

# **Rescuing Victims and Rescuing TEPCO: A Legal and Political Analysis of the TEPCO Bailout**

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- I. Introduction
- II. Nuclear Damages Act
  - 1. Structure of the Nuclear Damages Act
  - 2. Status of TEPCO and the Victims
- III. Rescuing TEPCO
  - 1. Solution by the Government
  - 2. Alternative Policies
- IV. Anatomy of Policy Formation
- V. Concluding Remarks

## I. INTRODUCTION

A great earthquake hit Japan on 11 March 2011, and the accident at the Fukushima Dai-ichi Nuclear Power Plant after the earthquake has caused serious radiation contamination of a wide area in the eastern part of Japan (*Figure 1*, p. 24). The radiation contamination has had a serious negative influence on a wide range of social activities.

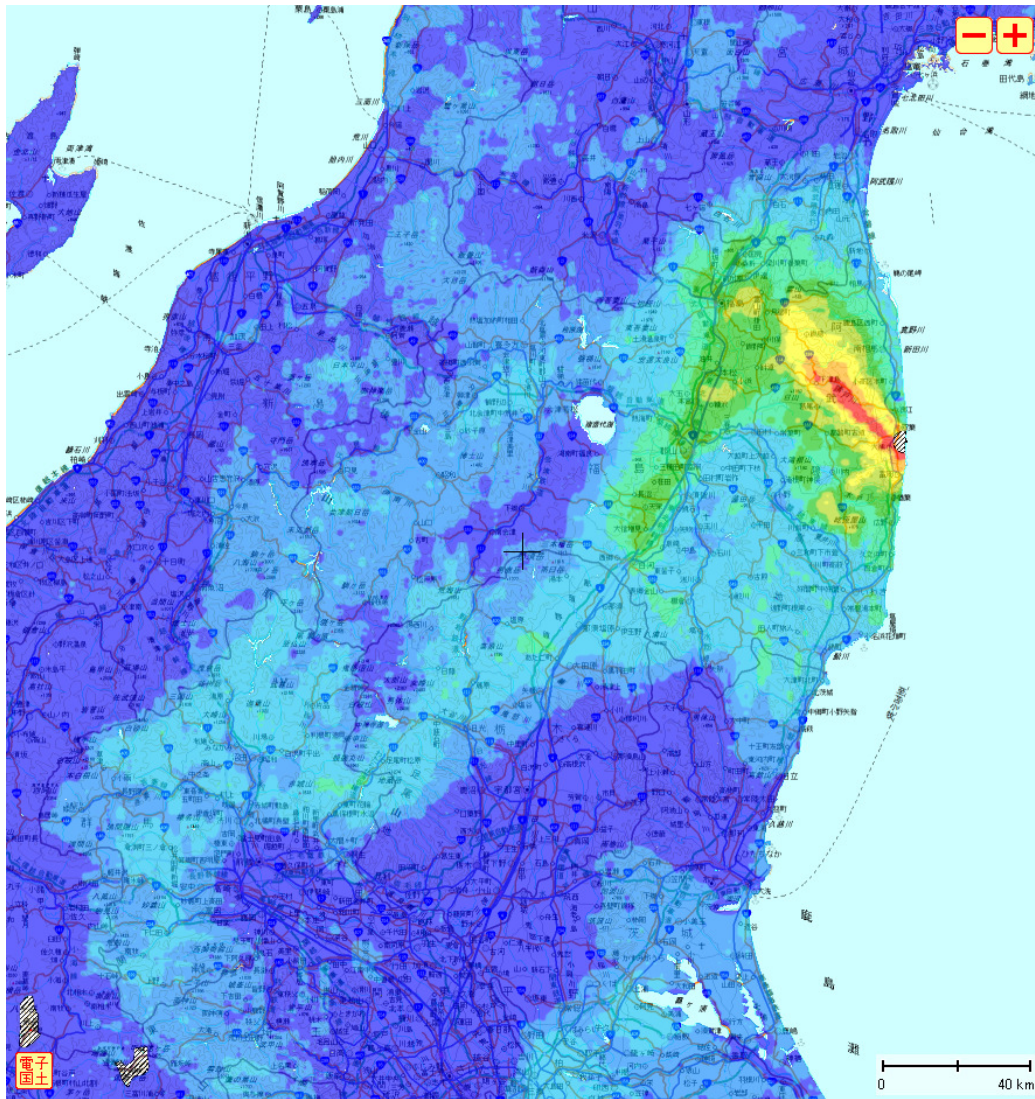
The Japanese government issued evacuation orders and many residents who lived outside of the government evacuation order areas evacuated voluntarily. Such evacuations have caused not only monetary cost, but also mental stress, injuries and even death. Many goods and foods are contaminated by radioactive materials and need to be inspected before bringing them to the market. Such an inspection cost is a big burden to many farmers and businesses. In order to decontaminate the radiation-contaminated area, it is necessary to remove soils and wash out buildings. In addition, the radiation contamination has caused huge business losses. Consumers are unwilling to buy goods, especially agricultural products, from the contaminated area. Visitors to the contaminated area have decreased dramatically after the accident. Rumours of radiation contamination have exacerbated the situation: many agricultural products which are from the contaminated area but have not been contaminated by radioactive materials are not accepted by the market and people outside Japan stay away from Japan and Japanese products.

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\* I thank seminar participants at Tohoku University and the University of Sydney for helpful comments.

Figure 1

Radiation contamination  
after the Fukushima Dai-ichi Power Plant accident



(Source: MEXT)

Tokyo Electric Power Co., Inc. (TEPCO) is the operator of the Fukushima Dai-ichi and is supposedly liable for the damages caused by the radiation contamination as a tortfeasor. Since internalization of externality from harmful behaviour and compensation

for victims are the main purpose of tort law, TEPCO, the tortfeasor, ought to assume the whole of the damages which have been caused by the Fukushima Dai-ichi accident.

However, the amount of damages owed by TEPCO is expected to be over trillions of yen, and it is almost certain that TEPCO itself cannot afford the full amount. This would mean that the compensation for the victims cannot be achieved only by tort law and some other arrangements are necessary to achieve full compensation.<sup>1</sup> Other stakeholders, such as TEPCO clients, financial institutions and tax payers (via the national government), need to provide the necessary funds for compensation.

In order to realize appropriate compensation for the victims, the Japanese government has chosen to bail out TEPCO by providing government money. However, it seems that the government should not bail out TEPCO since there is a more desirable policy which realizes the necessary compensation for the victims. This raises another question: Why are the socially optimal policy and the actual one different? This paper analyses the source of such deviation from a political perspective. The answer to the question is that many constituencies around TEPCO have influenced policy formation, resulting in a socially undesirable outcome. The paper describes how and why.

The structure of the paper is as follows. In section 2, a brief overview of the Nuclear Damages Act is introduced. The Nuclear Damages Act [*Genshiryoku songai no baishô ni kansuru hôritsu*] is a special act which sets out a compensation scheme for victims from accidents of nuclear power plants. There is a debate as to whether TEPCO is liable under the act. If TEPCO is liable, then whether TEPCO can reimburse the full damages to the victims is discussed.

Section 3 argues several alternatives to rescue the victims and TEPCO. The simplest policy is to bankrupt TEPCO and set up special arrangements to provide compensation for the victims. In contrast, the Japanese government has decided to bail out TEPCO. This paper argues that the former is a more desirable policy and analyses who has benefited from the latter policy. In addition, the most efficient but infeasible alternative will be discussed.

Then in section 4, why the most desirable policy was not actually chosen is analysed. Financial institutions, TEPCO employees and the Democratic Party of Japan (DPJ) played an important role. However, the political situation is still uncertain and the final outcome may change. Finally, section 5 provides some concluding remarks.

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1 It is impossible to achieve full internalization of externality from the accident, since TEPCO is a stock corporation and enjoys limited liability. Therefore, TEPCO's effort level is inevitably socially suboptimal. In order to elicit socially efficient behavior of TEPCO, special governmental regulation, such as safety standards, is necessary. The situation where limited liability of a stock corporation induces inefficient behavior and direct regulation is needed is similar with that of banking regulation; see M. DEWATRIPONT / J. TIROLE, *The Prudential Regulation of Banks* (MIT Press, 1994). For other environmental regulation, see S. SHAVELL, *Foundations of Economic Analysis of Law* (Harvard University Press, 2004) pp. 230-232.

## II. NUCLEAR DAMAGES ACT

The Nuclear Damages Act was enacted in 1961.<sup>2</sup> It is a special law which overrides general tort law and is applicable to the Fukushima Dai-ichi Power Plant case. In order to understand the starting point of negotiation among the stakeholders, this section first provides a brief overview of the Nuclear Damages Act and then moves on to what will happen when the act is applied to this case.

### 1. *Structure of the Nuclear Damages Act*

#### *Structure*

Under the Nuclear Damages Act, the operator (Art. 2 (3)) of a nuclear power plant assumes unlimited no-fault liability (Art. 3 (1)). Only the operator owes the liability, and other parties, such as manufacturers of the nuclear reactors, are not liable (Art. 4 (1)). However, in the case of extraordinary natural catastrophe or social upheaval, the operator is exempted from no-fault liability (Art. 3 (1)). The operator is required to buy a liability insurance, to enter an indemnification contract, or to make a deposit (Arts. 6 and 7). If the amount of damages exceeds the amount of the insurance, indemnification or deposit, the government can make some arrangements to rescue the victims (Art. 16 (1)). When the operator is exempted by Art. 3 (1), then the government shall rescue the victims (Art. 17). The Ministry of Education, Culture, Sports, Science, and Technology (MEXT) is required to set up an arbitration board for arranging settlements between the operator and the victims (Art. 18).

First, let us consider whether TEPCO assumes unlimited no-fault liability under the act. Since the definition of ‘nucleus damages’ under the act (Art. 2 (2)), which says that nucleus damages mean damages which have been caused by radioactivity or toxic activity from nuclear materials, is quite broad and there is no definition of ‘nuclear accident’ in the act, any accidents caused by the operation of a nuclear power plant are covered under the act. Then the only constraint on the range of damages is the proximate causation (foreseeability) principle of general tort law.

#### *Exemption*

Another possible rationale which limits the liability of TEPCO is the exemption under Art. 3 (1) of the act. The requirement of Art. 3 (1) is an ‘extraordinary natural catastrophe’ and, according to the generally accepted interpretation of the act, this language does not literally mean extraordinary in scale but simply an unforeseeable natural catastrophe. Then there is a debate whether the exemption can apply to TEPCO in regards to the Fukushima Dai-ichi accident.

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2 Law no. 147 of 17 June 1961.

Those who insist that the exemption applies to TEPCO argue that the tsunami following the 11 March earthquake was huge and it was unable to foresee such a tsunami in advance. In contrast, those who insist that TEPCO is not qualified for the exemption argue that a tsunami of the same scale hit the Tohoku region 1200 years ago and such a large tsunami is expected to occur every 1000 to 1100 years. TEPCO itself did recognize the possibility of that scale of tsunami just a few days before 11 March, but it did not take any immediate countermeasures. In addition, although the scale of the earthquake was not so large, the reactors of Fukushima Dai-ichi Power Plant were the oldest ones in Japan,<sup>3</sup> and there is a possibility that the reactors were not able to survive the earthquake itself, let alone the following tsunami.<sup>4</sup> Considering that the Onagawa Nuclear Power Plant,<sup>5</sup> which is much nearer to the 11 March earthquake epicentre and was affected more seriously by the earthquake and tsunami than the Fukushima Dai-ichi Power Plant, survived the 11 March earthquake and tsunami, the older reactors of Fukushima Dai-ichi Power Plant and the negligence of TEPCO seem to have caused the accident. In addition, many people argue that the bad management of TEPCO after the earthquake and tsunami<sup>6</sup> exacerbated the accident, resulting in a level seven meltdown.

Considering these factors, the government and many legal scholars argue that TEPCO is not qualified for the exemption of Art. 3 (1). On the other hand, TEPCO tried to invoke the exemption at the outset. However, TEPCO seems to have waived the exemption by not arguing the exemption in lawsuits against the victims of the Fukushima accident.<sup>7</sup>

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- 3 Six reactors of Fukushima Dai-ichi Power Plant were built in 1971, 1974, 1976, 1978, 1978 and 1979 respectively. The older three reactors were damaged heavily and experienced a meltdown. The fourth reactor was not in operation when the earthquake occurred, but was heavily damaged too since the storage pool for used nuclear fuels went out of control. The newer two reactors are almost intact, though slightly damaged.
  - 4 The Japanese government seems to have adopted relaxed regulations for the duration of nuclear reactors. In the US, in principle, the duration of a reactor is 40 years. There is no such fixed duration in Japan and a reactor can continue working as long as it passes a test by the government. Since the cost of building a nuclear power plant is sunk cost after it has begun operation, the longer duration of a reactor means a higher profit to the operator. Then it might be argued that the relaxed regulation for the duration of a reactor implies the acceptance of risk with regard to old reactors by the government and the whole nation.
  - 5 The Onagawa Power Plant is operated by Tohoku Electric Power Corporation, not by TEPCO.
  - 6 Many people believe that at least the decision to ventilate the reactors and to inject seawater into the reactors was too late.
  - 7 The reason why TEPCO has waived the exemption is not clear. One possibility is that by waiving the exemption, TEPCO expects government financial aid under Art. 16 of the Nuclear Damages Act.

*Amount of Damages*

Thus we can safely presume that TEPCO is liable for the damages caused by the Fukushima accident under Art. 3 (1) of the act. All the damages which are within proximate cause from the Fukushima accident concentrate on TEPCO. The scope of damages includes:

- evacuation cost (both governmental evacuation order and voluntary evacuation)
- decontamination cost
- inspection cost
- loss of business opportunities
- loss caused by rumours<sup>8</sup>

TEPCO assumes all of these damages<sup>9</sup> and needs to pay compensation to the victims. The whole amount of damages is expected to be more than (tens of?) trillions of yen. In addition, the cost to shut down Fukushima Dai-ichi Power Plant is also huge: around one trillion yen. As we see below, TEPCO by itself cannot afford such huge amounts of money, triggering Art. 16 of the Nuclear Damages Act. The government needs to arrange financial aid for TEPCO.<sup>10</sup>

## 2. *Status of TEPCO and the Victims*

### *TEPCO's Financial Status*

TEPCO released its financial statements to its shareholders for the fiscal year 2011 on 10 June 2011.<sup>11</sup> The shareholder meeting reference material contains a consolidated balance sheet (B/S) of TEPCO as of 31 March 2011 (Figure 2, p. 29). The B/S does not include the tort claims of the victims of the Fukushima accident, but only includes the cost to shut down Fukushima Dai-ichi Power Plant. In addition, the auditor added a caveat to the financial statement that the premise of a going concern is not warranted,<sup>12</sup> although the B/S itself is prepared based on the premise of a going concern.

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8 It is reasonable to consider that the loss caused by rumours is not within proximate cause of the Fukushima accident, but that such loss is caused by the media, which sells pessimistic news to clients, and the government. Then it can be argued that the media and the government assume some (or most) of the liability.

9 Here we suppose that the damages are within proximate cause from the Fukushima accident.

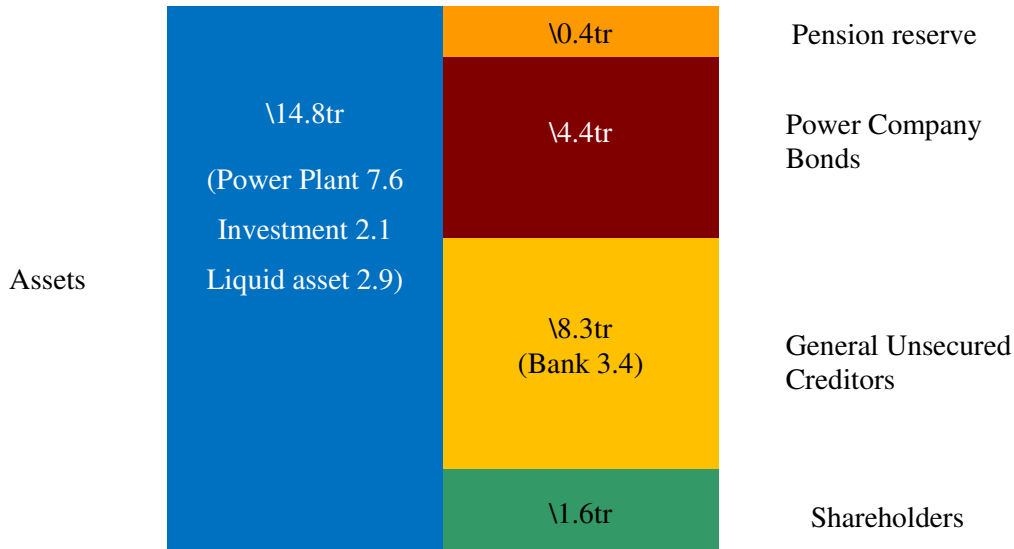
10 Exactly speaking, Art. 16 of the act gives the government only the authority to arrange financial aid in order to help the victims. The government owes no responsibility to set up financial aid. However, since most of the public sympathize with the victims, it is politically impossible for the government to ignore such public emotion.

11 [http://www.tepco.co.jp/ir/soukai/pdf/110610\\_2-j.pdf](http://www.tepco.co.jp/ir/soukai/pdf/110610_2-j.pdf)

12 The auditor stated that this is because it is impossible to estimate reasonably the amount of the tort claims and it was uncertain whether the Japanese government would provide financial aid to TEPCO at the time.

Figure 2

TEPCO's B/S



(as of March 31 2011, book value)  
Tort liability is *not* included yet

Although the B/S is imperfect, it tells us the situation of TEPCO and the victims. First, on the debit side, the total assets of TEPCO amount to 14.8 trillion yen, including power plants (nuclear as well as water and fire) and electric transmission facilities of 7.6 trillion yen, investments of 2.1 trillion yen, and liquid assets of 2.9 trillion yen. Please note that the evaluation of these assets is on an acquisition cost basis principle and that their market value must be higher than the indicated numbers. On the credit side, the balance of 14.8 trillion yen consists of pension reserves of 0.4 trillion yen, power company bonds of 4.4 trillion yen, general unsecured claims of 8.3 trillion yen, and shareholder equity of 1.6 trillion yen. The 8.3 trillion yen of general unsecured claims includes 3.4 trillion yen of bank loans.

Since the amount of damages is estimated to exceed ten trillion yen, TEPCO must be insolvent even if the assets were revalued at the market price. TEPCO is in asset deficiency and we need to consider the priority rank of the credit side.

*Priority Rank of Claims*

Under the Japanese bankruptcy law, the priority rank among claim holders is set as follows: a secured creditor is the most preferred claim holder (Bankruptcy Code, Corporate Reorganization Act, Civil Rehabilitation Act), and then comes salary and pension claims of employees (Civil Code Art. 306 (2) and 308), followed by the power company bond. Next comes general creditor, then subordinated creditor, and finally shareholder is the lowest rank. An interesting feature of the ranking system is the position of power company bonds. Normally a corporate bond has the same priority as a general creditor, but the Electricity Enterprise Act [*Denki Jigyô Hô*] set power company bonds at a higher level than general creditor (Art. 37). The reason why the Electricity Enterprise Act puts priority on power company bonds is that the power companies are important social infrastructure, and a stable supply of operating funds is necessary for the stable operation of power companies. Placing priority on power company bonds enables the smooth financing of operating funds because the priority improves the credit rating of power company bonds. The holders of power company bonds are mainly financial institutions (banks) and institutional investors,<sup>13</sup> but there are some individual investors, too.

In contrast, the victims of the Fukushima Dai-ichi accident are tort creditors, who are part of the general creditors. The victims do not occupy a priority position. Among the claims that appear in TEPCO's B/S, the priority rank is as follows (from higher to lower):<sup>14</sup>

1. pension reserves for the TEPCO employee: 0.4 trillion yen
2. power company bonds: 4.4 trillion yen
3. general unsecured creditor (including the victims): 8.3 trillion yen + ?
4. shareholders

*Effect of Governmental Aid*

Considering the priority rank of claim holders of TEPCO, the payoff of the claim holders when TEPCO goes into bankruptcy can be calculated. Since TEPCO is already insolvent and asset deficient, the shareholders will get no distribution. The general creditors, including the victims as tort creditors, will not be able to get full repayment and will suffer losses. If the selling price of the assets of TEPCO is not high enough since the buyers worry about incurring future losses,<sup>15</sup> then the power company bond holders may also suffer losses. The employees will probably receive full repayment, but their

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13 Normally the word 'institutional investors' means investment fund; however, in the Japanese context, 'institutional investors' are mainly life insurance companies.

14 Here we suppose that there is no secured creditor. Even if there were secured creditors, the amount of their claims would be negligible.

15 In addition, there will be procedural costs and its damaged reputation.



wage levels will decline after bankruptcy.<sup>16</sup> After having gone through the bankruptcy procedure, the new TEPCO will be basically free from owing compensation to the victims and will continue its business as normal.

In contrast, when the government makes a sufficient financial aid payment directly to TEPCO based on Art. 16 of the Nuclear Damages Act, the picture changes dramatically. Then the new money is distributed according to the priority rank system discussed above. The aid first goes to the power company bond holders, then to the general unsecured creditors, which consist of the victims as well as financial institutions,<sup>17</sup> and finally to the shareholders. Therefore, such direct governmental financial aid to TEPCO will require much more money than directly providing aid to the victims, since the aid will rescue not only the victims but also other claimants.

### III. RESCUING TEPCO

Responding to TEPCO's status as discussed above, the government enacted a new act called the Institution Supporting Compensation for Nuclear Damages Act [*Genshiryoku songai baishô shienkikô-hô*],<sup>18</sup> based on Art. 16 of the Nuclear Damages Act. We will examine the solution taken by the government and compare it with alternative policies.

#### 1. *Solution by the Government*

The Institution Supporting Compensation for Nuclear Damages Act was adopted by the Cabinet on 14 June and passed the Diet on 3 August. The basic characteristic of the act is shown in *Figure 3* (p. 32):

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16 The power industry is notorious for the high wage level of its employees. The industry's regional monopoly system has made high wages possible and those high wages have attracted many competent workers into the power industry.

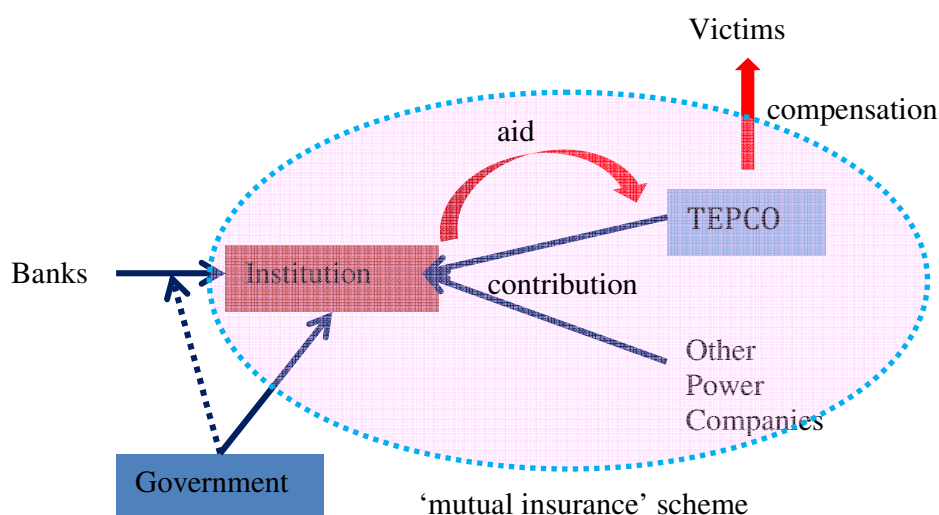
After the Fukushima Dai-ichi accident, the wage level of TEPCO employees is expected to be cut off in order to create a source of compensation for the victims. Although a decrease in the wage level is almost inevitable since public emotion towards TEPCO is quite bad, it may also cause problems for TEPCO's business, which in turn will cause a delay in compensation.

17 Three mega banks in Japan (Mitsubishi Tokyo UFJ Bank, Mizuho Bank and Sumitomo Mitsui Bank) and the Development Bank of Japan are the main lenders of TEPCO.

18 Law No. 94 of August 10, 2011.

Figure 3

## Institution Supporting Compensation for Nuclear Damages Act



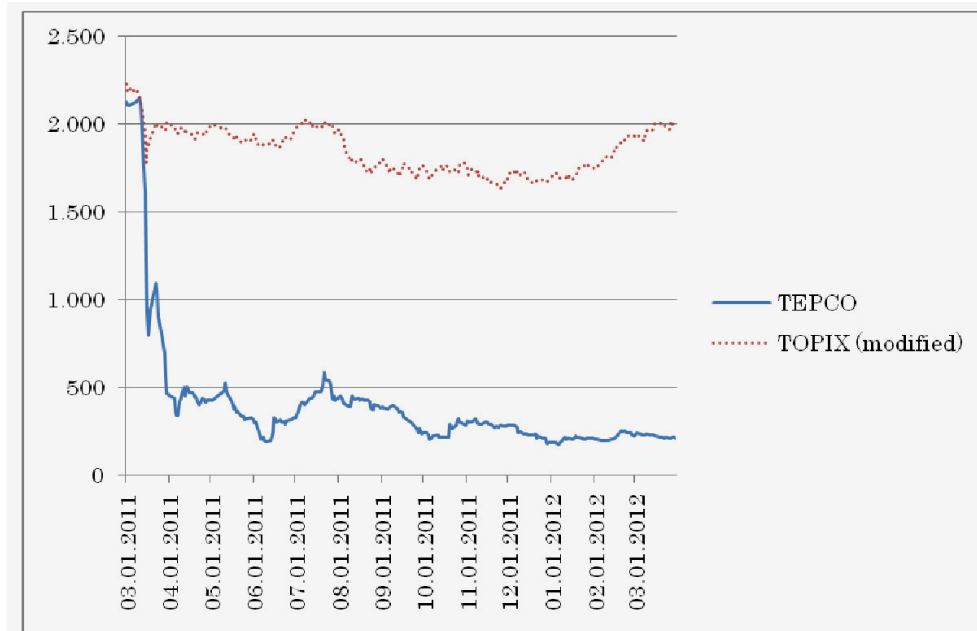
According to the act, a new institution called the 'Institution Supporting Compensation for Nuclear Damages' was incorporated in order to finance the source money for the compensation to TEPCO. The government provides necessary financial support to the institution by issuing treasury bonds (Art. 48). Power companies – not only TEPCO but also all other companies which operate nuclear power plants – are required to pay a 'mutual insurance' premium to the institution every year (Art. 38). The amount of the insurance premium is left to the discretion of the institution's steering committee (Art. 39).<sup>19</sup> When a power company receives financial support from the institution, the company is required to pay an additional premium (Art. 52).

The effect of this solution was dramatic. Since TEPCO will be bailed out by financial support from the institution, the shareholders, the general unsecured creditors (mainly financial institutions) and the power company bond holders as well as the victims have benefited from the solution. An observation of the change in the stock price of TEPCO shows the effect of the solution (*Figure 4*, p. 33).

<sup>19</sup> Factors which the steering committee needs to take into account when determining the amount of the insurance premium are the size and risk of the nuclear power plant business, the financial status of the power companies and the demand of the institution.

Figure 4

## TEPCO's stock price



Before 11 March 2011, the stock price of TEPCO was quite stable around 2,000 yen. After 11 March and the Fukushima Dai-ichi accident, the stock price fell dramatically and kept falling since the amount of liability of TEPCO was uncertain and whether the government would bail out TEPCO was also uncertain. However, after the Institution Supporting Compensation for Nuclear Damages Act was adopted by the Cabinet on 14 June, the stock price began to rise.<sup>20</sup>

At the same time, the act adopted a weird ‘mutual insurance’ scheme. In standard mutual insurance settings, an insurance purchaser enters an insurance contract and pays an insurance premium before any accident occurs. By doing so, an individual insurance purchaser can shift the risk of accidents to a group of insurance purchasers that is less risk-averse. In contrast, under the Institution Supporting Compensation for Nuclear Damages Act, the insurance purchasers – that is, the power companies that own nuclear power plants – are required to pay an insurance premium after an accident has already occurred. Consequently, this is not mutual insurance, but a loss-sharing scheme. Although TEPCO is liable for the Fukushima Dai-ichi accident, other power companies

<sup>20</sup> The actual turning point of the stock price is 9 June, since the draft of the Institution Supporting Compensation for Nuclear Damages Act was discussed in the Cabinet and the relevant ministries before 14 June, and the likelihood of its adoption already turned into reality around 9 June.

are not liable for the accident, and there is no reason why other power companies ought to support TEPCO.<sup>21</sup> This strange loss-sharing scheme has had a negative impact on other power companies, and the stock price of other companies fell after the adoption of the Institution Supporting Compensation for Nuclear Damages Act.

## 2. *Alternative Policies*

However, the solution taken by the government requires much more money than directly providing compensation to the victims. We explore such alternative policies here.

### *Bankruptcy*

The first alternative is to bankrupt TEPCO.<sup>22</sup> If TEPCO goes into bankruptcy, not only the shareholders but also the general unsecured creditors and the power company bond holders will suffer loss. However, it is more socially desirable for the shareholders, the general creditors and the bond holders to assume the risk resulting from the operation of nuclear power plants because it is relatively easy for them to monitor the activity of the operator, while it is difficult (or almost impossible) for the victims to monitor the operation of nuclear power plants effectively.<sup>23</sup> And since they have not monitored TEPCO sufficiently so far, they ought to assume some loss resulting from the realization of the risk.

In order to achieve a scheme where government financial aid goes only to the victims and not to the shareholders, the general creditors and the power company bond holders, the financial aid should not be thrown into TEPCO itself. Instead, the financial aid must be given to a separate independent entity, such as a trust or a special purpose vehicle (SPV). By setting up a trust or an SPV and putting government money into the entity, and letting them guarantee the compensation liability of TEPCO towards the victims, only the victims benefit from government financial aid and not the other claimants.

However, there are some counterarguments against the policy of bankrupting TEPCO. The first counterargument insists that bankrupting (or reorganizing) TEPCO will lead to

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21 One possible rationale for other power companies to support TEPCO is that it was a national agreement for every power company to continue using old nuclear reactors, and thus the 'unfortunate event' which occurred to TEPCO should be borne by all power companies.

22 The detail of this alternative is discussed in W. TANAKA, *Tôden shori ni kansuru ichikôsetsu: hôteki seiri to kenri no yûsen kankei no mondai o chûshin ni* [How to Reorganize TEPCO?: On Priority of Claims], in: *Fukkô to kibô no keizai-gaku: higashi nihon dai-shinsai ga toikakeru mono* [Economics of Restoration and Hope: After the Great Earthquake in East Japan] (Nihon Hyôron Sha, Tokyo 2011) 158-163.

23 To be accurate, among the victims, those who live in the neighbourhood of a nuclear power plant may be able to monitor its operation. Local governments near the nuclear power plant can exercise pressure on the operator power company. However, those who have been damaged by the nuclear power plant accident and who live far from the nuclear power plant cannot monitor its operation.

a discontinuation of TEPCO's business, which causes tremendous harm and inconvenience to the clients of TEPCO. This argument is simply wrong and we can easily find many examples. For example, JAL (Japan Airlines) and UAL (United Airlines) went through bankruptcy (corporate reorganization), but their airplanes kept flying nevertheless. Even if TEPCO goes into bankruptcy, it can continue in the power business for as long as its trade creditors are paid in full and its employees are paid enough.

The second counterargument is that the bankruptcy procedure will cut off the wages of TEPCO employees, which will hurt the employees' motivation to rehabilitate TEPCO. Even worse, some competent employees may leave TEPCO. However, this problem is not unique to the policy of bankrupting TEPCO but applies to the solution taken by the government, too. There are only two ways to create a source of compensation for the victims: a national tax or an electricity charge levied from TEPCO clients. Since TEPCO clients had enjoyed the externality of the old reactors in the form of a low electricity charge until 11 March 2011, they should assume some part of the risk which resulted from the operation of the old reactors. In other words, TEPCO clients have enjoyed moral hazard. At the same time, relying too much on an electricity charge would constrain TEPCO's business too rigidly and impair the employees' incentive. Therefore, although some discipline regarding moral hazard on the part of TEPCO clients is necessary, the main source of compensation for the victims should be a national tax. Then bankruptcy (and following reorganization) is an appropriate opportunity to restructure TEPCO. TEPCO would be able to enjoy a 'fresh start'.

The analysis so far on the better alternative can be summarized as follows. First, TEPCO goes into bankruptcy. Then a rescue fund is incorporated, which makes contracts with the victims to guarantee TEPCO's liability. Since making contracts with millions of victims would incur a high transaction cost, it would be helpful to enact a new law which saves the contracting cost. Finally, TEPCO is split into a bad company and a good company, and the good company succeeds the former TEPCO's power business.

#### *Ideal, but Infeasible Alternative*

There is another alternative. Under present Japanese law, power company bond holders and employees are protected before tort creditors, and general unsecured creditors are in the same priority rank as tort creditors. However, tort creditors are not in a good position to monitor corporate activity<sup>24</sup> as compared to other claim holders. Power company bond holders, who are mainly institutional investors and financial institutions, and general unsecured creditors, who are mainly financial institutions, are in a better position to

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24 H. HANSMANN / R. KRAAKMAN, *Toward Unlimited Shareholder Liability for Corporate Torts*, in: *Yale Law Journal* 100 (1991) 1879-1934, argue that since tort creditors are involuntary creditors and cannot monitor corporate activity effectively, shareholders' limited liability should be void against tort creditors. A similar argument applies to the relationship between tort creditors and other creditors.

monitor the operation of a power company. Then a new legislation that places tort creditors as top priority might be a desirable alternative.

Regardless of the attractiveness of this alternative, it is infeasible. Since the Fukushima Dai-ichi Power Plant accident has already occurred, applying the new legislation to this case leads to retrospective application and is unconstitutional. Therefore, this alternative is not applicable to the present case. However, it is worth considering enacting new legislation in order to prepare for future accidents.

#### IV. ANATOMY OF POLICY FORMATION

As discussed in the previous section, the government's policy to bail out TEPCO is not the most socially desirable one. A question as to why the government has not chosen the optimal policy then arises. This section tries to answer this question.

In order to analyse the government's action, it is reasonable to focus on those who have benefited from government policy. The shareholders, the bond holders, general creditors and employees have benefited from the bailout, and the role of each interest group is discussed in turn. Finally, against the background of these interest groups, politicians and bureaucrats also play an important role in policy formation.

##### *Shareholders*

The first question is why the government has decided to rescue TEPCO shareholders. Although TEPCO has large shareholders such as financial institutions – including the three mega banks (Mitsubishi Tokyo UFJ, Mizuho, and Sumitomo Mitsui) and the Tokyo metropolitan government – there are many individual shareholders. Since the TEPCO share price had been relatively stable (see *Figure 5*, p. 37) and TEPCO shares had provided relatively stable dividends before 11 March 2011, many individual shareholders had considered their TEPCO shares as a kind of pension payment after retirement. Therefore, bankrupting TEPCO and depriving many individual shareholders of this payment might not be a politically wise choice, since older TEPCO shareholders have a high turnout ratio at national elections and are believed to hold strong political power.

However, rescuing individual shareholders is not itself sufficient motivation to bail out TEPCO. It is true that the present government party, DPJ, does not want to go against public opinion in order to realize high public support, and policies rescuing 'vulnerable' individuals tend to be supported by the media.<sup>25</sup> However, the number of

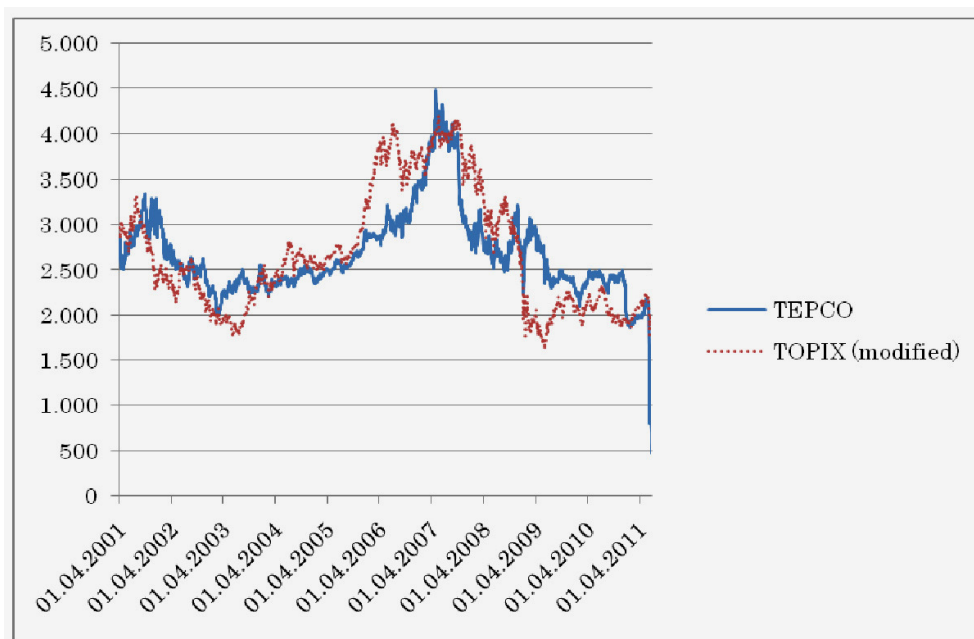
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25 Similarly, the DPJ government is strongly against raising electricity charges, although there are only two sources for compensation of the victims: a national tax and an electricity charge. Since an electricity charge is more salient and sensitive to popular emotion than a national tax, it is rational to employ a national tax as the primary source for the compensation; see A. FINKELSTEIN, E-ztax: Tax Salience and Tax Rates, in: *The Quarterly Journal of Economics* 124 (2009) 969-1010.

such individual shareholders is not big, and their distribution is skewed to the wealthier population who are not in serious need of a redistribution policy. In addition, rescuing individual shareholders will lead at the same time to rescuing large shareholders, including mega banks, which tend to be regarded as villains. Consequently, the political effect of rescuing shareholders is expected to be mixed. In fact, from around the end of 2011, the government seems to have changed policies and begun to discuss the temporary nationalization of TEPCO, which will kick out old shareholders.

Figure 5

TEPCO's stock price before 11 March 2011



Minister Renho said on 5 April 2011 that TEPCO should not raise electricity charges (<http://sankei.jp.msn.com/politics/news/110405/plc11040510350005-n1.htm>).

In December 2011, TEPCO began to seek raising the electricity charge. Electricity charges for businesses are at the discretion of the power company, while changing electricity charges for households requires approval from the authorities. TEPCO has already decided to raise electricity charges for businesses, but the government is blocking a raise of electricity charge for households.

However, high electricity charges for businesses would drive businesses away from the TEPCO business area. Since the mobility of businesses is higher than that of households, an effective tariff would be just the opposite: setting electricity charges high for households and low for businesses. However, the DPJ government, which cares about public support, would not choose this policy.

*Financial Institutions*

Next we need to look at other constituencies, especially the general unsecured creditors and the power company bond holders. As mentioned in section 2, the general unsecured creditors and the power company bond holders consist mainly of financial institutions and institutional investors. Considering the fact that they are usually considered villains in the mass media, it is puzzling why the government has decided to support them. Financial institutions and institutional investors have lobbied the DPJ government to bail out TEPCO, but why did the government listen to them?

This is because financial institutions and institutional investors held the power company bond market hostage. Since other power companies, as well as TEPCO, are utilizing power company bonds in order to finance their operating capital and many investors thought their power company bonds would never default, bankrupting TEPCO would destroy investors' prior belief and cause a market crash – not only in the TEPCO bond market but also in bond markets of other power companies – by decreasing the credit ratings of power company bonds in general. Decreasing the credit rating of power company bonds would make it difficult for other power companies to finance their operating capital smoothly.

However, this argument, insisted on by financial institutions and institutional investors, is probably wrong. First, although power company bond holders have the ability to monitor corporate activity, they have no incentive to do so if the government will always bail out power companies. This is a typical soft budget problem,<sup>26</sup> and both the power company's behaviour and the bond holders' monitoring activity would be at a socially inefficient level. Therefore, the shrinking of the power company bond market is not a bad thing but is instead welcomed. Second, TEPCO and other power companies may be different. As already discussed in section 1, the Fukushima Dai-ichi Power Plant has the oldest reactors and is especially vulnerable to earthquakes, while other power plants are not. In addition, TEPCO's management turned out to be extremely bad, while those of the other power companies may be better. If we can say TEPCO and Fukushima Dai-ichi Power Plant are different, then what happens to TEPCO's bond market is not expected to influence other power companies' bond market.

In any case, the lobbying seems to have been successful, and TEPCO's bailout has already been decided. Once the bailout policy is fixed, financial institutions acquire a strong bargaining position. In order to keep TEPCO's business running, TEPCO needs fresh operating capital. The provider of the operating capital is financial institutions that can use such a status to strengthen their bargaining power. For example, the government is now asking financial institutions to write off their loans to TEPCO. The financial

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26 As to the explanation of the soft budget problem, see J. KORNAI / E. MASKIN / G. ROLAND, Understanding the Soft Budget Constraint, in: *Journal of Economic Literature* 41 (2003) 1095-1136.



institutions are resisting this request by threatening to stop providing operating capital to TEPCO in the future.

### *Employees and Management*

In addition to financial institutions and institutional investors, TEPCO itself has lobbied for bailout. If TEPCO went bankrupt, then TEPCO's management and employees<sup>27</sup> would lose control of the company. Fearing this possibility, TEPCO's management and employees want to retain control of the company. Since one of the constituencies of the present government party (DPJ) is the Japan Trade Union Confederation (an association of a labour union), TEPCO employees can influence the policy of the DPJ.<sup>28</sup>

### *Current Status*

However, since TEPCO is now regarded as a bad guy in the mass media, the DPJ government now seems to fight against them at least partly in a search for public support. Since the bailout plan of TEPCO has become a politically salient issue,<sup>29</sup> it is difficult for the government to ignore public anger against TEPCO and to follow the argument of the financial institutions and TEPCO.

Minister Edano (Ministry of Economy, Trade and Industry (METI)) recently announced that the government is considering the temporary nationalization of TEPCO, which would kick out the shareholders, and asking for a write-off of loans to TEPCO, which would hurt the financial institutions. Although TEPCO and the financial institutions are opposed to this request, the media is supporting the move. You can see the effect of the move through the change in the stock price of TEPCO (*supra*, fig. 4). The stock price hit its lower limits again in January of 2012.

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27 Since the market for executives is not well established in Japan, and most executives are promoted from normal employees under traditional long-term employment practice, the preferences of executives and employees tend to be similar in traditional companies in Japan.

28 An additional (ironic) motivation for the government to bail out TEPCO is that the government can use TEPCO as a scapegoat for its policy failure.

29 P.D. CULPEPPER, *Quiet Politics and Business Power: Corporate Control in Europe and Japan* (Cambridge University Press 2011), argues that the governing parties and their opponents have powerful electoral incentives to respond to the dictates of public opinion when they know that political issues are debated in the mass media, but that when the public pays little attention to political issues, highly organized interest groups dominate the policy process by expert lobbying, agenda-setting capacity in informal policy working groups and influence over the tone of media coverage. In TEPCO's case, the issue of how to treat TEPCO has become the focus of the media's coverage since TEPCO caused the Fukushima Dai-ichi Power Plant accident and is also considering raising electricity charges for households. See also K. KOLLMAN, *Outside Lobbying: Public Opinion and Interest Group Strategies* (Princeton U.P. 1998).

However, the Ministry of Finance (MOF) is against the nationalization of TEPCO, arguing that nationalization of TEPCO would bring potential responsibilities, such as a shutdown of the damaged reactors, additional compensation to the victims and so on. Although this concern seems to be valid in the short run, the soft budget problem will be serious in the long run. Bailing out TEPCO would cause inefficiency, not only of TEPCO but also of other power companies and their monitors. And such inefficient behaviour could lead to more accidents in the future, resulting in more financial burden to the state. It seems that MOF bureaucrats are biased towards the short term. Since MOF bureaucrats do not have a sufficient incentive to consider the long-term perspective,<sup>30</sup> this reaction may be rational for them.

## V. CONCLUDING REMARKS

We have seen that the DPJ government has not chosen the most desirable policy, although it is rather obvious. TEPCO ought to go into bankruptcy. Its shareholders, creditors and bond holders should suffer losses since they did not fulfil their monitoring function, and the victims of the Fukushima Dai-ichi accident should be rescued by setting up a rescue fund and providing government financial aid to the fund. This policy will minimize the necessary cost and discipline the relevant parties.

However, many political actors have influenced the government's choice, and the result has changed. The present political forum of Japan is not adequate for effective policymaking in regards to recovering from the Fukushima Dai-ichi accident. We could find a similar difficult situation in Greece and the European Union today. In Greece, people's rational behaviour or *moral hazard* has caused a malfunction of democracy. The so-called 'failure of democracy' sometimes leads to suboptimal policy formation. However, that does not mean democracy is an inferior political system. We need to tweak the present system in order to achieve more optimal policy implementation, although it will be a quite difficult task.

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30 Personnel evaluation of bureaucrats is based on their performance during their job, which keeps changing every two or three years. Since the long-term effect of their job is difficult to measure, personnel evaluation depends basically on short-term performance.

## ABSTRACT

*The accident at the Fukushima Dai-ichi Nuclear Power Plant following the 11 March earthquake in Japan has caused enormous radiation contamination in the eastern part of Japan, and TEPCO (Tokyo Electric Power Co., Inc.), which operates the plant, is now liable for at least trillions of yen of damages as a tortfeasor. The amount of damages is so large that it is expected TEPCO by itself cannot afford it. Therefore, other stakeholders, such as TEPCO clients, financial institutions and tax payers (via the national government), need to provide the necessary funds for the victims. I analyse the present situation of TEPCO and the victims both from a legal perspective and from a political perspective. First I argue that the most desirable solution is to indemnify TEPCO's burden from a legal perspective. Then the most desirable solution is compared with the actual one chosen by the Japanese government. Finally, the reason why the actual solution has deviated from the most desirable one is discussed from a political perspective. Interest groups, such as financial institutions and the management/employees of TEPCO, have influenced the policy formation process. However, since the bailout plan of TEPCO has become politically salient, the government strategy is fluctuating between whether it should accept the arguments of interest groups or appease the public anger against TEPCO.*

## ZUSAMMENFASSUNG

*Der durch das Erdbeben vom 11. März 2011 verursachte Reaktorunfall an der Dai-ichi Nuclear Power Plant hatte eine weitreichende radioaktive Verstrahlung Ostjapans zur Folge. Das Unternehmen TEPCO (Tokyo Electric Power Plant Co., Inc.), das den Reaktor betreibt, haftet als deliktisch Verantwortlicher mit etlichen Billionen Yen für die entstandenen Schäden. Der zu ersetzende Schaden ist so groß, dass TEPCO allein nicht in der Lage ist, alle Schadensersatzforderungen zu erfüllen. Aus diesem Grund müssen andere „stakeholders“ wie die Kunden von TEPCO, Finanzinstitute und indirekt der Steuerzahler die erforderlichen Mittel zur Befriedigung der Ansprüche der Opfer zur Verfügung stellen. Der Beitrag untersucht die aktuelle Lage von TEPCO und die der Opfer aus rechtlicher wie aus politischer Perspektive. Zunächst wird als die am meisten befriedigende Lösung eine Übernahme von TEPCOs Lasten aus rechtlicher Sicht herausgestellt. Sodann wird diese Lösung mit der von der japanischen Regierung gewählten Lösung verglichen. Anschließend diskutiert der Beitrag aus politischer Perspektive die Gründe, warum die gewählte Lösung von der optimalen abweicht. Interessengruppen wie etwa die Finanzindustrie oder das Management und die Angestellten von TEPCO haben den politischen Entscheidungsprozess beeinflusst. Weil jedoch der Rettungsplan für TEPCO politische Aufmerksamkeit erlangt hat, schwankt die japanische Regierung, ob sie dem Anliegen der genannten Interessengruppen Rechnung tragen oder den öffentlichen Unmut gegenüber TEPCO abbauen soll.*

*(Übers. durch d. Red.)*