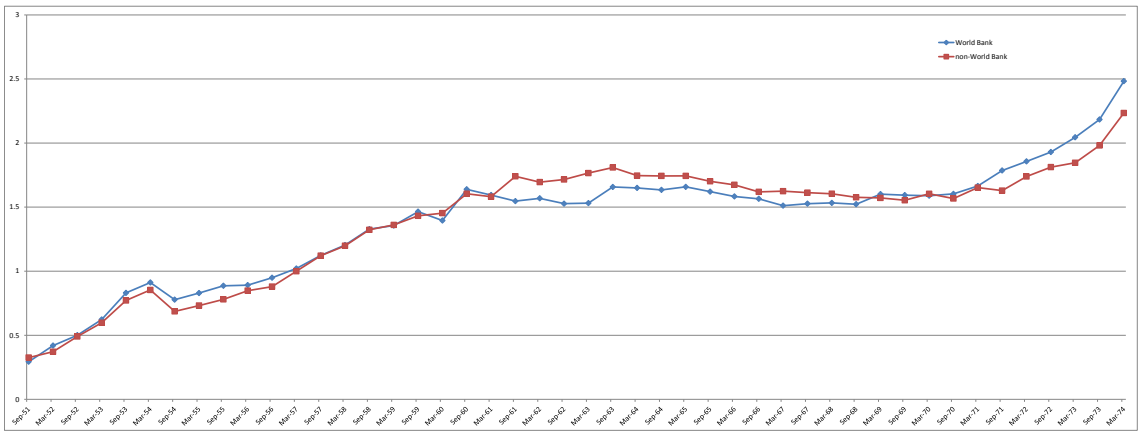

Fig 2 The ratio of the companies borrowed from World Bank

Sources: Nine electric power companies, Yukashoken hokokusho

In Hokuriku, the average debt-to-market ratio from March of 1964 to September of 1965 was 1.99. However, after March of 1966, the ratio decreased as a result of the company's issuance of common stock and its increase in capital stock from 26 billion yen to 32 billion yen.[91] A similar phenomenon occurred in Chubu for the same reasons.[92] In contrast, in September of 1961, Tokyo's debt-to-equity ratio was 2.11, but continued to exceed 2 in subsequent years.

When their respective ratios approached 2, Chubu and Hokuriku issued stock to reduce them at the behest of the World Bank. In response to World Bank concerns about its high debt-to-equity ratio, Chubu issued 16.2 billion yen worth of stock and advised World Bank in March of 1970.[93]

How, then, did the debt-to-equity covenant between the World Bank and electric power companies affect the companies' capital costs? This question can be addressed by a hypothesis. As discussed above, the World Bank's loan was lower than other financial

[91] Hokuriku Electric Power Company, "Yukashoken Hokokusyo," (Toyama, Japan, 1966).
[92] Chubu Electric Power Company, "Yukashoken Hokokusyo," (Nagoya, Japan, 1966).
[93] Chubu Electric Power Company, "A Letter from Chubu to World Bank on 14th March 1970," (Nagoya, Japan, 1970).

methods in terms of its capital cost. However, the companies that borrowed from World Bank were restricted by the financial covenant that limited the degree to which they could engage in debt financing. The capital cost of debt was lower than that of stock from 1951 to 1973. As a result, the World Bank's loans did not always reduce the companies' capital costs. This was particularly true when a company's debt-to-equity ratio grew, causing the companies to issue stocks, thereby increasing capital costs.

Table 6 illustrates the capital costs for the nine Japanese electric power companies in March of 1964, September of 1971, and March of 1974.[94] According to Table 6, in March of 1964, the capital costs incurred by Chubu, Hokuriku, and Kyushu was higher than average; Kansai's capital costs were lower than average. By September of 1971, the capital costs of Chubu and Kyushu remained higher than average and Kansai's remained lower than average. Finally, by March of 1974, the capital costs for Chubu and Hokuriku were higher than average and the capital costs for Kansai and Kyushu were lower than average. Given that the capital costs for the different companies seemed to vary over time, securing loans from the World Bank was not always the cheapest financing method available to the companies.

Generally, for those companies that borrowed money from the World Bank, the capital structure determined their capital costs. Kansai's capital costs were lower than those of the other companies in March of 1964 and September of 1971. Further, Kansai's debt-to-equity ratios at those times (i.e., 1.13 and 1.54, respectively) were the lowest among the nine electric power companies (see Figure 1). Given the company's low debt-to-equity ratio, Kansai did not need to issue stocks. In contrast, Chubu, Hokuriku, and Kyushu had debt-to-equity ratios that ranged from 1.7 to 2.0, causing their capital costs to be equal to or higher than average. Loans from the World Bank reduced the capital costs of companies who already had lower debt-to-equity ratios. In contrast, World Bank loans increased the capital costs of those companies who already had high debt-to-equity ratios.

[94] To calculate capital cost, I divided the sum amount of interest expense and dividends by the sum amount of debt, provision, and capital.

Table 6. The capital costs of nine companies

	Mar-64	Sep-71	Mar-74
Hokkaido	6.5%	6.6%	6.0%
Tohoku	6.6%	6.5%	6.8%
Tokyo	7.1%	7.3%	6.2%
Chubu	6.6%	6.8%	6.2%
Hokuriku	6.6%	6.7%	6.2%
Kansai	5.3%	5.9%	6.0%
Chugoku	5.9%	5.6%	5.3%
Shikoku	5.9%	6.7%	5.8%
Kyushu	6.5%	6.8%	6.0%
average	6.4%	6.7%	6.1%

Sources: Nine electric power companies, Yukashoken hokokusho.

6.2. A role of World Bank's Loan to Japanese electric power companies

Given the above, the question remains as to whether loans from the World Bank affected the profitability of Japanese electric power companies. Ultimately, these loans improved the companies' practices in two ways.

First, by inciting a rise in the companies' electricity rate, the World Bank increased the companies' rate of depreciation. As shown in Table 2, following a rise in the electricity rate in October of 1954, Kansai's depreciation exceeded the amount calculated by the fixed-rate method by 1955. Kyushu experienced a similar phenomenon. In 1960, Kyushu's depreciation rate was 56%; that rate increased to 86% by 1961.[95] An increase in internal reserves through depreciation was good not only for the World Bank, but also for the management of the Japanese electric power companies.

Second, the World Bank's loan stipulations encouraged the construction of thermal power stations. Because of the World Bank's insistence that the Japanese electric power companies become more efficient, thermal power stations largely replaced hydroelectric power stations during an era of rapid economic growth in Japan. Ultimately, by insisting on the construction of thermal power stations, the World Bank promoted increased efficiency in the production of Japanese electricity.

[95] The Public Utilities Bureau of the Ministry of International Trade and Industry and the Federation of Electric Power Companies of Japan, "Denki jigyo junen no tokei [10 Years of Electric Industry]," (Tokyo, Japan, 1962).

7. Conclusion

Loans provided by the World Bank affected the management of Japanese electric power companies. Many of these companies borrowed money from the World Bank to construct power plants between 1953 and 1961. As a stipulation of the loan, however, the World Bank requested that the companies increase their respective electricity rates to increase depreciation and improve their profitabilities. This increase in internal reserves caused by depreciation benefitted not only the World Bank, but also the management of Japanese electric power companies. In addition, the World Bank encouraged the Japanese electric power companies to construct thermal power stations, which are cheaper, more efficient alternatives to hydroelectric power stations.

Ultimately, the World Bank's loans to Japanese private electric power companies demonstrate that the World Bank, as a creditor, can improve companies' managerial practices. As discussed in the Introduction, creditors often supervise debtors' management to prevent the debtor from defaulting on their loans. To this end, the debtor's accounting methods are critical, particularly in the public utility industry.[96,97,98,99,100,101,102,103,104] Although the World Bank's requests for the electric companies to increase their electricity rates and construct thermal power stations were primarily motivated by its need to ensure the companies would not default on their loans, these steps had the added effect of improving the management of debtors' business operations.

[96] Cahan, 1992.
[97] Chow, 1982.
[98] Duke and Hunt, 1990.
[99] Dichey and Skinner, 2002.
[100] Jones, 1991.
[101] Key, 1997.
[102] Leftwich, 1983.
[103] Sunder, 1997.
[104] Watts and Zimmerman, 210-17, 231-33.