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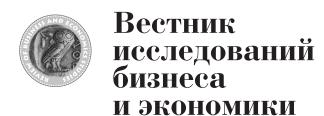
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At the Origins of Neo-institutionalism: Ronald Coase

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Abstract

The article contains the analysis of the views of the Nobel laureate in economics Ronald Coase (1910–2013) as the founder of neo-institutionalism. It provides a comparative description of the "old" and "new" institutionalism and shows the relationship and difference between neoclassicism and neo-institutionalism. I analysed in detail the most famous articles of Coase and, first of all, "The Nature of the Firm" and "The Problem of Social Costs". In these works, Coase showed that in the absence of transaction costs there is no economic novelty for the existence of a firm, in the second — that in the lack of transaction costs the legal system does not matter. With an exact specification of property rights, the market economy itself is able to cope with environmental pollution without resorting to government intervention, adjusting taxes and subsidies. The article shows the history of lighthouses in economic theory. Usually, the lighthouse is listed as a purely public good. Ronald Coase shows that even a public good — like lighthouses —was paid for by shipowners. The last part is devoted to essays on economics and economists.

Keywords: Institutionalism; neo-institutionalism; transaction costs; externalities; property rights; Coase's theorem JEL Classification: B15, B25, D23, L33

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1. Comparative Characteristics of "Old" and "New" Institutionalism

Although institutionalism as a notable trend was formed at the beginning of the twentieth century, for a long time, it was on the periphery of economic thought. The explanation of the movement of economic benefits only by institutional factors did not find a large number of supporters. It was partly due to the vagueness of the very concept of "institution", by which some researchers understood mainly customs, others — trade unions, still others the state, fourth corporations etc., etc. Partly — with the fact that institutionalists tried in economics to use the methods of other social sciences: law, sociology, political science, etc. As a result, they lost the ability to speak the single language of economics, which was considered the language of graphs and formulas. There were, of course, other objective

reasons why this trend was not in demand by contemporaries.

The situation, however, changed radically in the 60s and 70s. To understand why it suffices to make at least a cursory comparison of the "old" and "new" institutionalism. There are at least three fundamental differences between the "old" institutionalists (such as T. Veblen, J. Commons, J. K. Galbraith) and neo-institutionalists (such as R. Coase, D. North, or J. Buchanan).

Firstly, the "old" institutionalists (for example, J. Commons in *The Legal Foundations of Capitalism*) moved to economics from law and politics, trying to study the problems of modern economic theory by methods of other sciences about society. However, neo-institutionalists follow the exact opposite path — they study political and legal issues using the methods of neoclassical economic theory, and above all, using the apparatus of modern microeconomics and game theory.

Table 1 Fundamental differences between "old" institutionalism and neo-institutionalism

SIGNS	OLD INSTITUTIONALISM	NEOINSTITUTIONALISM
Movement	From law and politics to the economy	From economics to politics and law
Methodology	Other humanities (law, political science, sociology, etc.)	Economic neoclassical (methods of microeconomics and game theory)
Method	Inductive	Deductive
Focus of attention	Collective action	Independent individual
Analysis prerequisite	Holism	Methodological individualism

Secondly, traditional institutionalism was based mainly on the inductive method, aspired to go from particular cases to generalisations, as a result of which a general institutional theory never took shape. Neo-institutionalism follows a deductive path — from the general principles of neoclassical economic theory to the explanation of specific phenomena of social life.

Thirdly, the "old" institutionalism, as a trend of radical economic thought, focused primarily on the actions of collectives (mainly trade unions and the government) to protect the interests of the individual. Neo-institutionalism puts an independent individual at the forefront, who, of his own free will and following his interests, decides which collectives are more profitable for him to be a member of (see Table 1).

In recent decades, there has been an increase in interest in institutional research. It is partly due to an attempt to overcome the limitations of several prerequisites characteristic existing in economics (axioms of complete rationality, absolute awareness, perfect competition, the establishment of equilibrium only through the price mechanism, etc.) and, also, to consider modern economic, social, and political processes more comprehensively and comprehensively; partly — with an attempt to analyse the phenomena that arose in the era of scientific and technological revolution, the application of traditional research methods to which does not yet give the desired result. Therefore, let us first show how the development of the premises of the neoclassical theory took place within it.

2. Neoclassicism and Neo-institutionalism: Unity and Differences

Familiar to all neo-institutionalists is the following: first, that social institution's matter,

and second, that they can be analysed using standard microeconomic tools. In the 60s 70s. a phenomenon called by G. Becker "economic imperialism" began. It was during this period that economic concepts: maximisation, equilibrium, efficiency, etc., began to be actively used in such areas related to the economy as education, family relations, health care, crime, politics, etc. It led to the fact that the fundamental economic categories of neoclassicism received more in-depth interpretation and broader application.

Each theory consists of a core and a protective layer. Neo-institutionalism is no exception. It, like neoclassicism as a whole, considers the following to be among the primary prerequisites:

- methodological individualism
- the concept of an economic person
- activity as an exchange.

However, in contrast to neoclassicism, these principles have become more consistent.

Methodological individualism. With limited resources, each of us is faced with the choice of one of the available alternatives. The methods of analysing the market behaviour of an individual are universal. They can be successfully applied to any of the areas where a person must make a choice.

The basic premise of the neo-institutional theory is that people act in any sphere in pursuit of their own personal interests and that there is no insurmountable line between business and the social sphere or politics.

Economic man concept. The second premise of neo-institutional choice theory is the concept of the "economic man" (*homo oeconomicus*). A person in a market economy identifies his preferences with a product. He seeks to make decisions that maximise the value of the utility function. His behaviour is rational.

The rationality of the individual has a universal meaning in this theory. It means that all people are guided in their activities primarily by the economic principle, that is, they compare marginal benefits and marginal costs (and, above all, benefits and costs associated with decision-making):

MB ≥ MC

Where

MB is a marginal benefit

MC is a marginal cost.

However, in contrast to neoclassicism, where mainly physical (scarcity of resources) and technological limitations (lack of knowledge, practical skills, etc.) are considered, in neo-institutional theory, transaction costs are also considered, i.e. costs associated with the exchange of property rights. It happened because any activity is viewed as an exchange.

Activity as an exchange. Proponents of the neo-institutional theory view any area by analogy with the commodity market. For example, the state, is an arena of competition between people for influence on decision-making, for access to the distribution of resources, for places in the hierarchical ladder. However, the state is a market of a special kind. Its members have unusual property rights: voters can elect representatives to the highest bodies of the state, deputies — to pass laws, officials — to monitor their implementation. Voters and politicians are treated as individuals exchanging votes and campaign promises.

It is important to emphasise that neo-institutionalists are more realistic about the features of this exchange, given that people have limited rationality, and decision-making is associated with risk and uncertainty. Plus, you do not always have to make the best decisions. Therefore, institutionalists compare the costs of decision-making not with a situation that is considered as etalon in microeconomics (perfect competition), but with those real alternatives that exist in practice. This approach can be complemented by an analysis of collective action, which involves the consideration of phenomena and processes from the point of view of the interaction of not one individual, but a whole group of people. People can be

grouped according to social, property, religious, or party affiliation.²

At the same time, institutionalists can even

At the same time, institutionalists can even deviate somewhat from the principle of methodological individualism, suggesting that the group can be considered as the final indivisible object of analysis, with its own utility function, limitations, etc. However, the approach to considering a group as a combination of several individuals with their own utility functions and interests seems to be more rational.³

Some institutionalists (R. Coase, O. Williamson, and others) characterise the above differences as a genuine revolution in economic theory. Without underestimating their contribution to the development of economic theory, other economists (R. Posner and others), however, consider their work to be a further development of the mainstream of economic thought. Indeed, now it is more and more difficult to imagine the mainstream without their work. They are more and more fully included in modern textbooks on Economics. However, not all directions are created equal. To be convinced of this, let's take a closer look at the structure of the modern institutional theory.

3. Ronald Harry Coase: Biography Pages

Ronald Harry Coase (1910–2013) became the pioneer of neo-institutional theory. After graduating from the London School of Economics (Bachelor of Commerce) in 1932, he worked until 1935 at the School of Economics and Commerce in Dundee, where he met Duncan Black, a scientist. The latter anticipated the creation of the foundations of public choice theory.

His first successes are associated with his work at the London School of Economics (1935–1951). It was during this period that his famous article *The Nature of the Firm* (1937) was published, which showed the role of transaction costs.

The firm is seen as a network of contracts, a way to reduce transactions. The variety of contracts determines the variety of firms. Their size increases with the improvement of control technology.

After moving to the United States in 1951, he works as a professor at the Universities of Buf-

¹ Generalizing work is work Stevens J. [1993].

² Common features and differences between the main approaches are analysed in detail by Reisman D. [1990].

³ For details, see Olson (1995), Olson (1998), Olson (2000).

falo (1951–1958), Virginia (1958–1964), Chicago (since 1964).

In 1960, his excellent article *The Problem of Social Costs* was published. Later, in his monograph The Firm, Market, and Law, Coase emphasised the unity and difference between the 1937 article on the nature of the firm and the problem of social costs: "In *The Nature of the Firm*, I showed that in the absence of transaction costs, there is no economic basis for the existence of a firm. [...] In *The Problem of Social Cost*, I showed that in the absence of transaction costs, the legal system does not matter."

In the 1950s, he publishes several articles on the analysis of natural monopolies: in 1950 he published his article British Broadcasting: A Study of Monopoly, in 1955 — Postal Monopoly in Great Britain: A Historical Review, in 1959 — Federal *Communications Commission*, in 1961 — *British* Postal Service and Courier Companies. Coase focused on the idea that state monopolies impose their own standards on society and infringe on press freedom. It has been particularly evident in British broadcasting, where the frequency band is not affected by the price mechanism. Central to Coase was the problem of externalities and the creation of an effective system of property rights. However, criticism of state monopolies did not pass without leaving a trace: under the influence of this criticism, criticism of the cumbersome mechanism for regulating natural monopolies begins. This cycle ends with the work *Lighthouse* in Economic Theory published in 1974.

1985 Coase was elected a Corresponding Member of the British Academy. And in 1991, he was awarded the Nobel Prize in Economics "for the discovery and clarification of transaction costs and property rights for the institutional structure and functioning of the economy."

From 2000 until the end of his life, he was the scientific director of the Institute that bears his name.

4. Legal Prerequisites for a Market Economy

Property Rights and Their Structure

In modern economic theory, property rights are understood as sanctioned behavioural norms. Property rights are a set of power rights, sanctioned behavioural relationships that develop between people regarding their use of economic benefits. The current set of rights has evolved historically over a long time. In Roman law, the leading role was played by the rights of ownership, use, management and transfer of things by inheritance (or will).

With the rise of capitalism, it has been supplemented with such essential characteristics as, on the one hand, the right to the basis or "capital value" of a thing. On the other hand, the right to income arising from the use or management of the property. The nationalisations that took place in several countries during the XX century sharply raised the question of the time limits for the use of things (unlimited or with a limited period) and especially the right to security (guaranteeing against expropriation under one or another plausible pretext). Protection from the negative consequences of using a thing (negative external effects arising from the use of a thing) has become especially relevant with the aggravation of environmental problems. It made it necessary to prohibit the harmful use of things. These and other powers (for example, liability in the form of collecting a thing in payment of a debt, the so-called residual nature of unrecorded powers) now constitute a complete definition of ownership [Honoré, 1961, 112–128; Kapelyushnikov, 1994, 12–18]. In reality, their most diverse combinations are possible.

The Anglo-Saxon legal tradition (in contrast to the legal systems of continental Europe) considers property rights as a certain set of partial powers, which can be strengthened by adding to it (specification) more and more new rights or weakened by separating some powers from it — dilution (attenuation) property rights. The process of specification/dilution of property rights is associated with transaction costs.

Forms of Transaction Costs

Transaction costs are exchange costs associated with the transfer of ownership. The category of transaction costs was introduced into economics in the 30s. Ronald Coase and is now widespread. There are usually five main forms of transaction costs:

- 1) costs of information retrieval
- 2) costs of negotiating and concluding contracts
 - 3) measurement costs

- 4) costs of specification and protection of property rights
 - 5) the costs of opportunistic behaviour.

Information search costs are associated with its asymmetric distribution in the market: it takes time and money to find potential buyers or sellers. The incompleteness of the available information turns into additional costs associated with the purchase of goods at prices above equilibrium (or selling below equilibrium), with losses arising from the purchase of substitute goods.

Negotiating and contracting costs are also time and resource-intensive. The costs associated with negotiations on the terms of sale, legal execution of the transaction, often significantly increase the price of the item being sold.

A significant part of transaction costs is made up of measurement costs, which is associated not only with the direct costs of the measuring equipment and the measurement process itself but also with errors that inevitably arise in this process. Besides, for several goods and services, only an indirect or ambiguous measurement is allowed. How, for example, can you assess the qualifications of a hired employee or the quality of a purchased car? Particular savings are determined by the standardisation of products, as well as guarantees provided by the company (free warranty repair, the right to exchange defective products for good ones, etc.). However, these measures cannot completely eliminate the costs of measurement.

Exceptionally high are the costs of specification and protection of property rights. In a society where there is no reliable legal protection, there are frequent cases of constant violation of rights. The time and expense involved in rebuilding them can be extremely high. It should also include the cost of maintaining the judicial and state bodies that are on guard of law and order.

The costs of opportunistic behaviour are also associated with, though not limited to, information asymmetry. The point is that post-contract behaviour is very difficult to predict. Dishonest individuals will comply with the terms of the contract to a minimum or even evade their implementation (if no sanctions are provided). This moral hazard always exists. It is especially significant in the conditions of joint work — working as a team when the contribution of each cannot be strictly separated from the efforts of other team

members, especially if the potential of each is entirely unknown. So, opportunistic is the behaviour of an individual who evades the terms of the contract to make a profit at the expense of partners. It can take the form of extortion or blackmail when it becomes apparent the role of those team members who cannot be replaced by others. Taking advantage of their relative advantages, such team members can demand special work conditions or pay for themselves, blackmailing others with the threat of leaving the team.

Private, shared (communal), and state property

Thus, transaction costs arise before the exchange process (ex-ante), during the exchange process and after it (ex-post). The deepening division of labour and the development of specialisation contribute to the growth of transaction costs. Their value also depends on the dominant form of ownership in society. There are three main forms of ownership: private, general (communal) and state. Let's consider them from the point of view of the theory of transaction costs. In the conditions of private property, the individual has all the full rights. In situations of state ownership, decisions are made based on established rules and procedures that govern the interests of society as a whole.

In terms of common (communal) ownership, all members of the organisation (commune), owning such property, have a common right to use the good (before it is appropriated) and a private right to use it after it has been obtained (appropriated) for temporary or permanent ownership.

Since under state ownership an individual member of society does not own property directly (as in private property), but indirectly (through the system of rules and procedures established in society), then control over this property becomes more complicated. As a rule, it cannot be sold or transferred to another person. It is difficult to control those who directly manage it (i.e., the bureaucracy). The complexity of the decision-making procedure also weakens the functions of control and operational management of it. Therefore, in practice, there is no direct connection between the desires and aspirations

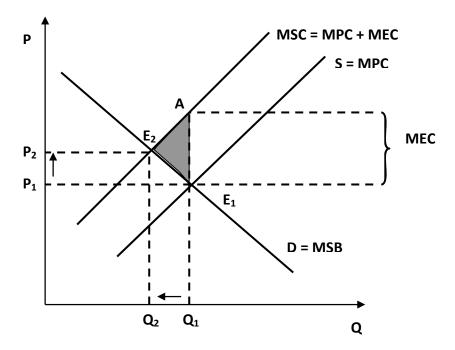


Figure 1. Negative externality

of co-owners of state property and the results of its actual use. Also, the wishes and aspirations of individual co-owners rarely coincide, and the reconciliation of interests turns into a big problem, the solution of which depends on the balance of political forces.

Common (communal) property arises when and where and when the costs of specifying and protecting private property rights are incredibly high. The benefits from the establishment of private property rights are either zero (if the good is abundant), or less than the costs associated with their establishment.

The main problem of common property is its overuse: each individual seeks to get ahead of the other in consuming what he gets for free. He is not interested in the fact that as a result of predatory exploitation, the consumption possibilities of other owners may be reduced. But, since everyone does this, the good that is in common ownership is quickly depleted. Therefore, common (communal) property turns out to be unstable, unstable and, over time, turns into either private or "state property."

5. External Effects. Coase's Theorem

External Effects

Externalities and externalities are costs or benefits from market transactions that are not reflected in prices. They are called "external", as

they relate not only to the economic agents participating in this operation but also to third parties. They arise as a result of both production and consumption of goods and services.

Externalities are divided into negative and positive. Negative effects are associated with costs, positive ones with benefits for third parties. Thus, externalities show the difference between social costs (benefits) and private costs (benefits).

$$MSC = MFC + MEC, \tag{1}$$

where

MSC— the marginal social cost

MFC— the marginal private cost

MEC— the marginal external cost.

A negative externality occurs when the activity of one economic agent causes the costs of others. Let's show this with an example. The pulp and paper mill discharges insufficiently well-treated water into the river. Let's assume that the wastewater discharge is proportional to the production volume. It means that as production grows, so does the volume of environmental pollution. Since the pulp and paper mill does not thoroughly purify the water, its marginal private costs are lower than the marginal social costs, since it does not include the costs of creating an additional treatment system. It leads to the fact that the number of products produced

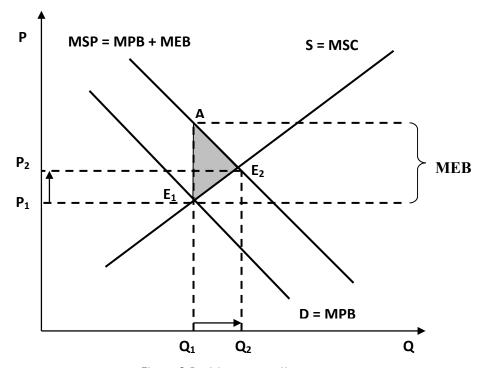


Figure 2. Positive externality

exceeds the effective volume of production (Fig. 1). Without treatment facilities, the number of products produced is Q1 tons of paper at a price of P1. Market equilibrium is established at point E 1, at which the supply equal to the marginal private cost of the MPC intersects with the demand curve equal to the marginal public benefit MSB, that is, MPC = MSB.

Meanwhile, marginal social costs are equal to the sum of marginal private costs plus marginal external costs. Therefore, if it were possible to turn external costs into internal ones, the effective volume of output would be reduced to Q_2 when the price rises to P_2 . At the point, E_2 marginal social benefits would equal marginal social costs MSB = MSC.

Let us pay attention to the fact that at point E 2 the consequences of environmental pollution are not entirely eliminated (after all, in our case, the release of wastewater is proportional to the volume of production, and the volume of production of a pulp and paper mill at point Q_2 is by no means zero). However, the damage from pollution is significantly reduced. Area of a triangle AE_1E_2 shows the loss of efficiency associated with the fact that the marginal private costs were lower than the marginal social costs. Thus, in the presence of a negative external effect, the economic good is sold and bought in a larger amount than the effective volume,

i.e., there is an overproduction of goods and services with negative external effects.

A positive externality occurs when the activity of one economic agent benefits others.

$$MSB = MPB + MEB,$$
 (2)

where

MSB— the marginal social benefit

MPB— the marginal private benefit

MEB— the marginal external benefit.

The development of education provides an excellent example of achieving positive externalities. In society, each of its members benefits from the fact that fellow citizens receive a good education. However, each of us hardly thinks about the benefits that society as a whole gets when we decide to receive an education. In making a decision, the rational consumer balances the costs of getting a good education and the benefits that can be obtained as a result. It is not surprising that investment in human capital may be lower than optimal for society (Fig. 2). Market equilibrium E is established at the point of intersection of marginal private benefits and marginal social costs: MRV = MSC.

Meanwhile, marginal social benefits are greater than marginal private benefits by the amount of marginal external benefits. Therefore, an effective equilibrium for society would be achieved at the point of intersection of the marginal social benefits and costs, that is, at the point E_2 Efficiency increases in the area of the triangle AE_1E_2 . Thus, in the presence of a positive external effect, the economic good is sold and bought in less than the effective volume, i.e., there is an underproduction of goods and services with positive external effects.

Adjustment Taxes and Subsidies

If we wish to reduce the overproduction of goods and services with negative external effects and make up for the underproduction of goods and services with positive external effects, it is necessary to transform external effects into internal ones. The transformation of external effects into internal (internalisation of an externality) can be achieved by approaching the marginal private costs (and, accordingly, benefits) to the marginal social costs (benefits). A. S. Pigou proposed to use corrective taxes and subsidies as a solution to this problem.

A corrective tax is a tax on the output of economic goods with negative externalities that raises marginal private costs to the level of marginal social costs. In our example with a pulp and paper mill, a tax (tax-T) equal to the marginal external cost T = MEC could bring the market equilibrium closer to effective:

MSB = MSC.

A corrective subsidy is a subsidy to producers or consumers of economic goods with positive externalities that bring marginal private benefits closer to marginal public ones.

In the case of teaching, an adjustment subsidy equal to the marginal external benefit (S = MEB) could be provided to students. It would increase their demand for educational services to a level where MSB = MSC.

Adjustment taxes and subsidies cannot completely solve the problems posed by externalities. First, in actual practice, it is difficult to quantify marginal costs and benefits accurately. Secondly, the extent of damage is determined in the course of legal and political discussions very roughly. Finally, the fact that the adjustment taxes paid by the producers of goods with negative externalities play an important role, by no means always achieve the set goal. All this predetermined criticism of corrective taxes and subsidies and attempts to find fundamentally new ways to solve

the problem. They are primarily associated with the works of R. Coase.

Coase's Theorem

R. Coase proceeds from the fact that the problem under consideration is double-edged, or, as he says, "mutually binding" in nature. "By avoiding damage to B, we incur damage to A. The real question that needs to be decided is whether A should be allowed to harm B or should B be allowed to cause damage to A? The problem is to avoid more serious damage.".4

The answer is by no means evident until it has been possible to determine the value of what we have acquired as a result and the value of what we had to sacrifice for this. Thus, the solution proposed by A.S. Pigou does not use the concept of opportunity costs and treats factors like material, and not legal, phenomena.

Analysis of the problem of social costs led Coase to a conclusion that J. Stigler [1966, p. 113] called the "Coase theorem". Its essence is that if the property rights of all parties are carefully defined, and the transaction costs are zero, the final result (maximising the value of production) does not depend on changes in the distribution of property rights (aside from the income effect). J. Stigler expressed the same idea as follows "... In conditions of perfect competition, private and social costs are equal."

Comparison of the pricing system, including liability for damage because of negative externalities, with the pricing system, when there is no such liability, led R. Coase to a seemingly paradoxical conclusion that if the participants can agree on their own. The costs of such negotiations are negligible (transaction costs are equal to zero), then in both cases, in conditions of perfect competition, the maximum possible result is achieved, maximising the value of production.

R. Coase gives the following example. There is an agricultural farm and a cattle ranch nearby: a farmer grows wheat, and a cattle breeder breeds livestock, which from time to time grasses crops on neighbouring lands. There is an external effect. However, as R. Coase shows, this problem can be successfully solved without the participation of the state.

⁴ Coase R. Firm, Market and Law. C. 85–86.

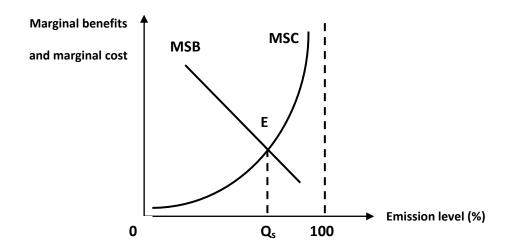


Figure 3. Determination of effective emission level

If the pastoralist is liable for the damage, there are two options. "Either the pastoralist pays the farmer for the uncultivated land, or he decides to rent the land himself, paying the farmer for the uncultivated land a little more than the farmer himself pays (if the farmer leases the farm himself), but the end result will be the same and will mean maximising the value of production." 5

If there is no liability for damage, resource allocation is the same as before. The only difference is that the farmer will now make the payments. However, "the end result (which maximises the value of production) does not depend on the legal position if it is assumed that the price system works without cost." With zero transaction costs, both the farmer and the pastoralist will have economic incentives to increase the value of production, as they each receive their share of the increase in income. However, when transaction costs are taken into account, the desired result may not be achieved. The fact is that the high cost of obtaining the necessary information, negotiating and litigation can exceed the possible benefits of a deal. Besides, when assessing the damage, significant differences in consumer preferences are not excluded (for example, one estimates the same damage much more than the other). A clause regarding the income effect was later introduced into the formulation of Coase's theorem to accommodate these differences.

Experimental studies have shown that Coase's theorem is valid for a limited number of participants in the transaction (two or three). With an increase in the number of participants, transac-

⁵ Coase R. Decree. op. P. 90.

tion costs increase sharply, and the assumption of their zero value ceases to be correct.

It is interesting to note that Coase's theorem proves the value of transaction costs "by contradiction." In reality, they play a huge role, and it is surprising that neoclassical economic theory, until recently, did not notice them at all.

Pollution Control

Coase's theorem helps to develop the right strategy in the fight against environmental pollution.

An effective pollution control policy is one that balances the marginal social benefits of control with the marginal social costs required to enforce it. The intersection of the marginal social benefit curve MSB with the marginal social cost curve MSC allows us to determine the level of harmful emissions that is effective for a given society (Fig. 3). The fact is that as the percentage of polluting emissions decreases, the marginal social costs rise sharply, so each additional percentage reduction costs more and more.

There are three main ways to reduce harmful emissions into the environment: 1) the establishment of norms or standards for harmful emissions; 2) introduction of payment for emissions; 3) sale of temporary emission permits.

Emissions standards are statutory limits for the concentration of hazardous substances in industrial waste.

Such standards are accepted in many countries. In the United States, for example, the Environmental Protection Agency monitors its implementation. Exceeding the standards set by gov-

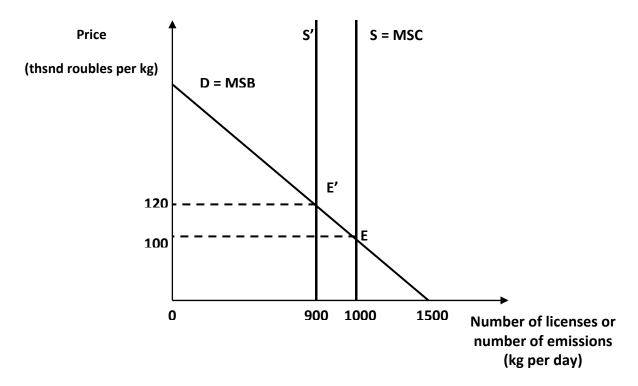


Figure 4. Pollution Rights: The Role of the Green Movement

ernment bodies carries a hefty fine or criminal penalty.

The practice of setting standards has, however, its apparent disadvantages. First of all, they allow, within certain limits, to dump harmful substances free of charge. When establishing uniform norms for the country, the different degrees of severity of environmental problems in different regions, as well as significant differences in the marginal private costs of individual firms, are not taken into account. Therefore, the costs associated with achieving a uniform level of pollution can lead to significant losses for individual firms and society as a whole, since the comparative advantages existing in the private sector are ignored. Finally, and most importantly, the standards do not provide incentives for manufacturers to reduce existing pollution levels.

Emission charges are more flexible. An emission fee is a fee charged to a firm for each unit of polluting emissions. Such a system helps to reduce the total volume of harmful emissions, as evidenced by the experience of its application in Germany. However, with such a system, there is no complete certainty that pollution standards will not be violated.

Recently, new methods of combating environmental pollution have been increasingly used. Among them is such a peculiar form as the sale

of rights to pollute the natural environment. The state determines the volume of harmful emissions allowed in this area and sells it in the form of licenses at auction. Suppose it wants to reduce the volume of harmful emissions from 1500 to 1000 kg, then the state sells not 1500 licenses, but 1000 licenses, each of which gives the right to emit 1 kg (Fig. 4). Since the supply is absolutely inelastic, equilibrium will be established at point E. In this case, the price of one license for the right to discharge 1 kg of pollutant per day will be equal to 100 thousand roubles. Suppose the local community of the environmentalist party ("green") decides to improve the environmental situation in the area. In that case, it can buy part of the licenses to withdraw them from circulation. If this part is 100 licenses, then the price of one license will rise to 120 thousand roubles. Thus, the sale of pollution rights is a flexible means in the struggle to improve the environmental situation in the country.

6. Political and Economic Significance of the Coase's Theorem

In his work *Firm, Market and Law* R. Coase noted that "If the rights to perform certain actions can be bought and sold, they will eventually be acquired by those who value the opportunities of production or entertainment they give them."

Table 2
The ownership structure of large and medium-sized privatised companies in Russia in the 1990s, %

	1994	1996	1998	2000
INSIDERS	60-65	55-60	50-55	30-35
OUTSIDERS	12-25	30-35	35-40	50-55
THE STATE	15-20	9-10	5-10	10-12

Source: Radygin A. Ownership and control of the Russian industry. OECD Roundtable on Corporate Governance, www.oecd.org/daf/corporate-affairs. 2000.

It happened in Russia in the 1990s. Over a short time, there has been a significant change in the ownership structure of large and medium-sized privatised companies (Table 2).

People working at enterprises (insiders) received the lion's share of state property, according to A. Radygin, 60–65 per cent, while those who did not work at these enterprises only 12–25 per cent. The situation changes dramatically by 2000. Insiders already own 30–35 per cent, while the share of outsiders rises to 50–55 per cent (Fig. 5). The very fact of such a significant redistribution suggests that the laws of the market have begun to operate in Russia, that is, the Coase theorem is being fulfilled.

7. Lighthouse in Economic Theory

In 1974, R. Coase published work *The Lighthouse in Economic Theory* in which he criticises the false understanding of the production of public goods. To this end, the author examines the British Lighthouse Service. It traditionally included three organisations — Trinity House, which performed this function for England and Wales; The Northern Lighthouse Commissioner for Scotland and the Irish Lighthouse Commission for Ireland.

According to the existing tradition, the expenses of these authorities are paid from the General Lighthouse Fund, the revenues of which consists of the lighthouse duty paid by shipowners. The receipt of funds is entrusted in the UK to the customs services of ports Payment for these services is carried out as follows: they take into account two factors — the volume of goods transported and the frequency of visits to ports in the UK. Duties are usually set per tonne of net cargo per voyage of any vessel that visits UK seaports. If ships transport goods between ports of the country, the monthly duty is levied only on the first ten voyages of the year, and if they

transport goods from abroad, then payments are limited to the early six trips of the year.

Until the 17th century, there were very few lighthouses on the British Isles. Their absence was partially compensated for by navigation signs, signal lights and buoys. The right to install them from 1566 was entrusted to Trinity House.

The construction of lighthouses began in the 17th century. This construction is carried out by both the state organisation (Trinity House) and private individuals. The latter is obliged to obtain a royal patent for the construction of a lighthouse and the collection of duties from owners of ships. Who can benefit from its existence? The collection of duties compensated for this construction. The presence of different lighthouses led to this. that ships paid for each beacon they passed in proportion to the size of the ship. To unify payments, Trinity House Corporation began to pursue a new policy that not only retained rights but also increased its income. The company filed a patent for the maintenance of the lighthouse. It gave it for a fee for temporary use to private individuals, most of whom often received not a ready-made lighthouse, but only the opportunity to build it with their own money with the subsequent operation. Only in 1836, an Act of Parliament passed all the lighthouses of England to Trinity House.

The evolution of the British lighthouse system clearly shows that the market economy and the system of private property have gradually solved even such a difficult task as the production of public goods. Therefore, the use of lighthouses as a purely public good is based only on an elementary ignorance of economic history.

8. Essays on Economics and Economists In 1994, R. Coase's second theoretical monograph, *Essays on Economic Science and Econo-*

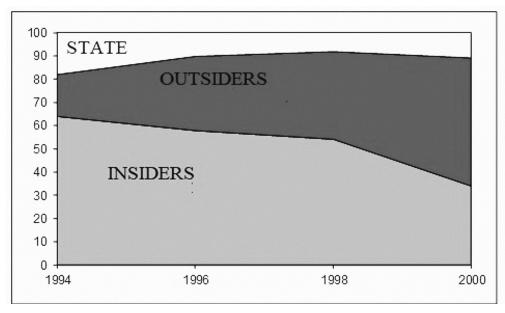


Figure 5. Dynamics of the ownership structure of large and medium-sized privatised companies in Russia in 1994–2000, %

Source: Compiled by Radygin A. (2000). Ownership and control of the Russian industry. OECD Roundtable on Corporate Governance. Available at www.oecd.org/daf/corporate-affairs.

mists, was published. It consists of 2 parts. The first part (chapters 1–7) is devoted to economics, the second part (8–15) — to economists. The monograph begins with R. Coase's Nobel lecture, in which he summarises his research. In the same part, Nobel laureate defines the tasks of economic science in conjunction with related disciplines. The last two chapters of the first part are devoted to the legacy of A. Smith. The author shows that there is no contradiction between *The Wealth of Nations* and *Theory of Moral Sentiments*.

In his youth, R. Coase dreamed of writing a lengthy monograph on A. Marshall. Some of the materials for it were published in the second part of the work. Coase tells in some detail about the

ancestors of A. Marshall, his father and mother. Coase considers the appointment of Pigou to replace Marshall a failure, which noticeably narrowed the scientific program formulated by A. Marshall. In this part, he also writes about his teacher — Arnold Plant, and friends — Duncan Black, whom he met while teaching at Dundee, George Stigler, with whom he worked at the University of Chicago. The last chapter is devoted to the London School of Economics in the 1930s, in which, at that time, worked a magnificent galaxy of economists. Despite the apparent diversity in the book, there is a certain inner unity. In fact, the central plot is classical liberalism in the history of economic science from A. Smith to J. Stigler.

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У истоков неоинституционализма: Рональд Коуз

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Аннотация. Статья посвящена анализу взглядов нобелевского лауреата по экономике Рональда Коуза (1910–2013) как основоположника неоинституционализма. В ней дается сравнительная характеристика «старого» и «нового» институционализма, показывается взаимосвязь и различие неоклассики и неоинституционализма. Подробно разбираются наиболее известные статьи Коуза и прежде всего «Природа фирмы» и «Проблема социальных издержек». В первой работе Коуз показал, что при отсутствии трансакционных издержек нет экономической основы для существования фирмы; во второй — что при отсутствии трансакционных издержек не имеет значения правовая система. В условиях четкой спецификации прав собственности рыночная экономика сама способна справиться с загрязнением окружающей среды, не прибегая к вмешательству государства, корректирующим налогам и субсидиям. В статье показана история маяков в экономической теории. Обычно маяк фигурирует как чисто общественное благо. Рональд Коуз показывает, что даже такое общественное благо, как работа налога, оплачивалось владельцами судов. Последняя часть посвящена очеркам Коуза по вопросам экономической науки и оценке экономистов.

Ключевые слова: институционализм; неоинституционализм; трансакционные издержки; экстерналии; права собственности; теорема Коуза

Growing Household Credit Load Through the Prism of Social Perception, Credit, and Political Attitudes of Russians

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Abstract

The year 2020 demonstrates another surge of civil non-conventional activism in the world due to the epidemiological situation and related government restrictive measures. In Russia, at the background of the "Corona-crisis" and falling real incomes, retail lending to households continues to proliferate, along with an increase in their overdue debt. The deteriorating economic well-being of Russians raises questions about the possibility of an increase in political protest behaviour of citizens and how much their readiness for it is affected by the deteriorating financial situation due to difficulties in paying off their loan obligations. The authors used the methods of cybermetric analysis and mass survey, examines the perception of the credit problem by Russians, their assessment of its causes and "culprits" (the state, banks and borrowers themselves). The paper also notes some trends of mutual conditionality at the individual level of credit attitudes of Russians, their financial prosperity and readiness to participate in various forms of pro-government and opposition political activity. The authors conclude that the most common conservative model of credit behaviour among Russians contributes to the latent deterioration of the subjective well-being of borrowers that not always leading to a decrease in credit payments. It, in turn, leads to a desire to share responsibility for these difficulties with creditors and the state and, probably, increases the readiness for protest activism.

Keywords: household credit debt; protest activity; credit attitudes; credit behaviour

JEL Classification: G41, G51

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Introduction

In the modern age, rife with goods and services, large-scale socioeconomic inequalities persist, and opportunities for increased consumption remain very limited. Because of this contradiction between the growing supply and the unsuccessful demand (noted by the classic T. Malthus and later by many others), after the Second World War, the institution of consumer lending received rapid and previously unprecedented development, despite all the ambiguity of its perception by Western societies [Novikov, 2017, pp. 86–88]. However, the growth of consumer lending, although it stimulates the economy at the stage of recovery, also brings the business cycle closer to the point of overheating, which is usually caused by the again weakening demand

from the negative contribution of credit debt to household income.

This perennial problem of credit cycles, in particular the growth of the debt burden of citizens and the subsequent growth of non-payments, becomes a predictor of political risk for the state and threatens the success of its economic policy [Kozlov, 2020, p. 56]. Today in Russia exists a situation of this risk evidenced by the statistics of the Bank of Russia for 2020. Despite the shocking decline in household lending by 44 and 30 per cent in April and May compared to 2019, in June, July, August and September, the corresponding dynamics showed an increase of 3, 13, 17, 22 per cent compared to with the same periods last year.

Thus, the COVID-19 pandemic did not affect the very trend of growth in the population's need

for free cash. However, at the same time, the share of overdue debts is also growing, and (although in the total amount of debt it does not yet exceed 5 per cent) in the third quarter of 2020, in comparison with the second quarter, the share of overdue debt in the total amount of debt even decreased by 0.1 per cent. Still, in contrast to 2019, over the same three months, this indicator decreased by 4.9 per cent. In absolute terms, the volume of delinquencies from the second to the third quarter increased from 810 billion rubles to 849 (+ 5.5 per cent), in 2019 over the same period the overdue debt decreased from 760 billion to 757 (-0.4 per cent). It confirms that the factor of the pandemic crisis has seriously hit the solvency of citizens. 2

In connection with this risk, ratings of Russian regions in terms of population debt load have become quite common. The debt load is calculated as the ratio of the total credit debt of the region's households to banks to the total income of its economically active population, usually for a year. Although such a comparison may provide some insight into the most problematic subjects of the country, it says little about the real burden of borrowers and its impact on the ability to maintain economic prosperity, since it does not take into account either real loan payments, or the cost of living in the region, or the number of borrowers.

Nevertheless, ratings such as, for example, the rating of the Agency "RIA Rating"³ or calculations of the All-Russia People's Front's project "For the rights of borrowers",⁴ attract the attention of ordinary citizens and various political actors to this problem using modern communication channels, primarily social media. The question arises: how

¹ The Bank of Russia, official site. Available at http://cbr.ru/(Accessed 03.11.20).

does society react to the growth of the population's credit burden in the face of the uncertainty of the future, which was clearly manifested in 2020.

At the individual level of the problem, our focus shifts to how the individual borrower relates to the loan and the resulting debt: how this burden affects the emotional, cognitive and behavioural aspects of the individual. In this regard, the researchers cite different classifications of credit borrowers. For example, Yu. E. Muzhichkova singles out on active consumers (who often use credit services, assess their risks, and pay off debts on time), credit addicts (who are unable to objectively assess their capabilities, abuse new loans to pay off old ones, and often do not comply with their obligations), and conservative consumers (who use bank loans only in exceptional cases and seeking to pay off their debts as soon as possible) [Muzhichkova, 2015, p. 38].

Concerning debt, some borrowers will enthusiastically strive to repay it as soon as possible. In contrast, others, on the contrary, will experience demobilizing anxiety, fatigue and a sense of uncertainty about the future financial situation. The second model of behaviour can be defined as "financial threat". One of the tactics for overcoming the state of this threat is to maximize resources through a mode of the economy [Fiksenbaum, Marjanovic, Greenglass, 2017, pp. 129–131].

It is closely related to the influence of debt not only on the objective but also on the subjective dynamics of the socioeconomic well-being of a person. The deterioration of the latter, including through deprivation, can significantly affect the growth of political activity, including unconventional [Gurr, 1970]. Modern researchers confirm the applicability of the theory of relative deprivation for predicting social unrest, but only in the case of an increase in unemployment. In other cases, while reinforcing the resource theory of protest activism, scientists argue that the growth of social movements can be traced where, on the contrary, the economic situation shows improvements. However, separately objective indicators of the economy are often not able to give an idea of political risks from society, since they have little to do with individual perceptions of financial well-being [Vassallo, 2020, 58–63]. At the same time, a subjective assessment of a decrease in life satisfaction, which includes a much wider range of issues, in addition to economic ones, finds a posi-

² This is also evidenced by the data for the 2nd quarter of 2020: first, the fall in real disposable income of the population by 8 per cent compared to the same period in 2019; secondly, a significant reduction in household credit payments to banks in such regions as the Chechen Republic (22 per cent), Kaluga and Tyumen regions (14 per cent each); colossal growth of delinquencies — in the city of Sevastopol (17 per cent), the Republic of Crimea (11 per cent), the Udmurt Republic (8 per cent); and both of these trends are in the Kaliningrad region (16 and 33 per cent) and the Krasnodar Territory (17 and 7 per cent).

³ Рейтинг регионов по закредитованности населения — 2019. Areнтство «РИА Рейтинг», 24.12.2019. Available at https://riarating.ru/infografika/20191224/630147980.html (Accessed 01.05.20).

⁴ Карта кредитной и сберегательной активности домохозяйств РФ. Available at http://zapravazaemschikov.ru/map/ (Accessed 12.08.20).

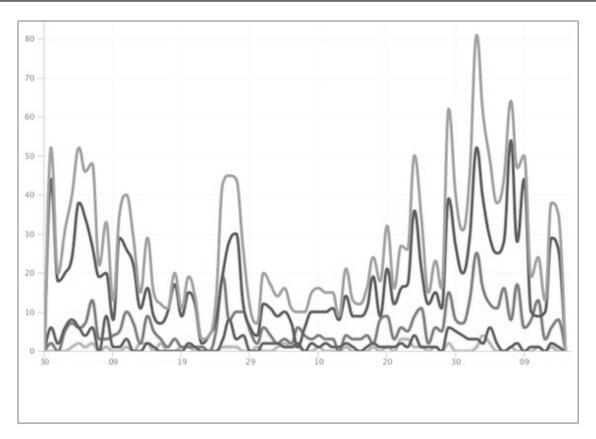


Figure 1. Dynamics of documents from 31.01.20 to 14.04.20 (no duplicates)

Source: IQBuzz.

tive relationship with the growth of civil protest actions [Witte, Burger, Ianchovichina, 2020, p. 135].

Thus, in order to understand how the situation of the indicated political risk of debt load can affect the political behaviour of citizens, this work will test the relevance of some of the above provisions, in particular, the perception of the problem of debt load at the social and individual levels, the impact of credit debt on the objective and subjective the financial situation of borrowers, citizens and the relationship between difficulties in repaying a loan and the political mood of borrowers.

Methods of Research

As unique research methods, the author used a cybermetric analysis of digital traces left by social media users on the issues of interest to us, as well as a method of a mass sociological survey conducted among adult residents of the city of Moscow, and subsequent correlation analysis.

Cybermetry was performed using IQBuzz software. In the course of the work, 5000 documents were unloaded, the content of which corresponded to the presence of keywords — markers ("debt burden of the population",

"bankruptcy of citizens", "debt hole", "credit bondage", "credit slavery", etc.).

Two iterations of the documents were made, during which documents that did not correspond to the given problem were deleted, and the tonality of the documents was also affixed. After the first iteration, the request was adjusted, however, as a result of the second iteration, 2884 documents were saved (2055 — without duplicates), most of which are comments, posts on social networks and posts. The period for creating final sample documents is 01/31/2020-04/14/2020. The tonality of the documents was set in relation to the authorities: negative messages — which expressed a negative perception of the authorities of the Russian Federation in connection either with the indicated problem or with measures taken to resolve it; positive — contained the approval of the modern Russian authorities; mixed — did not allow to determine the pole of the given assessment; neutral unambiguously — stated the facts, had no emotional colouring or did not mention the authorities at all.

The distribution of messages in dynamics we showed in Figure 1. The largest number of messages fell on the periods: the 31st of January —

the 12th of February (there is no pronounced topic, few negative documents), 25–27 February (amendment to hold an all-Russian vote and the estimated date, negative in the unwillingness to vote for "rewriting the constitution" and support the authorities who have driven people into a "debt hole"), 10–15 March ("zeroing the presidential terms — why not zeroing citizens' loans"), from the 20th of March (about self-isolation, nonworking days that drive people into a "debt hole"; the delusion that the state is obliged to hold a credit amnesty, dissatisfaction with refusals in credit vacations, and if approved, the accrual of interest for their period => the measures taken are ineffective, they drive people into credit bondage: "all the measures taken are a postponed debt hole for representatives of small and medium-sized businesses, for of many people").

In terms of sentiment, the messages in the sample were distributed in the following ratio: neutral — 67.4 per cent, negative — 22.9 per cent, mixed — 7.3 per cent, positive — 2.4 per cent. Moreover, more than 50 per cent of all negative documents fell on the period from the 20th of March to the 14th of April.

More than 12 million users could see these messages (2055) — the coverage of messages was 12091582 people.

Also in the period from 27.09. until 05.10. In 2020, a massive sociological survey was conducted. The distribution of the questionnaire was carried out in social networks: VKontakte and Facebook — by a random method through private messages and various community groups. The sample was formed with two restrictions: all respondents had to be of legal age and have a permanent registration in Moscow (to be able to vote in the Moscow elections). The total sample of respondents was 235 people. Among them — 83 per cent are women, and 17 per cent are men.

By age groups: 18–24 (8 per cent), 25–34 (35 per cent), 35–44 (41 per cent), 45–59 (15 per cent), 60 and more (1 per cent). 84 per cent of respondents have completed higher education. Thus, the sample does not pretend to be representative in the classical sense, but on the whole meets the set tasks of the work, in particular, the search for correlations between different socioeconomic and political indicators.

Each respondent had to go through several blocks of questions: to assess the degree of agree-

ment with statements about a loan, about readiness for forms of political activity aimed both at supporting the authorities and against it, leaving some information about themselves, in particular, assessing their economic well-being, answering the presence or absence of current outstanding loan obligations, as well as expectations of difficulties in repayment.

The loan statements proposed for assessment were divided into 5 groups: 3 statements each reflecting an optimistic view (for example, "Loan is a convenient banking service that saves time" or "Having a loan encourages me to work more actively") — credit optimism — and pessimistic look ("For me, credit is an unbearable burden and burden" or "Burdening oneself with credit is possible only in case of extreme despair") — credit pessimism.

Three other groups included one statement each, indicating the responsibility of banks, the borrower and the state ("The main purpose of a loan is to tempt a person to buy and make a person dependent on the bank", "People who take out a loan drive themselves into credit bondage", "The Russian authorities are responsible for the credit problems of their citizens").

The block of questions for assessing the willingness of respondents to participate in political activities in support of or against the current government included such forms of participation as voting in elections, participation in the work of public organizations, participation in (un) sanctioned rallies, financial assistance to public organizations, signing collective petitions, appeal to the authorities and politicians, etc.

To measure the expectations of respondents of varying degrees of difficulty in repaying the current loan, as well as questions to assess the objective and personal financial situation of the respondent, we used the formulations from the VTsIOM (Russian Public Opinion Research Center)-SPUTNIK survey.⁵

To search for relationships between variables such as the expectation of credit difficulties, credit pessimism and optimism, the assignment of re-

⁵ How do you assess your ability to repay the current loan? (Kak Vy otsenivayete svoi vozmozhnosti po pogasheniyu tekushchego kredita?). VTsIOM (ВЦИОМ), 19.11.2017. https://wciom.ru/trzh/print_q.php?s_id=60&q_id=3375&date=19.11.2017 (Accessed 11.09.2020).

sponsibility to lenders, borrowers and the state, objective and subjective levels of financial security (income), the willingness to support the authorities and the readiness to oppose the authorities, a pair correlation analysis. It made possible identification of some trends and indicated further directions of research.

Among those surveyed, 37 per cent stated that they are currently paying off outstanding loans (consumer, auto, mortgage). Among them, 56 per cent (or 21 per cent of the entire sample) stated their expectations of loan repayment without difficulties or with little difficulty. 40 per cent of borrowers (15 per cent of the total number of respondents) expect that they will be able to repay the loan only with great effort or will not be able to do it at all.

Results

As a result of the analysis of the discourse in the sample of messages for the period from the 31st of January to the 14th of April, 2020, it was possible to come to several conclusions. Today, the problem of citizens' debt burden is latent in public discourse on social media, that is, it is rarely discussed separately from other problematic news events, such as the "oil war", amendments to the Constitution, economic support of business and the population, etc.

The situation with the population's debt burden by itself does not cause wide public discussion on social media and is rarely distinguished by a pluralism of opinions regarding the negative consequences of the credit burden, which, from the author's point of view, can be explained by the general consensus in assessing credit for the population (consumer, mortgage) as a negative and undesirable instrument "driving you into debt" or "credit bondage". Closely related to this is a wide range of comments and entries, the content of which clearly indicates a negative attitude towards the capitalist economic model and a vast demand for an equitable distribution of wealth, which is in stark contrast to credit and lending.

Indeed, as of September 2019, 76 per cent of Russians believe that a loan is permissible if absolutely necessary, while 82 per cent believe that the loan must be repaid under any circumstances. The state should always help the borrower in case

of difficulties with payments (22 per cent) and in exceptional cases (55 per cent).⁶

The results of the authors' survey of Moscow residents are quite consistent with these figures. Thus, 63 per cent of the respondents to one degree or another agree that it is worth taking out a loan only in cases of extreme despair. The same 63 per cent — among actual borrowers, however, the answers differ markedly between those expecting difficulties in repayment and no: among the former, 80% agree with the statement, among the latter— only 46 per cent. And the opposite statement about credit as a service that saves time is not supported by 67 per cent of all respondents (among actual borrowers — 63 per cent).

And 38 per cent agree with the fact that in Russia, credit has become the only opportunity to purchase the desired product "here and now" (47 per cent do not agree). The respondents with current loan obligations agreed with this in 62 per cent of cases, which suggests that the financial possibilities of Moscow borrowers are very limited. Depending on the expectations of difficulties in repayment, opinions were practically not divided on this issue.

Also, 68 per cent do not agree that loan obligations encourage them to work more actively (only 18 per cent agree). Interestingly, among those with an outstanding loan, the number of those who support this statement increases to 31 per cent, and among those awaiting credit problems — there is also 31 per cent against 35 per cent among self-confident borrowers. That is, despite individual credit experience, the majority in any category of borrowers do not find credit as a motivating tool.

The "culprits" of Russians' growing debts are different in the perception of social media users. These are the debtors themselves, who take loans for a new car or the latest smartphone model, these are banks with MFIs ready to "rip it off", this is the state that has brought the country's economy to a situation where citizens are forced to go into unbearable credit debts. And although the latter point of view on the subject responsible for this problem prevails in social media quantitatively, in many cases the inseparability of the interests of financial capital from the highest ranks of state power is emphasized.

⁶ Credits: Attitudes and Practices. FOM (Kredity: ustanovki i praktiki. FOM). 20.09.2019. https://fom.ru/Ekonomika/14260 (Accessed 08.05.20).

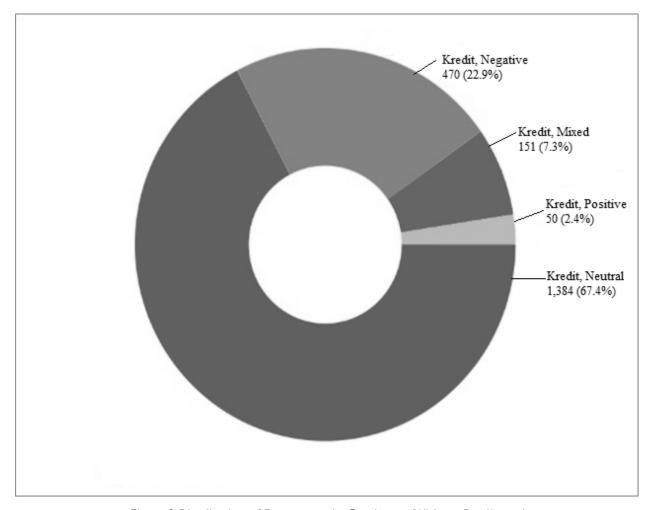


Figure 2. Distribution of Documents by Sentiment (Without Duplicates)

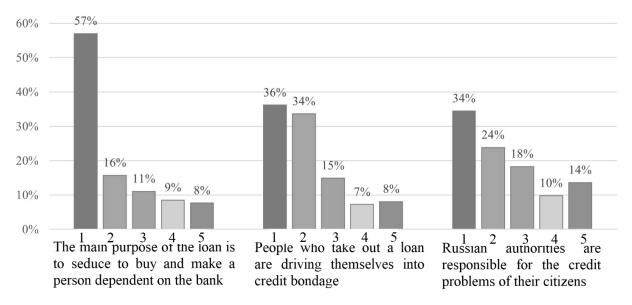
Source: IQBuzz

According to the results of the cybermetric analysis, the messages containing the connection between the problem of Russian debt load and the guilt and ineffectiveness of federal politicians make up almost a quarter of the sample (see Figure 2).

The negative messages were of the following nature: the presentation of the high debt load of the population as one of the results of Vladimir Putin's rule expressing a negative assessment of the latter; hatred of state political initiatives (for example, voting on amendments) due to poverty of the population (debt load and an increase in the number of bankruptcies as its indicators); expression of dissatisfaction with the insufficiency and "cunning" of the credit holidays; the attitude to self-isolation measures as a push into a credit hole; the demands of the left opposition to the authorities to introduce a credit amnesty for the population, the ONF's call to execute the President's decree on credit vacations, etc.

A survey conducted among Moscow residents confirms some of the findings of the analysis of subject discourse in social media. Figure 3 shows how the assessments of all respondents were distributed for each of the "culprits" of the population's credit problems: the statement about selfish banks (73 per cent) received the greatest agreement, followed by the borrowers themselves (70 per cent) and government authorities (58 per cent).

Classification of respondents depending on the presence or absence of outstanding loans and expectations regarding the possibility of repayment will reveal some more features. Thus, the direct borrowers among the respondents, regardless of the expected credit difficulties, were less confident when assessing the statement about their responsibility for the assumed credit burden: 24 per cent expressed absolute agreement, 48 per cent rather agree. Nevertheless, such a high awareness of their choice (72 per cent) as a risk of "enslavement" clearly speaks of the prevalence among Muscovites of a conservative model of



1 Absolutely agree 2 Rather agree 3 Not sure 4 Rather disagree 5 Strongly disagree

Figure 3. Distribution of Answers According to Statements About the Subject of Responsibility for Credit Debts of Russian Citizens (N = 235)

Source: The authors.

consumption of credit services, in which credit is most undesirable, and the culture of fulfilling the obligations assumed is indisputable.

At the same time, there is a very striking difference between the assessments of respondents-borrowers with optimistic and pessimistic expectations of debt repayment regarding the "fault" of banks and the state. Among optimists, 57 per cent and 49 per cent agree that creditors and the Russian authorities are responsible for credit problems, respectively, while debtors who are pessimistic about their ability to repay a loan agree with this in 89 per cent and 74 per cent of cases.

At the same time, the difference between the respondents' assessments is quite striking — this proves that, when realizing the difficulties of their situation, people tend to share responsibility with others, and targeted work with this category of borrowers requires special attention from both credit institutions and government officials.

The results of the correlation analysis between the above variables also confirm some of the observations made (see Table 1). For example, the relationships between the borrower's expectations of credit difficulties and their attitudes toward loans turned out to be statistically significant: a fairly strong positive relationship (r = 0.487) of higher expectations of debt repayment problems

was found with credit pessimism, and, conversely, negative, but weaker — optimistic (r = -0.227).

There is also a significant (with a probability of 99 per cent) average positive dependence of the expectations of problems with loan repayment and "blaming" banks (r = 0.349) and a significant 95 per cent average direct correlation of the same expectations of difficulties and the blaming of the Russian authorities (r = 0.256).

Credit optimism is inversely related to the imposition of responsibility on banks (r = -0.278) and the borrower (r = -0.182) with a statistical error of no more than 1 per cent. Also, at the level of the trend, he has a positive relationship with the financial situation, in particular, with a probability of 95 per cent, there is a significant correlation between an optimistic view of credit and the objective financial situation of the respondent (r = 0.159). It makes it possible to assume that the more secure a person is, the more positive aspects he will find for himself in a loan.

In turn, credit pessimism has significant, close to average, positive links with the assignment of responsibility to all three subjects and with a general readiness for protest political behaviour (r = 0.133) and an inverse relationship with the respondent's financial situation. It tells us that the more a person considers credit unacceptable, burdensome. Still, the only chance to acquire an

Table 1 Defining Pairwise Dependencies Between Variables

Variables	Expecta- tions of credit difficulties (N=79)	Credit optimism	Credit pes- simism	Assign- ment of responsi- bility on banks	Assign- ment of responsi- bility on a loaner	Assign- ment of re- sponsibil- ity on state power	Financial situation (objective) (N=205)	Financial situation (subjec- tive) (N=205)	Total will- ingness to support a govern- ment	Total readiness to oppose govern- ment
Expectations of credit difficulties (N=79)										
Credit optimism	227*									
Credit pessimism	.487**	.141*								
Assignment of responsibility on banks	.349**	278**	.217**							
Assignment of responsibility on loaner	800.	182**	.134*	.483**						
Assignment of responsibility on state power	.256*	057	.196**	.173**	.142*					
Financial situation (objective) (N=205)	551**	.159*	237**	980:-	.017	121				
Financial situation (subjective) (N=205)	583**	.136	207**	082	.043	058	***			
Total willingness to support government	.013	.115	.063	056	.044	071	.011	.106		
Total readiness to oppose government	.284*	052	.133*	.231**	.073	.119	046	147*	190**	

N=235 if nothing else stated.

** Correlation is significant at the 0.01 level (two-tailed).

*. Correlation is significant at the 0.05 level (two-tailed).

Source: The authors.

Determination of Dependencies Between the Variables of Financial Well-Being and Readiness for Certain Forms of Protest Activity

Variables	Total readiness to oppose govern- ment	Vote for opposition	Sign petitions against govern- ment's measures	Participate in anti- govern- ment organiza- tions	Participate in sanc- tioned rallies against the govern- ment	Participate in non- sanctioned rallies against the govern- ment	Support organizations with money, oppose the government	Participate in violent actions against the govern-	Volunteer with an organiza- tion that is opposed to govern- ment	Participate in the creation of an anti-government organization
Expectations of credit difficulties (N=79)	,284*	,190	,267*	**60£'	,268*	,184	,271*	,170	,301**	,232*
Assignment of responsibility on banks	,231**	,206**	,237**	,244**	,144*	,146*	,166*	,112	,187**	660'
Assignment of responsibility on loaner	,073	,064	980'	,071	,022	,034	,023	,019	,064	,046
Assignment of responsibility on state power	,119	,040	,109	,171**	060'	090'	260'	,138*	,151*	,083
Financial situation (objective) (N=205)	-,046	,023	-,077	-,085	500,	-,033	-,012	-,118	-,103	-,088
Financial situation (subjective) (N=205)	-,147*	-,056	-,156*	-,131	-,100	-,150*	-,119	-,187**	-,119	-,181**

N=235 if nothing else stated.

 ** . Correlation is significant at the 0.01 level (two-tailed).

*. Correlation is significant at the 0.05 level (two-tailed).

Source: The authors.

expensive product, the more he will blame banks, the state, and even in fewer cases, himself for the credit risk taken.

Such a person will be more inclined to take actions to express his lack of power support. And, most importantly, more often this position will be characteristic of people with credit difficulties and poorer financial position (a strong inverse correlation was revealed between the expectation of more serious credit problems and higher financial status, and this relationship with the respondent's objective material position (r = -0.551) slightly less compared to his subjective rating (r = -0.583)).

Speaking about the possible impact of credit debt on the political behavior of citizens, we immediately note that no statistically significant correlation could be established between the variables of credit and financial issues and the willingness to support the current government in various ways (this factor had the highest correlation with credit optimism (r = 0.115)).

However, some tendencies were established by referring to the variable of readiness to oppose the government and its policies through various forms of political activity (see Table 2). So, this factor in total terms with a probability of 99 per cent positively correlates with the respondent's assignment of responsibility for credit debts to banks wishing to make the borrower dependent on themselves (r = 0.231). At the same time, with an error of 5 per cent, the average direct relationship with the expectations of difficulties in repaying a loan (r = 0.284) and a weaker inverse correlation with the subjectively estimated favourable financial situation (r = -0.147) are significant. It follows from this that the respondents expect the greater difficulties with their credit debt, and the worse they assess their financial situation, the higher their readiness as a whole to oppose the government.

Let's see how the factors we are considering affect certain forms of readiness for protest activity. The strongest direct correlations with the expectations of credit problems — the readiness of respondents to such forms of non-support of the authorities as participation in the work of public and political organizations opposing the government (r = 0.309), work in such organizations as a volunteer (r = 0.301), as well as financial support for such organizations (r = 0.271), participation in anti-government sanctioned rallies (r = 0.268) and

signing collective petitions and appeals against government measures (r = 0.267). The subjective material situation of the individual, which is interesting, demonstrates a lower in strength, but statistically significant negative relationship with the readiness for various forms of expression of disagreement with the state authorities: with violent street actions (r = -0.187) and with participation in the creation of a public organization (r = -0.181), as well as signing petitions (r = -0.156) and participation in unauthorized rallies (r = -0.150).

But the dependences of the respondent's objective financial position on any form of protest activity are insignificant. The same can be noted regarding the degree of agreement with the fact that the borrower is driving himself into "credit bondage".

At the same time, the assignment of responsibility to banks showed as many as four significant (with a probability of 99 per cent) correlations with such forms of non-support to the government as participation in the work of public and political organizations (r = 0.244), signing petitions (r = 0.237), voting in elections for opposition (r = 0.206) and work as a volunteer (r = 0.187). It means that the more the respondents agreed that a loan is a means of making a person dependent on the bank, the more people among them were willing to participate in organizations independent of the government, sign collective letters against the government and vote for the opposition in elections.

At the 95 per cent level, this factor also affects other forms of protest, but the correlation coefficient is even lower there. According to the author, such a connection between attitudes towards credit and readiness to oppose the authorities in various forms can be explained by a vivid negative interpretation of unfreedom — the dependence contained in this statement, since the relationship of credit debt can be directly associated with forced restrictions, so unacceptable opponents of state authorities.

The respondents are more inclined to believe that it is the authorities who are responsible for the population's credit problems, are more willing to work in organizations that oppose the course of the official authorities (r = 0.171), to a slightly lesser extent — to work as a volunteer (r = 0.151) or to participate in violent protests (r = 0.138).

Conclusions

As a summary of the work, let us pay attention to some observations based on the analysis of empirical data. The analysis of the discourse clearly showed that the problem of the growth of the credit burden of the population and the difficulties encountered in repaying loans does not go unnoticed in social media, and, although it is not a central topic of discussion, it is regularly updated in a variety of news items.

On the Internet, in the vast majority of cases, the loan is perceived extremely negatively and is often associated with expressions such as "debt hole" and "credit bondage". This, as well as the agreement of 73 per cent of Muscovites surveyed that the task of a loan is to make a person dependent on a bank, speaks of the attitude of citizens towards the institution of lending as a selfish mechanism of encumbrance and the following restrictions. Due to the high awareness of the need to repay debts (82 per cent of Russians believe that loans must be repaid in any situation), loans, which, according to 63 per cent of Moscow borrowers, are permissible only in hopeless cases, do not stimulate borrowers to earn more money, but rather activate savings a model of behaviour or, more simply, a model of the economy in the context of a decrease in real disposable income, which negatively affects the subjective assessment of an individual's financial situation.

However, the existence of a current loan in itself is not always associated with a poor financial situation (no significant connection was found here). And this is explained by the fact that 56 per cent of those surveyed who turned out to be valid borrowers expect that they will easily or with little difficulty repay their loan, while 40% are preparing to face great difficulties or will not be able to repay the debt at all. And it was precisely between this factor and the respondent's material position that a very strong inverse correlation was found: the greater credit difficulties an individual expects, the worse he estimates the level of his economic wealth.

Correlation analysis also revealed an important trend that answers one of the research questions: indeed, the expectation of serious problems with loan repayment directly affects the growth of protest sentiments among such borrowers, expressed in a higher readiness to participate in various forms of political activity aimed at opposing the government and its policies.

Interestingly, the strongest significant correlation was found with the willingness to participate in and volunteer in anti-government public and political organizations. This fundamentally does not confirm the theory of protest political participation, provided with appropriate time, material and other resources, since credit difficulties in fact mean an insufficient amount of resources for engaging in social and political activities within the organization after all the costs of overcoming the negative consequences of credit.

It should be noted, however, that willingness to participate does not always translate into participation itself. However, in this case, it also becomes unclear what is the reason for the lack of a more noticeable direct connection between credit difficulties and voting for opposition candidates, because voting as a voter is a much less costly event. However, the answer to this and other questions has yet to be given with the help of new research, not limited to a sample of residents of a very specific political life of the capital.

This work also demonstrated that the perception by the population of the current Russian economic model as unfair is valuable for building the entire economic policy in the country, in particular with regard to the redistribution of financial resources between business entities, which is connected with the memory of a financially stable and much fairer memory preserved in the minds of some part of the population about the life in the USSR.

Analysis of the discourse in social media has also established that credit problems have their "creators", those subjects that, in the opinion of citizens, are to blame for their existence. These include, firstly, lenders, that is, first of all, banks and MFOs, secondly, the borrowers-households themselves, and thirdly, government authorities that did not prevent or even contributed to the acceleration of the debt burden of the Russian population.

On the Internet, because of its specificity as a platform for expressing opinions, in a quarter of all cases of discussion of the problem of Russians' debt burden, responsibility is laid on the state and its official authorities. Less often — on other subjects. A mass survey conducted among social media users from Moscow showed that in the

greatest number of cases, citizens agree that, first of all, a loan is needed in order to tempt people to buy and, as a result, make a person dependent on a bank (73 per cent).

Also, the overwhelming majority of those surveyed agree that the borrower condemns himself to a loan. Among real borrowers, there are even a little more of them, which, along with the prevailing negative attitudes towards credit, characterizes the prevailing conservative model of credit behaviour of Muscovites, however, when using this information, it is worth remembering that the declared attitudes are not always implemented in behaviour, as evidenced by the "Lapierre paradox" [Davydenko, 2014, p. 26]. A little less often, Moscow respondents agreed that the credit problems of citizens are the responsibility of the state authorities (58 per cent); nevertheless, their number is significant.

Among those who expect great difficulties in repaying their loans, the number of those who impose responsibility on banks and the state is significantly higher, which is consistent with the fact that people who are tolerant of credit are more inclined to write off responsibility for failures on others or bad luck [Lebiedev & Gordyakova, 2016, p. 80]. Despite the clarified link between blaming the lender and the authorities with credit pessimism and the expectation of credit problems, the question remains: is there a relationship between these characteristics and an individual's trust in banks, MFIs or key political institutions of the state.

The answer will make it possible to ascertain to what extent the shifting of responsibility to the lender and the state will contribute to a decrease in confidence in them in the event of an increase in problems with loan payments. Closely related to this issue is the tendency, confirmed in the Moscow sample, that people who are inclined to treat credit as a means of driving the bank into "credit bondage" express a greater readiness to engage in political activity that opposes the official authorities.

Speaking about the costs of work that influenced the result, it should be noted that, like cybermetry, and the mass survey was conducted at a time of growing uncertainty and general irritation with the pandemic situation and its economic consequences, which could affect the respondents' assessments of their ability to repay

the loan. and readiness for one form or another of political activity, as well as on the emotional state of social media users.

This allows us to regard the presented results as reflecting not only the attitude of Russians to credit and their political moods, but also the reaction of the population to the current events of 2020, which challenge the maintenance of the previous quality of life, and therefore, as the world experience of recent years shows, they are also "fuel "For the flaring fire of social protests [Shek, 2020, p. 633]. Therefore, in order to confirm or deny the relevance of these results for the conditions of a more predictable reality, the following measurement of public mood should be carried out.

A second note for further work could be the development of a broader set of statements to assess credit optimism and pessimism, as well as the responsibility that citizens, creditors and authorities place upon themselves. In addition, the sample of respondents should be expanded both quantitatively and by expanding the regional coverage of respondents in order to neutralize the specifics of the social dynamics of the megalopolis, which is Moscow.

Directions for further research in this problem area can be deepening knowledge about the influence not only of citizens' attitudes towards credit but also to such related categories as debt and interest rate, that is, the price of a loan, as well as the development of specific models of political behaviour depending on the degree of credit load and (not) incoming difficulties in its repayment. The study of these issues will allow us to form a more detailed picture of the mutual influence of credit relations, in which the individual is and can potentially be, and his political moods and (not) readiness for various forms of participation in politics.

* * *

This study has shown that the responsibility of the borrowers themselves for the loans they have taken and their perceived obligation to repay debts in any situation puts people in a disappointing and frustrating position when credit difficulties arise.

It, firstly, is reflected in the fact that the deterioration of subjective and objective material well-being, apparently, is possible even before the physical impossibility of repaying the loan, which is manifested in statistics in a reduction in loan payments and an increase in overdue debt, since a conservative borrower will continue to bear his credit obligations to the bank, even if this will lead to a decrease in the quality of his life until the subsistence level is reached; secondly, the difficulties in repaying the loan by Muscovites, despite the routine continuation of payments, probably contribute to the desire to share responsibility for these problems with the bank or the state, which in turn is expressed in the increased readiness for protest political activity.

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Рост кредитной нагрузки на домохозяйства через призму социального восприятия, кредитоспособности и политических взглядов россиян Олег Григорьевич Новиков^а, Никита Козлов^ь

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Аннотация. 2020 год демонстрирует очередной всплеск гражданской нетрадиционной активности в мире из-за эпидемиологической ситуации и связанных с этим государственных ограничительных мер. В России на фоне «корон-кризиса» и падения реальных доходов розничное кредитование домашних хозяйств продолжает расти вместе с увеличением их просроченной задолженности. Ухудшение экономического благосостояния россиян вызывает вопросы о возможности усиления политического протестного поведения граждан и о том, насколько на их готовность влияет ухудшение финансового положения из-за трудностей с погашением своих кредитных обязательств. Авторы использовали методы киберметрического анализа и массового опроса, исследуют восприятие кредитной проблемы россиянами, их оценку причин и «виновников» (государство, банки и сами заемщики). В статье также отмечаются некоторые тенденции взаимной обусловленности на индивидуальном уровне кредитного отношения россиян, их финансового благополучия и готовности участвовать в различных формах проправительственной и оппозиционной политической деятельности. Авторы приходят к выводу, что наиболее распространенная консервативная модель кредитного поведения россиян способствует скрытому ухудшению субъективного благополучия заемщиков, что не всегда приводит к снижению кредитных выплат. Это, в свою очередь, приводит к желанию разделить ответственность за эти трудности с кредиторами и государством и, возможно, повышает готовность к протестной активности.

Ключевые слова: кредитная задолженность населения; протестная деятельность; кредитное отношение; кредитное поведение

The Economic Theory Behind the Global Climate Change

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Abstract

This article touches on several polarising subjects in the world environmental crisis. The author attempts to classify the main ideas that can have the same venomous level of disagreements, such as the issue of climate change or global warming. The argument is supported by a healthy majority of people who work in the field with a vocal minority of dissenters as well. The article starts with models about economic growth and the energy industry and how those interact to produce carbon emissions. The author tries to analyse models of how carbon emissions affect climate. Finally, the article outlays the models of how climate affects economic output and health projecting into the future. The research concludes by adding some additional models of how policy changes might affect all of this.

Keywords: greenhouse gas emissions, global climate goals, decarbonisation, global warming scenarios, green economy and investment, cost and benefit analysis of investments in the green economy, zero discount rate. JEL Classification: F37

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1. Introduction

Just to set the stage in advance what sorts of reaction we usually get when speaking on this subject. One group will come up and say mournfully or angrily that they are so sorry to see an otherwise sensible person by all the hype by greenhouse gas warming; when reasonable people all know it is a scam rather than environmentalists using it as an excuse to implement their anti-consumption and anti-growth agenda. The other group will come up and say mournfully or angrily that they are so sorry to see an otherwise sensible person raising questions about whether greenhouse gas warming is really a looming disaster. Because we all know that if we do not slash global carbon emissions right away, the level of the ocean will rise by 20 feet and the world economy will be destroyed by raging hurricanes and extreme weather. Therefore, the article is just going to brace itself against both of these sets of reactions and proceed by talking about the scientific argument for climate change (Boddin, Stähler, 2018).

The basic notion of the global climate change is that sunlight comes down, and it hits the Earth. Some of the sunlight is absorbed into the Earth as heat. Some are reflected or radiated back into space. If the amount being radiated back into space is reduced, then the Earth will tend to get warmer. Some gases absorb outward infrared radiation. Carbon dioxide is the most prominent of these gases. Others include methane, nitrous oxide and various chlorofluorocarbons. You can see around the Solar System. What happens when you get different build-ups of these kinds of gases? The Planet Venus, for example, has so much greenhousegas atmosphere that water cannot exist as a liquid on the planet. So, there is steam instead. Mars has so little greenhouse atmosphere that water cannot exist as a liquid on Mars. And if water does exist on Mars, it would be frozen. Earth is the godly luck's planet, not too little, not too much, just the right amount of these various greenhouse gases. Thomas Schelling, a Nobel laureate economist, who spent recent years in Maryland, has pointed out that the

science of greenhouse-gas warming really is not about greenhouses. The way actual greenhouse gases work, as Shelling points out, is they trap air that is warmed by contact with the ground, which is heated by the sun. In other words, greenhouses have nothing to do with carbon dioxide. A better illustration, Schelling has pointed out, is that citrus growers and wine growers use smudge pots, i.e. little pots that burn crude oil. When temperatures drop down in a way that would threaten their crop of grapes or another citrus, it is not the heat from the smudge pots that matters. Instead, on a still night, the pots produce a blanket of carbon dioxide that captures some of the heat radiating from the ground and thus keeps the fruit from freezing. However, the smudge-pot effect does not nearly have the public relations sing that climate change or global warming does. It is probably a two-way point than an alternative name to stick (Beetsma, Giuliodori, De Jong, Widijanto, 2016).

2. International Programs Aimed at Preventing Climate Change

The most prominent international organisation involved with the climate change issue is the Intergovernmental Panel on Climate Change (or the IPCC). The IPCC is in the news a lot both for its reports and because it won a Nobel Peace Prize back in 2007. The IPCC was set up by two organisations: The World Meteorological Organisation and the United Nations Environment Programme. With these parents, it is maybe fair to say the Organisation is a little conflicted. It describes itself as a quote "scientific intergovernmental body", which is a little bit like saying a very musical manufacturing plant. The two parts do not always go together all that well. The IPCC does a lot of scientists working with it, and it does have big meetings every few years with lots of government representatives present to hear all the reports that are produced (Cohen, 2012).

Sometimes worries leak out that their reports are tinkered with a little bit around the edges to suit the governments in one way or another. The middle range IPCC estimate based on various assumptions about economic growth, emissions, and climate is that world temperatures are right

now on line to rise by 2.8 °C by the year 2100. If this happens, a lot of possible changes will result. There would be more precipitation at high latitudes, for example, less precipitation at tropical areas. There could be melting snow and sea ice. There could be extreme weather like more heatwaves, more droughts, more tropical cyclones. All of these weather patterns would involve costs, involving agricultural production, the potential cost to health, water supplies and coastal protection as well. The economic losses from this mid-range estimate of warming are smaller than maybe you might expect, at least for the world as a whole. The standard estimates are that 3 degrees of warming by 2100 could lead to a fall in world GDP of 3% at that point (De Haas, Horen, 2011). The reason that is so small is that warming helps some areas of the world but hurts others.

For example, it looks likely that say, Russia, North America and China could benefit from global warming as their climates became a little warmer while, say, Africa, Latin America, South Asia and Western Europe would probably suffer from global warming (Johnson, 2013). Also, a lot of the world economy just is not all that dependent on temperature and precipitation one way or the other, so, it is not strongly affected by the possibility of climate change. Because scientists take the lead in writing these IPCC reports, they acknowledge as scientific professionals that there is a range of uncertainty here. Temperatures could rise more or less than the middle of the estimate. Say, the range often cited is from 1.8 degrees up to 4 degrees Celsius by the year 2100. At the upper end you get a much greater risk of some difficult to describe extreme changes in weather, say, like change in circulation patterns in the Atlantic Ocean and cooling off Europe or a shift in monsoon patterns of South Asia, or perhaps melting the West Antarctic ice sheet in a way that could raise ocean levels around the world (Kadayan, 2014).

Standard estimates, the middle-level estimates are sort of an average. They assume in a way that the very worst outcomes are not going to happen, but if some of the more extreme events do occur, or say, if the weather helps facilitate the spread of disease, the costs of global warming and climate change could get much

higher in a hurry. It is fair to say, though, that for some analysts the main worry about global warming is not the mid-range scenario which can be dealt with in various ways, but it is hard to evaluate the risk of extremely high-costs scenarios. The costs of global warming rise over time as the extent of global warming increases. For example, one projection found that the costs of global warming would be something like 1 per cent of world GDP by 2050, then up to about 3 per cent of world GDP by 2100, rising to 13 per cent of world GDP by 2200 as the warming continued overtime (Dorrucci, McKay, 2011). Clearly, there is a lot of uncertainty in these kinds of discussions of what could happen with climate change. It might be the best we can do right now, but to put it mildly, it is some wiggle in these kinds of numbers. It is easy to find scientists on one side who argue that the IPCC forecasts are too mild and have been watered down to some extent by governments. It is easy to find scientists who claim the IPCC forecast are overstated and have been hyped up to some extent by governments.

The conclusion from all this controversy is the extent of uncertainty is probably understated. In other words, things could be better than the best IPCC scenario. It could be worse than the worst as well. A considerable number of climate scientists do believe that global warming is a real and dangerous phenomenon. A smaller minority disagrees. Maybe the tiny minority will eventually turn out to be right. It would not be the first time that a small minority turned out to be correct. But when the bulk of experts in a certain area believes something, it is wise to assume that there is at least some probability that the majority is correct. We can quarrel over that probability that they are right is 99% or 90% or 50% (Gourinchas, Obstfeld, 2012). But how one can reasonably say that there is zero probability that the majority of experts are correct about something. They probably are on to something. When there is a risk of something wrong happening, the standard economic response is to think about whether it is possible to buy insurance. In fact, policies about global warming are a kind of insurance. Just as you pay for insurance on your home or your car, and you hope the wrong thing does not happen or is not as bad as you feared. We

need to think about what kind of insurance does it make sense to buy for global warming, in a public policy sense and of course we will hope that the wrong thing does not happen or is not as bad as we had feared. Of course, to makes sensible decisions about the insurance, you have to decide how bad is the risk, and how much insurance it makes sense to buy. It does not mean, of course, you purchase vast amounts of insurance against relatively small risks. But taking out zero-insurance is not usually a sensible approach if you confronted with risks that are real.

Evaluating the problem of climate change involves some difficult questions about how to value costs and benefits. Let us first talk about the general problem of how policy might deal with events that have maybe a relatively low probability of happening like some of the worst outcomes of climate change. Still, if they do occur, they have a very high cost. The underlying approach here following the standard IPCC estimates is to say the most likely scenario for climate change right now is one of moderate warming with moderate costs. We would deal with this with some combination of moderate strategies, a mix of, say, reducing energy usage and paying to mitigate some of the other problems that arise like flooding or changes in agricultural yields as they happen. If it is a middle-range problem, it is not a world-changing problem. But the IPCC evidence also suggests there is some lower probability chance that the most likely scenario is not what happens. There will be either very warming or very high costs resulting from moderate warming (Khan, Zhao, Zhang, Yang, Haroon, Jahanger, 2020).

3. The Catastrophic Scenario and Mega Risks in Global Climate Change

Much of the concern over climate change is not about the moderate scenario. It is about the risk if something perhaps less likely, but very, very bad happening. How do we think about these kinds of risks? Richard Posner, who is a Federal Judge and Law Professor of the University of Chicago, is well-known among economists for his writings in the area of law and economics, posed this question back in 2004 in a book called Catastrophe. It was about how you should respond to low risk,

high-cost events. He includes global warming as being in this category. He also uses the useful law-professor approach of trying out some other examples to draw out our intuition on the overall issues here. For example, what is a chance of a large asteroid hitting the globe in the next one hundred years? Maybe there is one chance in a hundred million of say 1.5 billion people dying. Small chance — large lousy outcome if it does happen. What about a chance of a severe bio-terrorist attack? Say, there is one chance in a hundred thousand that an attack like that will kill 100 million Americans at some point in the next one hundred years (Lane, Milesi-Ferretti, 2011).

What is the appropriate policy response to lower probability, high-cost events? Of course, one might make some generic statements here. If the probability of the event gets bigger, you should spend more to avoid it. If the probability is smaller — then spend less. If the potential cost is more significant — you spend more to avoid it. If the potential cost is smaller — you should spend less. You can also note that people are often not very good at thinking about these kinds of low-probability risks. People tend to either overspend because they base all their actions on the fear of the immense possible loss or else they brush it aside, and they spend nothing because they say there is not very much chance it is going to happen. A more rational approach has to balance these two possibilities, search for ways to reduce the mega risk because it is so big, but not try to eliminate all risk because there is a relatively low chance of that lower of the worst outcome happening. So, stick to relatively low-cost approaches in the present, but build up overtime.

For example, what one might do if one took the asteroid risk seriously? One might start an agency, for example, that would formulate a plan for disrupting the flight of an asteroid, who would begin early monitoring of possible asteroids so that we would know their coming sooner. Eventually, the goal of this agency would be to act in the time that we have available for early warming if we knew an asteroid was likely to hit. We might also have that agency think what steps the globe would take if an asteroid were on its way. They could produce an annual report for what concrete steps we might take for

dealing with the aftereffects. These policies might have useful spinoffs. Monitoring asteroids might well have some scientific benefits. Emergency plans for an asteroid strike might also be helpful if, say, a significant tidal wave or an earthquake or a volcanic eruption occur. Notice this plan does not eliminate the risk of a massive asteroid strike. Maybe, instead of its being something that is one in a hundred million of happening, we could perhaps do something that would make it be one in a billion instead. Or instead of something that would cause 1.5 billion people to die, maybe only a hundred million people would die in the asteroid hit. But the risk does not go away.

One needs to balance the reduction in risk against the costs during occurring. In the realm of climate change and global warming, we need a sense of these catastrophe scenarios in this way. We need to do something to think about them. But nothing is particularly gained by making a really broad claim that most scientists agree the catastrophes are near-term and high probability. That is not what the IPCC reports say. Most scientists do agree that global warming is a real problem with high costs that extend off to the future. But that is very different from believing that it is a high-probability catastrophe just about to happen. So, the broad approach would be to balance the costs of action with reductions in risk and reductions in harm.

The costs of dealing with climate change are incurred relatively close to the present. The benefits are much further off in the future. In fact, the benefits might be hundreds of years into the future. One prominent report on climate change that came out in 2006 by very eminent British economist named Nicholas Stern estimated that climate change would reduce world GDP by an average of 1% per year over the next century. Still, the total loss overtime would be equal to 14 per cent of world GDP. How do you get from 1 per cent average over the next century to 14 per cent average overtime? (Milesi-Ferretti, Tille, 2011). It turns out when you look at Stern's calculations more closely that half of the losses he suggests will happen from climate change happen after the year 2800. It is eight centuries from now. So, yes, you ask yourself a question, if we are going to have costs of reducing carbon emissions right now and ask

if it is worth the benefits, should we be paying to benefits that are more than eight hundred years off in the future? While you definitely want to count benefits in the future, the further off the benefits are in the future, the less you want to count them. In other words, benefits that arrive next year or in a decade should be calculated as worth more than benefits that come several centuries off in the future. A lot of non-economists do not like doing this. How can you say life in the future is worth less than a life in the present? All lives are equal. You can hear the rhetoric. Other people say we just do not want to mess up the environment, not now, not ever. It does not matter to meet the timeline, or how of the future is. That view is something that people might not believe if they thought about it more closely. Do you want to place the same value on someone who lives three generations from now or fifty generations from now as you place on someone alive today? There are so many future generations out there. Is it really the problem of this generation to pay for every possible action that might affect the entire future of the human race? Sure, maybe we have a responsibility to start in the right direction. But do not they have some responsibilities too? After all, the odds are good that people in the future will have vastly better energy technology, considerably better health care, vastly longer lives and a higher standard of living. Should not they have some responsibility as well?

There is a funny line attributed to Groucho Marx. He says, why should you care about posterity? What has posterity ever done to us? Economists would say that Groucho ignores the future. He is discounting future benefits at a very, very high rate. But ignoring the difference between the near-term and the future does not make sense either. The amount by which you count the future less than the present is what economists call the discount rate. If you ignore the difference between the present and the future, basically you are saying your discount rate, the amount you discount the future is zero. As a result, anything happening eight centuries from now should count just as much to you as something happening this week. If you think this sounds a little crazy, you do not believe the discount rate ought to be zero. We can argue

what the discount rate ought to be -1 per cent a year, 2 per cent a year, but saying it should be zero is a very extreme choice (Obstfeld, 2011).

Let's use a calculation that is due to the eminent economist William Nordhaus at Yale University. Suppose, hypothetically, we discovered that all the costs of global warming would happen after the year 2200, and more specifically, suppose that after 2200, there is a 90 per cent chance nothing occurs as a result of global warming. Still, there is a 10 per cent chance that incomes for all the rest of the human future will fall by 0.1 per cent per year (Ostry, 2012). If you use a zero discount rate for the future, so that 10% chance of a 0.1 per cent fall as equally as bad that happens today, it would be worth paying something like 4 trillion dollars right now in the present to avoid the risk of something happening off in the future, even though it is only a 10 per cent chance if it is happening at all, even though it is only after the year 2200, because if you lose 0.1 per cent a year for the entire future of human history and you do not discount the future, that adds up to a lot of money over the millennia (Patil, Kulkarni, 2011). Here is another hypothetical. Imagine two policy actions can reduce climate change. They have equal cost. Let us say one of them saves ten thousand lives in ten years. Another saves eleven thousand lives, but only after 800 years. You need to choose which one to focus on. Save 10,000 lives of people currently alive, or save 11,000 lives of our descendants maybe thirty generations into the future.

Given those specific numbers, people would choose the present, because they place a higher value on the present lives than they do on those in the distant, distant future. Those who favour action on climate change tend to choose low discount rates for the future because it makes the benefits in the future look so prominent in the present. But it is worth thinking about where this logic goes if you really follow it out. For example, what happens, if someone says they fear nuclear proliferation or weapons of mass destruction? Some will argue that if we let this spread, then fifty or a hundred or two hundred years from now, we might have a devastating war. Suppose there is no discount in the future. In that case, we need to treat the future costs of that devastating war two hun-

dred years in the future as if they are happening right now, and that could easily just favour cost of short-term war right now, because of that risk of some catastrophe, many decades or many centuries in the future. Or put it another way, given the many social problems — health, education, nutrition in the US and around the world, would you favour a crash multi-trilliondollar worldwide programme for dealing with the chance of an asteroid hitting a few centuries from now? If you do not discount the future, you pretty much have to say, well, asteroids can happen, see it some time, it might be 10,000 years, it might be 500,000 years. But with no discounting for the future, we need to face 100 per cent of those costs right now (Reinhart, Rogoff, 2011).

A zero-discount rate has a natural effect that makes it very important to deal right now with big problems that could be away off in the future. Almost any positive discount rate — 1, 2, 3 per cent a year — means that you end up just not worrying too much about anything that is several hundred years off in the future. What discount rate you choose is probably more important for your thinking about climate change policy. Then all the rest of the uncertainty in the economic and meteorological models about costs and benefits put together (Rousseau, Wachtel, 2011).

Another difficulty is climate and its effect on technological progress. A tropical climate tends to have certain economic consequences. Look around the world. Poverty is in general, pretty close to the equator. Wealthier nations tend to be further away from the equator with, of course, a few exceptions. Even within Africa, the high-income countries are the southern ones like South Africa. If you look in South America, the high-income countries Argentina and Chile are far to the South. Because there are high temperatures at the equator in Africa, people tend to live away from the coast where would be hot and up in the mountains and highlands, which, of course, made transformation costs for products even more stringent.

In an equatorial zone there tends to be less food production. A temperate climate with winter has various advantages over a tropical climate. Winter kills bugs and pests. It breaks up the soil. It helps to fertilise the soil. A cycle

of freeze and melt and water flow makes the soil much more fertile. Plants tend to grow better when it is warm in the day and cool at night, not when it is warm in the day and the night. Areas that are right in the equator tend to have lower overall rainfall, especially in coastal regions and greater heat. The summer in temperate areas actually has longer days. The days get longer and shorter. In the winter, the days are shorter. But around the equator, all the days are roughly the same length. And that does not actually help growth very much. Around the equator there tend to be seasons of weighty rains and parched weather which tends to bleach out the soil. So, there are a lot of reasons why crops do not grow as well around the equator as they would in more temperate areas (Salisu, Akanni, 2020).

4. Global Reform of Agriculture

One last big area to talk about is a reform of agriculture. Agriculture is still the primary sector of output in most emerging economies. At the end of the 20th century, something like three-quarters of Africans earned a living in the agricultural sector, and they produced something like one-third of GDP. In a way, this is a sort of a pattern you expect that in very low-income countries at a much earlier stage of development. Here is a quick overview of a key fact. For most of the last three to four decades, the difficulty was that farmers in Africa did not earn very much. They did not earn very much partly because the price of food was low and falling overtime and partly because the governments in these countries often put price controls on food to keep the city dwellers who bought the food happily. With all those people working in farming are not earning much, maybe the fundamental problem about farming in Africa was it did not generate enough income. Farmers had to make a subsistence living. Staring in 2005 or 2006, and on for several years after that, the price of food rose dramatically all over the world. As a result, many farmers in Africa were getting a lot more income than ever before. The new problem is that the urban poor and countries that need to import food are having to pay a lot more in terms of higher food prices. So, the main problem for African

agriculture used to be low prices leading to low incomes for farmers. Now the question is high prices leading to a lack of affordability for food. Economists are always unhappy about something. From the long-run economic view, the story with agriculture is simple enough. Africa needs to get productivity up in agriculture. That will raise incomes. That will generate more food, and it will start the process of sectoral adjustment, where the country does not need as any farmers, and those folks can begin to work in manufacturing or services instead (Kasekende, Brixova, Ndikumana, 2010). There are a lot of technologies available to move beyond home technology or peddle power or animal fertiliser. However, a lot of research needs to be done on crops for African climates. There need to be more irrigation projects run and maintained by farmers. And it could also use a little more rural infrastructure like roads and electricity. Many African nations have made their gains in education and health, but there is a lot more to do. There are state-owned companies to be privatised.

Pollution, of course, is a real problem, but it is also a problem that can be addressed at some cost. For example, air and water pollution in the United States and Europe have in general been getting cleaner for several decades now. Apparently, an advanced high-income economy can afford to pay for lower pollution overtime. The big exception here is the risk of carbon dioxide emissions, and some other gases lead to climate change. There are conversations about fossil fuels and climate change, and someone says the world is just about to run out of oil and fossil fuels. Maybe in a few decades. And then about three sentences later, they worry about climate change, which is based on burning fossil fuels at rising rates, not only through the 21st century but for centuries beyond that. What is weird, of course, is that one worry is about running a fossil fuel in a few decades and the other is about burning it for centuries into the future. You cannot believe in both of these. If we are about to run out of fossil fuels, well, it really will help a lot with global warming. And if we are supposed to worry about climate change, because we are burning fossil fuels all through next century and the centuries to come, it is

pretty clear that we ought not to worry about actually running out (Tripathi, Kaur, 2020).

The other significant source of demand for food products is bio-fuels. A bio-fuel is something like ethanol, a fuel that is made from farm products and then can be used as a partial or a complete substitute for gasoline. Ethanol is the most common biofuel in the US made from corn typically added to gasoline. Biodiesel which is made from corn and also from oilseed is the major biofuel in the European Union. In major high-income agricultural countries, about 20 to 50% of the production of corn and oilseed are actually going to make biofuels. In the US, for example, about one-quarter of the corn crop toward the tail-end of the first decade of the 21st century is now going to ethanol, and that share is rising over time. In 2005, actually, the US overtook Brazil as the leading producer of ethanol around the world. In the last few years, both the US and Europe have put billions of dollars of subsidies in place so that they could meet aggressive goals for increasing production of biofuels. In the late 2000s, the US incentives were worth about 7 billion dollars a year (Vayanos, Woolley, 2013). It is just an enormous change in food markets.

The promise of biofuels was two-fold. One was that it would be a substitute for oil and help reduce oil imports. The other was an environmental promise that it might reduce pollution and particularly greenhouse gas emissions. Roughly speaking, the image of biofuels was something like this. First, you grow the crops. And in growing the crops, they absorb carbon dioxide. You turn those crops into fuel. When you burn the fuel, you create carbon dioxide, but then when you grow the crops, you absorb it back into the crops again. It is kind of a mental image, but it does not quite hold true. After all, it takes energy to grow corn in modern agriculture. It takes oil-based fertiliser. It takes tractors. It takes energy to turn corn into ethanol. It takes energy to transport it. And it starts clearing extra land to grow crops for biofuels that carbon from clearing that land gets released into the air as well.

Agriculture also has several environmental costs like high chemical use or runoff going into streams and rivers. Moreover, ethanol does not have a mile per gallon that is good as pe-

troleum. So, you need more gallons when you are driving with ethanol. At the end of the day the study suggests that if you take corn-based ethanol and you displace a gallon of gasoline, it saves maybe 10% of the gasoline you displace. The other 90 per cent went into making the ethanol. Depending on whether the additional land was cleared, this is or awash for greenhouse warming, or it could in some cases even make the climate change the issues somewhat worse. There is also a very modest gain on oil here. If you used 100 per cent of US corn crop for ethanol, it would replace less than 15 per cent of the total fuel that is used for transportation in the country. And there is the very modest gain if at all in terms of climate change (Yu, 2014). However, turning to biofuels is a major contributor to higher food prices around the world and thus to undernourishment and hunger all over the world. There is one World Bank estimate which says that the amount of grain you need to produce enough ethanol to fill the gas tank of a typical sport utility vehicle is actually enough grain to feed a person in a low-income country for an entire year, so the next time you fill your tank with an ethanol mix feeling all good about yourself, you need to sort of mould that fact over. The criticism of biofuels here is really focused on corn-based ethanol and to some extent on oilseed used for biodiesel. It is just not the best crops for producing ethanol.

In Brazil, they have been making ethanol for a lot of time out of sugar. Sugar turns out to be a considerably better pay-off in terms of gas savings, and also better in producing carbon emissions. Nevertheless, pushed by aggressive legislative targets for biofuels in the US and Europe and lots of political pressure from farm producers, it seems pretty much clear that at least for a few years, biofuels will continue putting upward pressure on food prices all around the world.

5. Recommendations for Fighting Global Climate Change

What would climate change policy look like, a sensible climate change policy? It will have several dimensions. It should focus on market-oriented environmental tools. It should respect the time dimension of the problem. It

should have an international dimension. Let us talk about those three. For economists, environmental policies fall into two broad categories. One set of policies are called command and control, and these kinds of policies, the government, specifies how much pollution can come out of a smokestack or what can be burned in an incinerator or precisely what can be released into a stream or lake? The government says how much pollution is allowed, and sometimes it specifies the pollution control technology to be used. This approach has had some successes but it also has some weaknesses. When you set the level like that, there is no incentive for anyone to go beyond the level the government sets or to be innovative about reducing pollution further. When you choose pollution control technology, the government regulators often choose something that is few years behind the times, and more generally, detailed regulations which can precisely emit or discharge what often get watered down by politics as they are put into place. For example, it is common to say new factories have to do one thing, but the old factories are going to be a grandfather dean under a different set of rules.

A market-oriented approach takes a different angle from command and control. The idea is the government provides broad incentives that reduce pollution and then lets companies and households adapt at they see fit. One example is a pollution tax. For climate change, you can think of a tax on carbon emissions. For example, you might collect that tax from oil refineries and coal companies and others who are producing things that will turn into carbon, and they, of course, pass that tax along to households and firms. But if anyone can figure out a way to emit or create less carbon, they will pay less of the tax. Incentives to innovate exist with pollution control technology. Another market-oriented idea is called cap and trade. The notion is that the government issues permits that allow firms to emit a certain amount of pollution like permits that will enable firms to emit a certain amount of carbon or to produce products like gasoline that emit carbon.

The total number of permits puts a cap on the total amount of pollution. Then the permit might require phasing down the amount of pol-

lution over time. The twist in the cap and trade is that these permits can be bought and sold. So, if someone finds a way to reduce pollution, they could sell their permits to someone else. Again, there is an incentive to reduce pollution, and there is an incentive to go beyond the basic level and find innovative new ways of reducing pollution in the future. A carbon tax basically sets the carbon price, and then you want to conserve to avoid paying the tax. Cap and trade since a quantity limit for carbon emissions, but because you can pay for permits, there is an incentive to conserve, because the permits become costly. Carbon taxes are more flexible in the output of carbon. They set a price. Cap and trade are more flexible about the price of carbon by setting an output level for carbon. But either one of these can be seen loosely or strictly with exceptions or no exceptions, just like any other form of pollution control. Politicians often like cap and trade because they like certainty over how much of a quantity of pollution will be emitted.

They do not like that nasty word tax which is, of course, kind of silly, because a carbon tax or a cap and trade approach both will tend to lead to higher prices for things that emit carbon. Indeed, that is their purpose of getting less of those things being used. You can have various variations and combinations too, mixing together pollution taxes and cap and trade policies. It is just that either market-oriented pollution control approach will reduce pollution at a much lower cost than a command and control approach. The time dimension of the climate change problem arises in this way. We know that the costs of climate change arise in overtime. If we have marketoriented policies to address climate change, and you phase in those policy changes over time, then they will tend to stabilise carbon emissions at a more modest cost.

The International Monetary Fund published a study in 2008 that looked at the policy of the carbon tax and cap and trade to stabilise carbon emissions. They estimated that the world economy if you put in a policy like this, would be 2 per cent in 2040 than it would otherwise be. But even though the world economy would be 2 per cent in 2040 than it would otherwise be, it is still true that in 2040, the world economy 2.3 times higher than it was in 2007. Their rec-

ommendations, sort of a hypothetical proposal, went like this: They said, start with one cent a gallon gasoline tax, and then announce it is going to go up two cents a gallon every three years in the foreseeable future. Frankly, any politician who claims to be worried about global warming, but will not support a slow phase of this kind of tax strikes me as fundamentally not serious about the problem. You say we are incredibly worried global warming will destroy the planet but not for ten or seven cents a gallon tax, let us not go crazy here, which is not a serious position to take. This sort of gradual phase-in policy works best when you think about it working along with technological progress. The idea is firms will see that gradual phase-in of higher taxes coming, and they will start to increase efforts to find ways to cash in. We strictly do not know how they will reduce carbon emissions, may be greater fuel efficiency for cars and buildings and houses, possibly alternative sources of energy that produce less carbon, perhaps what is called carbon capture sequestration where the carbon is injected down into the ground, so it does not end up in the air.

6. Conclusion

The philosophy on all this is pretty much umami. None wants to talk about the possibility. Climate change does seem to pose genuine risks, even if we can argue over the likelihood of those risks. So, people are interested in any and all possible answers to it. Another big area to think about in policy is international considerations. Carbon emissions are not equal around the world. Highly developed economies like the United States and those in Western Europe have traditionally been the biggest emitters of carbon. But now China has already become the biggest emitter of carbon among all the countries of the world. While carbon emissions are rising sharply from countries like India, Russia and Brazil as well. In fact, since the early 1990s, more than half of the world carbon emissions are from the developing nations of the world. Their emissions have been growing so rapidly that they are growing three times as fast as the rate of rich countries. If you do not get countries like China or India on board to at least hold down the rate of increase in their

emissions, so they are not burning coal and oil without limit, there is no conceivable carbon policy that can actually succeed.

Maybe once it was confirmed that the highincome countries of the world could address global warming on their own, but this is not true anymore. How do you get everybody on board? An obvious common proposal is to let us have an enforceable worldwide treaty where every nation will make commitments to reduce its emissions. Scientists admit this is a political judgement, not an economic one. They just think such a treaty is unlikely. More loose agreements are possible with goals and hopes, but at the end of the day, nations tend to act in what they perceive as their self-interest. Besides, it is not really fair to ask the low-income countries to pay a massive share of the cost for climate change policy. In many of these countries, children are dying from causes like malnutrition and the lack of clean water.

You have to put a zero discount rate on the future to say your main priority should be spending money on reducing smokestack emissions to reduce the risk that is decades off in the future when that economic growth might help you save people who are dying and in poverty right now. It also seems politically unlikely to me that high-income nations are going to send,

say, tens of billions of dollars to China to help China reduce its carbon emissions. Maybe that is the most cost-effective way to get emissions down the fastest, but we are not going to send the money, and the Chinese government is not going to let a bunch of US firms crawl all over factories and install a bunch of pollution control devices. What does seem conceivable is a loose set of international agreements, maybe at the regional level, say, Latin America, East Asia, US, Canada, European Union and so on. One can imagine those countries agreeing on a shared price to tax carbon across countries or on certain versions of cap and trade proposals. One can imagine sharing a lot more technology about energy conservation, alternative energy sources and pollution control. But the test of seriousness on climate change is that high-income countries have to take the lead in reducing their own emissions.

It is all about concrete commitments in the present, even if they start small and build up. Until they start talking in the United States about profound long-term ways of raising the price of energy that leads to carbon emissions and spending more money overseas for pollution control, nobody frankly does take all the rhetoric or all talk on international treaties very seriously.

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Экономическая теория глобального изменения климата

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Аннотация. Цель статьи — проанализировать противоречия в современной экономике глобального изменения среды обитания. Автор делает попытку систематизации основных положений, которые отражают наиболее острый уровень разногласий в области науки по поводу глобального потепления. Аргументы автора поддерживаются работами многих специалистов, занимающихся вопросами окружающей среды и влияния производственной деятельности человека на нее. Статья начинается с анализа моделей экономического роста и развития энергетики, их влияния на выделение углекислого газа в атмосферу. В дальнейшем анализируются факторы изменения климата в результате выбросов парниковых газов. В завершение приведен анализ моделей обратного влияния изменения климата на экономический рост, здоровье человека в будущем. Итогом исследования являются дискуссии о потенциальных моделях, посредством которых решения в области политики могут обеспечить стабилизацию проблематики глобального изменения климата.

Ключевые слова: выбросы парниковых газов; глобальные климатические цели; декарбонизация экономики; глобальные климатические сценарии; зеленая экономика и инвестиции; анализ прибыли и издержек от инвестиций в зеленую экономику; нулевая ставка дисконтирования

Stages of Development of Sberbank as a Reflection of Changes of the State

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Abstract

The research team, consisting of a political scientist and two young international finance specialists, made an interdisciplinary investigation on Sberbank to understand the prerequisites of its current state. To achieve this, the authors checked the history, principles of operation and the relationship of Sberbank with different political institutions, including the national state as the main one of these. We discovered that Sberbank changed drastically parallel to the changes of the state — founded as a transparent, stable saving institution during tsarist Russian Empire it absorbed all the controversy of later epochs with its "crescendo" in the 1990s. Much has been already saying about the citizens' deposits, made before 1991 and later claimed "burnt" or "zeroed", but the authors tried to add some arguments trying to represent alternative points of view and calculate the scales of citizens' financial losses. The paper contains the analysis of the most important facts and stages of development of the organisation since the foundation till recent years.

Keywords: Sberbank; deposits; Sberbank history

JEL Classification: G21, G28

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cceptance of small amounts for preservation with an increment of interest through savings for any citizen correctly and profitably to reserve for future needs"¹ — this phrase emphasised the main goal and indicated the origin of the savings banks (Sberbank is the historical successor of the savings banks), which first appeared in Russia in the 1840s.

Before the Russian Emperor signed this Decree on 12 November 1841, there had been various debates in the highest echelons of power concerning the necessity of this reform. However, the governor was sure that savings banks would be an essential tool of social policy, a way of fostering economy and thrift, taking into account the experience of European countries (the saving institutions first appeared in Scotland

and further developed in the West in the late 18th and early 19th centuries).²

This degree proclaimed the creation of a new type of banking institutions and, in case of future success, the possibility of spreading this type of institution throughout the whole Empire. Nikolai Christofari, an employee of the Loan Treasury in St. Petersburg, became the first client of the first Russian savings bank. On 1 March 1842, he opened his first deposit in the amount of 10 rubles at 4 per cent per annum since there couldn't be more than 10 rubles on depositor's account. Moreover, the total amount of deposits from one person could not exceed 300 rubles in silver, since savings banks were mainly focused on people with

¹ Ustav kredytnyi. Svod zakonov Rossiyskoi Imperii. SPb., 1893. T.XI. Ch. II. p. 107.

² Western Bank of Scotland: History. Available at https://www.natwestgroup.com/heritage/companies/western-bank-of-scotland.html// (Accessed 25.11.2020).

³ History of Sberbank, Sberbank. Available at https://www.sberbank.com/ru/about/history. (Accessed 26.11.2020).

Table 1
Development of saving banks in Russian in 1865–1892

Year	Number of cashboxes	Number of cashbooks, thousand	Lump-sum contribution, million rubs.	Loan portfolio savings banks, million rubs.
1865	47	70.3	5.4	4.6
1870	65	74.7	4.9	5.2
1875	75	81.9	5.5	5.4
1880	76	104.1	9.1	10.0
1885	326	218.9	26.6	28.0
1890	1826	798.4	147.0	142.0
1895	3875	1907.0	367.9	336.7

Source: Petrov Y. A, Kalmykov S.V. (1995). Savings bank business in Russia. Moscow: K.I.T.

low income. So the owners of significant capital were deprived of the opportunity to make profits at the expense of the state.

During the first year of the operation, the saving bank in Moscow conducted 2.5 thousand transactions and 15.5 thousand rubles were attracted. In 1853 the amount of contributions to savings banks increased up to 50 rubles, and the maximum deposit amount to 750 rubles, respectively. Consequently, by the end of 1860, there had been more than 90 thousand depositors, and the balance of cash deposits in the capital's cash offices exceeded 6 million rubles.

In 1860, the unified Bank of Russia was established, and saving institutions were transferred to the Ministry of Finance's jurisdiction. On 16 October 1862, Alexander II adopted a new Charter of savings banks, according to which they had to be created "in all cities, townships and places." As a result, from 2 small institutions with 20 employees in St. Petersburg and Moscow, the cashboxes turned into a network operating throughout the country. By 1895, 3875 branches were opened, 368 million rubles were accumulated in deposits. This time is called the heyday of Russian banking. The results 1865–1892 we shown in Table 1.

The further development of savings banks is tightly connected with the monetary reform of 1895–1897, initiated by S.U. Witte, who managed to transfer the ruble to the gold standard, even though this move caused much criticism.⁴ He believed that

savings banks in Russia should remain state-owned and be a part of the state financial system.

On 1 June 1895, Nicholas II approved a new charter of savings banks proposed by the State Council and prepared by Minister Witte. Under the new charter as the basis for the activities of the savings banks, French savings model was chosen, which Witte, who had financial affairs with French bankers, considered to be the most successful and acceptable for Russia. The government assumed responsibility for the integrity and safety of the amounts and capital transferred to the cash desks. Contributors can be "persons of both sexes, any rank and age", as well as institutions and communities. Deposits were accepted for an amount not exceeding 1 thousand rubles. For one depositor and no more than 3 thousand rubles. For an institution or society.5

After the introduction of the new charter, the ultimate goal of the government was to expand the network of cashboxes, aimed at the attraction to saving people with low financial literacy. In 1897, actions were taken to revive the factory cash registers. In the charter of the Office of Savings Banks was mentioned: "The workers who have accumulated savings and therefore who value their position, represent a reliable counterbalance to any kind of agitations. Accustoming workers to saving make them hard work and facilitates the in the labour level and economic welfare."

In 1900–1902, savings banks were opened at the state and private railways. Savings operations

⁴ Pushkareva I.M., Stepanov A.S. The "Golden" ruble in the Russian monetary system in 1897–1917.

⁵ Russkie banki. Spravochnik I statisticheskie svedeniy o vseh deistvuyshih v Rossii gosudarstvennyh, chastnyh I obshestvennyh kredytnyh uchrejdeniyah na 1 January1895. p. 6.

could be carried out not only in urban centres but also in remote areas (for example, in Siberia). Since the early 1900s, cash desks have been opened in secondary schools to instil a thrift spirit in them from childhood. By 1914, Russia had 2.5 thousand school ticket offices: 359 in secondary schools and 1385 in the lowest. More than 10% of the students were depositors.

During the first decade of the Witte's reforms, Russia took a huge step forward. For instance, the number of cash registers increased by 2.5–3 times, whereas the number of purchased securities by nine times. Savings business in Russia outstripped the European results, and before World War I, the savings bank system of Russia experienced a period of flourishing (Table 2).

During the war years, the government paid particular attention to the development of savings banks. In difficult wartime conditions, several steps had been taken in order to maximise the expansion of savings institutions. A crucial role played the law of 23 October 1915, providing for the expansion of the network of postal and telegraph departments with the opening of savings banks in the countryside. In less than a year and a half after its adoption (before the February Revolution of 1917), more than 4970 cashboxes had been opened. Moreover, first cashboxes were opened in China, Mongolia, Iran, as well as in Russian embassies in the USA and Canada. Considering possible options for expanding the network of savings institutions parishes and clergy were also involved in the savings business since there were more than 40 thousand Orthodox churches throughout the whole Empire.

In October 1921, the All-Russian Central Executive Committee adopted the establishment of the State Bank. On 26 December 1922, a resolution of the Council of People's Commissars was adopted on the establishment of state savings banks. The social composition of donors as of 1 October 1927 shows that the largest percentage (46.6%) falls on the employees of the Council, followed by workers (21.4%), persons of the free professions (2.9%), peasants (2, 1%). The peasantry remained practically not covered by savings banks. Overall, the number of savings banks increased 40 times, depositors' accounts — 36 times, the volume of deposits — 105 times.

During the World War II reserves, free financial resources of farms and banks, as well as funds of

the population in the amount of 270 billion rubles were directed to the defence needs. Throughout the 1941–1943 period number of deposits increased by seven times, and the sum of deposits reached 1425.5 billion rubles, considering that in July-December 1941 new banknotes had been emitted with the overall result of 14.3 billion rubles.⁶

The first post-war years were characterised by the extremely rapid growth of operations by savings institutions, with the deposit as the main instrument. Obviously, savings operations grew more intensively in the cities: 123% growth versus 54% in rural areas.

In 1960–1980 the development of savings bank systems carried on. On 1 January 1963, the Council of Ministers of the USSR entrusted the State Bank USSR organisation of savings business. It transferred the entire system of savings banks from the Ministry to its jurisdiction. The data in Table 3 characterise development savings business in the USSR during this period.

This table illustrates that throughout this period the number of cashboxes increased by 18 per cent, number of deposits by 3.1 times whereas the sum of deposits by 18.5 times, respectively (even though there was a severe denomination in 1961 where the "Khrushchev candy wrappers" had been introduced).

Thus, the analysis of the development of the savings business in the Soviet period shows that the savings infrastructure was steadily improving, which in turn facilitated the process of attracting more depositors and the amount of deposits. At the beginning of 1979, population deposits exceeded 130 billion rubles, and the savings banks received 50 per cent of the population's incomes.⁷

During the perestroika period in 1987, there was a reorganisation of the banking system. In 1988 new banks such as State Bank, Vnesheconombank, Promstroy Bank of the USSR, AgroIndustrial Bank of the USSR, Zhilsotsbank USSR and Sberbank of the USSR appeared. By the beginning of 1988, the system of Sberbank of the USSR included 15 republican banks, 166 regional, 4.1 thousand departments with 50.7 thousand branches and 22.1 thousand agencies, and by mid-1990 each

⁶ Nikolai Voznesensky, The military economy of the USSR during the Patriotic War.

⁷ Kashin Y. I Savings rate in the USSR. AM: Finances, 1979, p 5.

Table 2
Saving bank before World War I

	Number of	Number of	Lump-sum contri	Lump-sum contribution, million rubs.		
Year	cashboxes	cashbooks, thousands	cash	securities	savings banks, million rubs.	
1895	3875	1907	367.9	33.8	336.7	
1900	5415	3551	661.9	90.0	676.3	
1904	6558	5127	910.6	195.1	941.9	
1906	6679	5665	1035.0	237.4	1122.1	
1910	7365	7436	1396.9	286.9	1582.9	
1913	8553	8992	1685.4	348.6	1741.4	

Source: Outline of development and activities of state savings banks. SPb. 1912.

Table 3
The development of saving business in the USSR (1959–1984)

ltem	1959	1960	1970	1975	1980	1984
Number of cashboxes, th	54.3	66.5	78.3	79.9	79.9	78.9
Number of deposits, mln rubs	47	52.2	80.1	106.6	142.1	164.0
Sum of deposits, mln rub	87	10.9	46.6	91.0	156.5	202.1

Source: The economy of the USSR for 60 years. JUB. Statistical collection. Moscow. 1977, p. 462.

administration district had a bank with subordinate from 15 to 40 branches.8

1990-1998

During the collapse of the USSR and the formation of the Russian Federation, Sberbank remained the leading institution that accumulated citizens' money. It was a controversial period, since Sberbank was considered state property and then became a Joint Stock Company, according to some beliefs, Sberbank is not obliged to bear any past debts. In contrast, others consider the history of Sberbank as a whole if the one financial institution. Both points of view are still regarded as unofficial. It was a painful period for the population: the collapse of the Union, "shock therapy" (monetary reforms and inflation), devaluation of the ruble and subsequently national currency denomination. Nowadays, the status of the deposits of the USSR population is still to be discussed, and, moreover, in Russia, these deposits are called "burnt". To understand the basis for this thesis, it is necessary to trace in detail the causes and consequences of the reforms that took place in the 1990s.

In July 1990 the Russian republican bank of the Sberbank of the USSR was declared the property of Russian Soviet Federative Socialistic Republic. A planned economic system characterised the Soviet Union. The military industry accounted for vast volumes of production, while production of group "B" products was developed according to the leftover principle, which resulted in a shortage of consumer goods. The accumulation of savings of the population was constantly increasing, but there was nothing to buy. According to the World Bank, in 1990 Russia's GDP was \$ 516.8 billion, while the deposits of citizens accumulated by 1990 in the USSR Savings

⁸ United Savings business, Ed. R.V. Korneev. MS: Statistics, 1992, p. 21.

⁹ World Bank National Accounts Data and data files on OECD national accounts. Available at https://data.worldbank.org/indicator/NY.GDP.MKTP.CD? Locale=ru&locations=RU. (Accessed 23.11.2020)

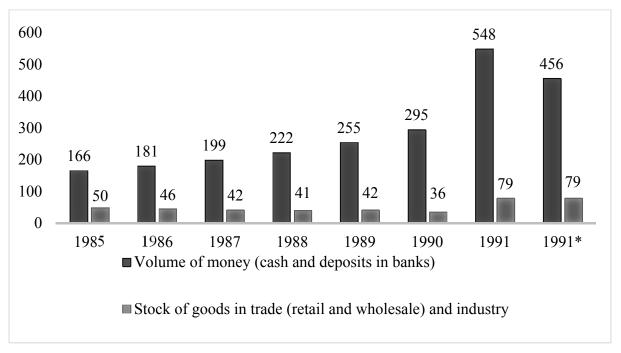


Figure 1. The ratios of the population's money and stocks of goods in trade and industry in Russia (at the end of the year, billion rubles)

Source: National Economy of the RSFSR in 1989; National Economy of the RSFSR in 1990; Social development of the Russian Federation 1992; Russian statistical book 1995; Russian statistical yearbook 1996.

Bank (369 billion rubles)¹⁰ amounted to 40 per cent of GDP. It was enormous. The explanation is that the Savings Bank of the USSR was the only bank for keeping savings; therefore, all deposits of the population were stored in it. To finance the deficit of the Union's budget, the Government of Nikolai Ryzhkov withdrew citizens' savings from Sberbank. By governmental Decree¹¹ of 11 December 1990, the USSR Supreme Soviet instructed the USSR Council of Ministers until 31 December 1991 to properly formalise the debt to Sberbank. It was the end of 1990 when the country faced a monetary (un)balance of the market. The ratios of the population's money and stocks of goods in trade and industry were disproportional (Fig. 1). Stocks of goods in trade and industry in relation to the funds of the population amounted to 12 kopecks per 1 ruble.

To regulate the volume of the money supply, it was necessary to withdraw part of it. It happened

in January 1991 through the confiscation reform of the Minister of Finance, and from 14.01.1991 — the Prime Minister of the USSR Valentin Pavlov. On 22 January, the last Soviet monetary reform began, the formal reason for which was stated as the fight against counterfeit banknotes — it was announced that counterfeiters had introduced large counterfeit bills of 50 and 100 rubles into cashflow circulation in large quantities. On 22 January 1991, the President of the USSR Mikhail Gorbachev signed a Decree¹² "On the termination of the acceptance for payment of banknotes of the State Bank of the USSR in denominations of 50 and 100 rubles of the sample of 1961 and the limitation of the issuance of cash from deposits of citizens." This Decree confirmed the Resolution¹³ of the USSR Cabinet of Ministers, which introduced restrictions: old bills had to be exchanged for new ones within three days from 23 January to 25, but the maximum amount

¹⁰ Sharionov, A. N. The state is in debt: how the savings of citizens in the Savings Bank of the USSR were destroyed accounts. [Electronic resource]. — URL: https://www.forbes.ru//mneniya-column/makroekonomika/238749-gosudarstvo-v-dolgu-kak-unichtozhili-sberezheniya-grazhdan-v-sb // (Accessed 27.11.2020)

¹¹ Resolution of Supreme Council of the USSR "On the implementation of the law of the USSR "On the state bank of the USSR" and the law of the USSR "On banks and banking activities"" 11 December 1990 No. 1830–1.

¹² Decree of the President of the USSR of January 22, 1991 No. UP-1329 "On the termination of the acceptance for payment of banknotes of the State Bank of the USSR in denominations of 50 and 100 rubles of the 1961 model and the restriction of the issuance of cash from the deposits of citizens".

¹⁵ Decree dated January 22, 1991 No. 20 "On termination of acceptance for payment of banknotes State Bank of the USSR in denominations of 50 and 100 rubles sample 1961 and the procedure for their exchange and restrictions on issuance cash from deposits of citizens".

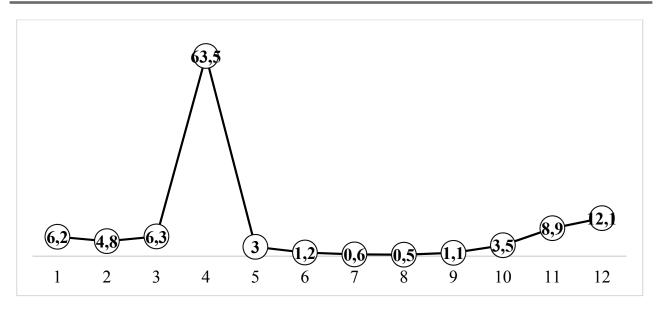


Figure 2. Inflation rate by months in 1990

Source: Inflation rate table by month on an annualised basis. Available at https://ypoвень-инфляции.pф/таблицы-инфляции. (Accessed 28.11.2020).

of exchange per person was 1000 rubles. It means that the rest of the savings became invalid. The money that was kept on deposits in the Savings Bank was partially "frozen" — one person could withdraw only 500 rubles once a month. The notes on the withdrawn amounts were recorded in the passport since citizens could have deposits in several savings banks in different cities.

In March 1991, "shock therapy" began — an increase in prices by a Decree¹⁴ of the Council of Ministers of the RSFSR. The changes also affected Sberbank: on 22 March, Gorbachov signed a Decree¹⁵ concerning the removal of all restrictions on the withdrawal of cash from bank accounts. The same Decree stated the compensation for losses of Sberbank's depositors — to index deposits by 40 per cent. If the monetary equivalent of indexation exceeded 200 rubles, the excess was recorded in a special account, from which money could be withdrawn after three years passed. From the same day, Sberbank was not considered to be the property of the RSFSR, because, according to the Law¹⁶ of the RSFSR "On Banks and Banking Activities in the RSFSR" dated 2 December 1990, at the general meeting of shareholders the Joint-Stock Commercial Savings Bank of the Russian Federation was established.

Viktor Gerashchenko, who was the head of the State Bank of the USSR, in the Letter¹⁷ dated 15 April 1991, informed the government that the State Bank had begun charging compensations for the government's use of deposit resources (including money received from Sberbank) at 5 per cent per annum. In April, the official inflation rate was 63.5 per cent (Fig. 2). Because of the high inflation and the low compensations' interest, the real interest rate on savings confiscated from citizens turned out to be strongly negative from the very beginning. The resolution of the Supreme Council on the debt to Sberbank was not executed by 31.12.1991, because de-facto compensation payments on USSR deposits are still being paid to Russian / ex-Soviet citizens.

December 1991. The authorities have entirely stopped regulating prices. At the end of December, the Soviet Union collapsed, and the state mechanisms for regulating the economy stopped working. The Government did not regulate deposits and their use.

1992–1995. Prices ceased to be regulated, and hyperinflation began.

May 1995. One year before the presidential election, B.N. Yeltsin's ratings, according to official data, was about 3 per cent, and to increase it, the

¹⁴ Council of Ministers of the RSFSR Resolution of March 20, 1991 No. 162 "On the reform of retail prices and social protection of the population of the RSFSR".

¹⁵ Decree of the President of the USSR from 22.03.1991, No. UP-1708 "On compensation to the population for losses from the depreciation of savings in connection with a one-time increase in retail prices".

 $^{^{16}}$ Federal Law "On Banks and Banking Activities" dated 02.12.1990 No. 395–1.

 $^{^{17}}$ State Bank of the USSR Resolution of 15.04.1991 "On the payment of the state internal debt".

state promised to restore savings that were stored in Soviet savings banks — and taking into account their purchasing power at the time of investment.

May 1996. Sberbank depositors born before 1916 were paid "preliminary" compensation. Unfortunately, the percentage 18 of the population born in those years (2.2 per cent or 3.3 mln people) was extremely low, because the life expectancy in the Russian Federation in 1996 was 65.85 years and because of the historical events that people born before 1916 faced up the First World War, two revolutions, civil war, several significant waves of repressions and several other wars: Soviet-Finnish, and World War II. Those compensations amounted at a maximum of 1 million rubles — it was about \$ 200, way far from being generous even at that time. It was a price of either half of a colour TV or two vacuum cleaners. The issue of the promised full compensation was postponed for an undefined period.

Since 1996 shares of Sberbank of Russia have been quoted on the Russian stock exchanges MICEX and RTS. Also, the shareholders' meeting adopted the concept of the bank's development until 2000 that was aimed at transforming the bank into a universal commercial one. The first payment cards were issued, and the Sberbank Non-State Pension Fund was created.

January 1998. The denomination took place — a decrease in the nomination value of banknotes and prices by 1000 times or, people simply call it "the crossing of three zeros". A thousand rubles turned into a ruble, that is why Soviet deposits are called "zeroed".

In the 2000s, the procedure for paying compensation and the age of the depositors receiving them changed several times. The current rules ¹⁹ were introduced in 2012 and later modified in 2019. Still, many compensations have not yet been paid. However, the real value of these compensations matches the nominal value of initial deposits, while the real rate of value was a thousand times higher. According to the Draft²⁰ of Russian Budget for 2021–2023, the internal debt of the state on USSR deposits

is estimated at 45.4 trillion rubles in 2020, 47.22 trillion rubles in 2021 and 49.11 trillion rubles in 2022 — this is half of Russia's GDP²¹ (110 trillion rubles) that is still impossible to pay back.

Due to the inflation and the failure to implement the policy of indexation of Soviet deposits, payments of these deposits and compensation payments on them, the nominal values of deposits, even if they were not changed, their real value decreased several thousand times. Since Sberbank became non-state property on 03/22/1991 and until the purchase by the Government of the Russian Federation on 03/18/2020, formally, it was only an intermediary financial institute between the population and state that was and still is indebted to depositors. The issue of so called "burnt" deposits remains unsolved up to nowadays.

Practical Examples of Calculating the Compensation on "Burnt Deposits" and Comparison of its Real Value in USD Currency

Sberbank has a webpage²² with a deposit compensation calculator where all criteria are mentioned. pays compensations only for deposits that were made in the USSR Savings Bank on the territory of the current Russian Federation. The restrictions for the deposit: it should be opened before 20 June, 1991 — this is the day of the liquidation of the USSR Savings Bank — and the deposit should remain opened from 20 June, 1991 until 31 December, 1991.

The basis amount for the calculation is the amount that was on the account on 20 June, 1991.

The formula of calculations of a current compensation:

Compensation = (Deposit balance as of 20 June 1991) × (Age coefficient) × (Deposit closing date coefficient)

Age coefficient — if the recipient of compensation was born before 1945, then the deposit amount is multiplied by 3, if after — by 2 (Table 4).

Deposit closing date coefficient — the earlier you withdraw all the money, the lower the coefficient is (Table 5).

¹⁸ Mortality of the population: trends, methods of study, forecasts: Collection of articles. (2007). Denisenko M.B., Bakhmetova G. Sh., (Eds.). Moscow: MAKS Press. pp. 256–271.

¹⁹ Federal Law of 29.11.2018 No. 459-FZ (as amended on 02.12.2019) "On the federal budget for 2019 and for the planning period of 2020 and 2021".

 $^{^{20}}$ Bill No. 1027743–7 "On the federal budget for 2021 and for the planning period 2022 and 2023".

²¹ Statistics showcase: GDP at market prices according to 2008 SNA methodology. Available at https://showdata.gks.ru/report/280029. (Accessed 27.11.2020).

²² Compensation for deposits. Available at https://www.sberbank.ru/ru/person/contributions/compensation. (Accessed 27.11.2020).

Example 1

The citizen was born in 1960 and deposited 3,000 rubles in May 1991. He did not make any other payments. The deposit was closed in 1994.

Compensation = $3,000 \times 2 \times 0.8 = 4,800$ rubles.

The real value of the deposit was 83,625 times more than the real value of compensation.

Example 2

A citizen born in 1943 opened a deposit in Sberbank in May 1991. At the end of April 1991, he put 6,000 rubles in and did not close it. Additionally, he put 500 rubles in May 1991. In 2009 he received 2,000 rubles under the then compensation rules.

Compensation = $6,500 \times 3 \times 1 - 2000 = 17,500$ rubles.

The real value of the deposit was 49,7 times more than the real value of compensation.

Example 3

A citizen born in 1943 opened a deposit in 1980. By March 1991, 6000 rubles had been accumulated on the book, and he closed the deposit in 1994. It should be borne in mind that in March 1991, the depositor was automatically compensated (on 22 March Gorbachev signed a Decree) — indexation by 40% from 6,000 rubles, that is, 2,400 rubles. At the same time, 200 of them were added to the existing account there were 6,200 rubles. And for the remaining 2,200 rubles, a special account was opened. Therefore, on 20 June 1991, the depositor had two accounts — for 6,200 and 2,200 rubles, a total of 8,400 rubles. Compensation will be calculated from this amount. Compensation = $= 8,400 \times 3 \times 0.8 = 20,160 \text{ rubles.}$

The real value of the deposit was 55 times more than the real value of compensation.

1998-2019

Sberbank's 2000 report stated that lending to the real sector of the economy remains the strategic line of the bank's development. The main borrower of the Bank in 2000 was RAO UES of Russia, a monopoly in the generation and energy transportation headed by Anatoly Chubais. This enterprise attracted more than \$ 200 million ²³ and was subsequently liquidated. Afterwards, on its place so-called "natural"

Table 4

Age coefficient on USSR deposit compensation

Year of birth	Coefficient
before 1945	3
after1945	2

Table 5
Deposit closing date coefficient on USSR deposit compensation

Year of the deposit closure	Coefficient
1992	0.6
1993	0.7
1994	0.8
1995	0.9
1996 and later, including still opened deposits	1

monopoly" companies, as well as privatised generating and sales companies appeared.

The holding company Russian Aluminum, which is managed by Oleg Deripaska and Roman Abramovich, also deserves attention. The joint holding has raised over \$ 49 million from Sberbank to finance investment programs at the Sayanogorsk Aluminum Smelter.²⁴

Volga-Dnepr Airlines, actively participating in numerous hot spots around the globe, also received \$ 10 million for 4.5 years.²⁵

Privatised in 1994, Siberia, currently S 7, received \$ 15.8 million²⁶ from the Novosibirsk bank of Sberbank of Russia to finance the costs of the program to expand and modernise its air fleet.

North Oil CJSC and Tyumen Oil Company received \$ 2.5 million²⁷ and \$ 300 million,²⁸ respec-

²³ Sberbank opened a loan to RAO "UES of Russia". Kommersant. Available at https://www.kommersant.ru/doc/152456. (Accessed 28.11.2020).

²⁴ Sberbank of Russia and Russian Aluminum OJSC signed a loan agreement. Available at URL: https://www.sberbank.ru/ru/press_center/all/article?newsID=2504-1-1&blockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 28.11.2020).

²⁵ Sberbank gave money for Ruslan to Volga-Dnepr Airlines. Available at https://lenta.ru/news/2000/08/14/ruslan. (Accessed 28.11.2020).

²⁶ Sberbank of Russia and Siberia Airlines signed a loan agreement. Available at https://www.sberbank.ru/ru/press_center/all/article?newsID=2350-1-1&blockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 29.11.2020).

²⁷ CJSC "Severnaya Neft" received a loan of the Savings Bank of Russia in the amount of \$ 2.5 million. Available at https://komiinform.ru/news/5611. (Accessed 28.11.2020).

²⁸ Sberbank of Russia and OJSC Tyumen Oil Company signed a General Agreement on Cooperation. Available at https://www. sberbank.ru/ru/press_center/all/article?newsID=2362-1-1&bl

Table 6
The dollar/ruble exchange rate in 2020, in 1991 (liquidation of Sberbank) and at the time of opening deposits, the calculations for which are given in the examples

			1991		
Year	1980	1990	Official Exchange Rate	Black Market Exchange Rate	2020
Rate of rubles per dollar	0.6395	0.6072	0.5605	30.33	75.85

Source: Website of the Central Bank: Currency rates for the period up to 01.07.1992. Available at https://www.cbr.ru/currency_base/OldVal. (Accessed 27.11.2020).

Table 7
Calculation of the compensation of Example 2

Deposit on June 1991, rubles	3000
Deposit on June 1991, USD	5352,363961
Age coefficient	2
Deposit closing date coefficient	0.8
Compensation in rubles	4800
Compensation in USD	64

Table 8
Calculation of the compensation of Example 2

Deposit on June 1991, rubles	6500
Deposit on June 1991, USD	11596,78858
Age coefficient	3
Deposit closing date coefficient	1
Compensation in rubles	17500
Compensation in USD*	233,3333333

*distraction of 2000 rubles received in 2009

Table 9
Calculation of the compensation of Example 2

Deposit on June 1991, rubles	6200	2200
Deposit on June 1991, USD	11061,55219	3925,066905
Age coefficient	3	3
Deposit closing date coefficient	0,8	0,8
Compensation in rubles	14880	5280
Compensation in USD	198,4	70,4
The whole sum of compensation in rubles	201	.60
The whole sum of compensation in USD	268	8,8

tively, to finance projects for the development of large oil and gas fields, for the reconstruction, modernisation, and capacity expansion of oil refineries.

VimpelCom JSC received about \$ 70 million²⁹ for the implementation of a regional project to create a large-scale cellular network.

Overall, in 2000 Sberbank actively allocated funds, focusing not only on the real sector of the economy but on everything that came to hand. By lending money to a variety of companies directly or indirectly involved in the domestic and foreign policy of the newly formed country, the question about the true purpose of the investments made remains ambiguous.

2001–2007 period is also considered to be a milestone in the history and formation of Sberbank. On 1 January 2001, there had been a reorganisation, as a result of which 79 regional banks of Sberbank of Russia were merged into 17 territorial ones.

ockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 28.11.2020).

²⁹ Sberbank of Russia opened a credit line for OJSC "Vimpelcom-Region". Available at https://www.sberbank.ru/ru/press_center/all/article?newsID=2642-1-1&blockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 28.11.2020).

In 2002, Sberbank issued the first VISA Aeroflot cards. This event may be connected with the first Russian president's "Family". Particularly with the husband of Yeltsin's daughter — Valeriy Okulov, who used to be a president of Aeroflot. Anyway, the project's initial purpose aimed at facilitation of domestic and international flights was economically successful (not taking into consideration common people)

In 2006 Sberbank implemented its policy of expansion on international markets and opened a representative office in Kazakhstan, and in 2007 in Ukraine. On 28 November 2007 German Gref was approved as a Chairman of the Management Board of Sberbank of Russia. Interestingly, Anatoly Sobchak was the scientific supervisor of the future head of the bank, and later on Gref acquainted with Vladimir Putin. Gref took place shortly before the 2008 elections, where Dmitry Medvedev was elected to the post of President of the Russian Federation.

The Supervisory Board of Sberbank unanimously approved the strategy "Development of Sberbank until 2014" on 21 October 2008. The Production System of Sberbank was developed, based on the technology of thoughtful and economical production. The Sberbank Online service was launched, thanks to which the bank's clients in the Moscow region were able to conduct banking transactions on the Internet any time they wanted. A new project "Credit Factory" was introduced, the key feature of which was the automation of the decision-making process for issuing a loan. In 2008, Sberbank received the status of a strategic partner of the World Economic Forum in Davos (Switzerland), which may indicate the desire of President Medvedev to strengthen his status in the international arena, and the Russian banking and financial sector in the international business community.

2009 became the starting point for the large-scale deployment and implementation of the Sberbank Development Strategy. The task of the bank was to help people alleviate the problems caused by the global financial crisis and stabilise their financial situation. "We have cancelled lending volumes in our business plan, putting forward reliability and guarantees of security for the repayment of loans issued by us as a priority", said German Gref. According to the reports of Sberbank, the volume of payments to the members of the

bank's board for 2007 amounted to 892.1 million rubles, and the volume of payments accrued for 2008 was 933.5 million rubles. Apart from this superior decision, Sberbank cut interest rates and created a special unit to work with citizens, especially older people, whose monthly income did not exceed 25 thousand rubles.

In October 2009, Sberbank began servicing Master Card Platinum, VISA Platinum and VISA Infinite cards. Sberbank offered its clients a new type of brokerage services in the stock market — Internet trading using the Focus IV Online remote access system. Sberbank's positions on the Russian and international markets continued to strengthen: Sberbank entered the top 20 largest banks by market capitalisation. In December 2009, Sberbank Group acquired a controlling stake in BPS-Bank OJSC. A representative office of Sberbank of Russia was opened in Germany, in Frankfurt am Main, an unofficial centre for commercial transactions in Europe. The bank's desire to establish a 'decorative' branch in the European market after the recent crisis is rather controversial. Besides, the bank's charitable activities started to develop actively, and Sberbank's Social Card was issued. A unique and innovative "Office of the Future Sberbank" was opened in Moscow.

On 17 September 2012, the first stage of Sberbank's privatisation was initiated by Bank of Russia, who sold 7.58 per cent stake of Sberbank from its portfolio and earned 5.2 billion rubles. What was the objective of this deal? In general, privatisation may have three obvious goals: fiscal (to increase budget revenues), ideological (reducing the impact of the state on the economy) and, pragmatic (improve the enterprise's management, attract new investors). What do we see in the privatisation of Sberbank? An ideological goal is not pursued — in the hands of the Central Bank, in full compliance with the law on the Central Bank, 50 per cent + 1 share, that is, a controlling stake. Actually, no denationalisation of Sberbank took place — it remained the same state bank as it was before privatisation. The role of the state in the banking sector is not decreasing. The fiscal target is a controversial issue since only 75 per cent of this money will be transferred to the federal budget following the budget law the CBR transfers 75 per cent of its profits to the budget.

2013

In the Sberbank's 2013 annual report, a separate chapter was devoted to investment in human capital. It was reflected in the bank's employees: an opportunity for advanced training was provided not only for heads of departments and key specialists but for employees of mass specialities too.³⁰ Such programs are significant since they contribute to an increase in the HDI (human development index), which includes the measurement of human potential, for which constant training of already employed people is important

In 2013, the Ukrainian question emerged. Since this year, branches of the subsidiary bank of Sberbank in Ukraine have become the objects of attention of the activists of the campaign "Don't buy anything Russian!" The activists urged not to receive services from Sberbank, pointing to the Russian origin of the bank's owners. In November a massive months-long protest action began in the centre of Kyiv — Euromaidan. In December demonstrations took place in Crimea.

2014

In 2014 Russia annexed part of the Crimea peninsula, and since that time its status has remained a matter of dispute. According to the official results of the referendum on the status of Crimea, held on 16 March 2014, the majority of Crimea population voted in favour of the annexation of Crimea to Russia. But Ukraine refuses to recognise the affiliation of Crimea to Russia and considers the peninsula Ukrainian territory, which Russia has temporarily occupied. The majority of the United Nations member states have the same position according to the UN General Assembly Resolution 68/262. The fact is that according to the legislation of Ukraine, the issue of changing the borders should be resolved

It is this historical event that shows the duality of Sberbank's position. It is the largest bank in Russia, aimed at becoming a worthy player in the global banking league. But it is considered both in Russia and in the world to be state-owned and is perceived as an instrument of the Russian state; therefore, since 1 August 2014, sanctions were imposed on Sberbank.³⁶ Financial institutions were being restricted from entering the European capital market: banks and their subsidiaries (with a share of 50% or more) were not able to attract new debt and equity capital to the EU for more than 90 days. Japan, USA, Canada also imposed sanctions against Sberbank.³⁷ Since December 2015, the United States has also imposed sanctions against affiliated banks in Belarus, Ukraine, Kazakhstan, Switzerland, as well as Sberbank Capital, Sberbank Europe, Sberbank Finance, Sberbank Insurance, Sberbank investments and Sberbank Leasing".38

Sberbank of Russia for the first time in October 2014 applied to the Court of Justice of the European Union with a statement of claim to annul the decision of the EU Council on the application of sanctions against the bank concerning Russia.

at the national level. At the same time, the referendum was held only on the Crimea peninsula. Then a wave of outcries against Russian banks, including against Sberbank, swept across Ukraine.³⁴ Later Sberbank stopped dealing in Crimea, and some of the branches were transferred to the RNKB.³⁵

³⁰ 2013 Annual Report of Sberbank of Russia. Available at htt-ps://www.sberbank.com/common/img/uploaded/files/pdf/yrep/annual_report_ru_2013.pdf. (Accessed 27.11.2020).

³¹ Referendum in Crimea on the status of autonomy 2014. Available at https://ria.ru/20150316/1052210041.html. (Accessed 27.11.2020).

³² UN General Assembly Resolution "Territorial integrity of Ukraine" from 27 March 2014 A/RES/68/262.

³³ Constitutional Court declared unconstitutional the decision of the Verkhovna Rada of Crimea on independence. Available at http://www.unian.net/politics/899002-ks-priznal-nekonstitutsionnyim-postanovlenie-vr-kryima-o-nezavisimosti.html. (Accessed 27.11.2020).

³⁴ Miners and metallurgists of Kryvbas for a civilized refusal to cooperate with Russian banks. Confederation of Free Trade Unions of Ukraine. Available at https://kvpu.org.ua/uk/news/4/3275/gornyaki-i-metallurgi-krivbassa-za-civilizovannyjj-otkaz-ot-sotrudnichestva-s-rossijjskimi-bankami. (Accessed 27.11.2020).

³⁵ Sberbank of Russia in Ukraine stops the work of its branches in Crimea. Available at https://ria.ru/20140507/1006811078. html. (Accessed 27.11.2020). Sberbank transferred part of its branches in Crimea to RNKB. Available at https://ria.ru/20140411/1003554779.html. (Accessed 27.11.2020).

³⁶ Sberbank fell under EU sanctions. Available at https://www.vedomosti.ru/finance/articles/2014/07/31/sberbank-popal-pod-sankcii-es. (Accessed 27.11.2020).

³⁷ Canadian Foreign Ministry announced the expansion of the list of sanctions against Russia. Available at https://ria.ru/20140916/1024394129.html. (Accessed 27.11.2020).

⁵⁸ US Ministry of Finance expanded the sanctions list in connection with the crisis in Ukraine. Available at https://ria.ru/20151222/1346973194.html. (Accessed 27.11.2020). The United States added three Crimean wineries to the sanctions list. Available at https://ria.ru/20151222/1346989108.html. (Accessed 27.11.2020).

The sanctions have not been lifted and are still in effect.

2015

In August 2015, the full name of the bank was changed to Public Joint Stock Company Sberbank of Russia (PJSC Sberbank). It allowed Sberbank to alter its organisational and legal form and structure. The point is that in a public joint-stock company, the number of shares owned by one shareholder and the maximum number of votes given to one shareholder can be unlimited. It is stated in article 97 of the Civil Code of the Russian Federation. As the result, it is possible for one person or one organisation to become the only owner of Sberbank.

2016

2016 was a very successful year for Sberbank. According to news sources, in 2016, Sberbank became the most expensive Russian brand — it came out on top in terms of capitalisation.³⁹ The bank's net profit increased more than twice times — it amounted to 541.9 billion rubles in 2016 (in comparison to 222.9 billion rubles in 2015).⁴⁰ Interfax adds that all foreign-affiliated companies of Sberbank, except for the Ukrainian one, were profitable. The total loss of Sberbank from business in Ukraine amounted to 7 billion rubles.⁴¹

2017

2017 was the year of summing up the "results" of the ten-year management of Sberbank by German Gref. Despite several controversial points during these ten years, they became insignificant as soon as in 2017, Sberbank's net profit increased even more than in 2016 and amounted to 748.7 billion rubles.

In 2017 Sberbank launched its project based on the Tele2 network, a virtual mobile operator "Pogovorim" and a service for searching and buying real estate "DomClick".

Also, 2017 was the beginning of permanent M&A programs: Sberbank concluded deals and owns 25 per cent of the "VisionLabs" face recognition system, the "Beru" marketplace in an equal share with Yandex — the deal was completely closed in 2018. "Beru" is called the Russian Amazon — it is an online platform for different sellers. Sberbank bought out 45% of Yandex.Market shares for 30 billion rubles. 42

2018

In 2018 the issue of privatising Sberbank was actively discussed. Remarkably is that German Gref also announced his intention to privatise Sberbank in 2015, when he gave an interview to the German newspaper "Handelsblatt",⁴³ as well as he mentioned Sberbank's privatisation in 2010 at the forum in Davos.⁴⁴ Throughout this time, the Ministry of Finance (represented by Alexei Kudrin in 2010) and the chairman of the Central Bank (represented by Elvira Nabiullina in 2015) have been opposed to privatisation. Sberbank was not privatised and still is not.

Some deals for the acquisition of shares in several companies and projects continued. Since 2018 Sberbank owns the "SberCloud "cloud storage platform for 60 per cent and a unified digital platform for the "Foodplex" restaurant market by 35 per cent. 45 Sberbank wholly owns "Intercomp" — outsourcing of business services. 46

2019

In July 2019, Sberbank announced that it had sold DenizBank to Dubai's Emirates NBD

³⁹ Sberbank became the most expensive company in Russia for the first time. Available at https://www.rbc.ru/finances/28/11/2 016/583c452c9a7947507a82ec9a. (Accessed 27.11.2020).

⁴⁰ 2016 Annual Report of Sberbank of Russia. Available at https://www.sberbank.com/common/img/uploaded/files/pdf/stockholders/2017/godovoy_otchet_banka_za_2016_god.pdf. (Accessed 27.11.2020).

⁴¹ Sberbank in 2016 increased its net profit by two and a half times. Available at https://www.interfax.ru/business/551963. (Accessed 27.11.2020).

⁴² Sberbank closed a deal with Yandex.Market. Available at https://www.vedomosti.ru/business/articles/2018/04/27/768146-sberbank-yandeksmarketom. (Accessed 27.11.2020).

⁴³ Sberbank boss calls for full privatization. Available at htt-ps://www.handelsblatt.com/finanzen/banken-versicherungen/herman-gref-sberbank-chef-fordert-vollstaendige-privatisierung/12625208.html. (Accessed 27.11.2020).

⁴⁴ Gref proposed to privatize Sberbank. Available at https://www.infox.ru/news/164/39251-gref-predlozil-privatizirovat-sberbank. (Accessed 27.11.2020).

⁴⁵ Sberbank took off into the clouds. Available at https://www.comnews.ru/content/112517/2018–04–03/sberbank-vzletel-v-oblaka. (Accessed 27.11.2020). Sberbank and Rambler have closed a deal to create a platform for the Foodplex restaurant market. Available at https://rb.ru/news/sberbank-rambler-foodplex. (Accessed 27.11.2020).

⁴⁶ Sberbank enters the business process outsourcing market. Available at https://www.sberbank.ru/ru/press_center/all/article?newsID=e12c329e-69a0-4602-96d7-111e418a2904&blockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 27.11.2020).

(On 8 June 2012, a final agreement was signed on the acquisition of 99.85 per cent of Deniz-Bank shares by Sberbank for 6.469 billion).⁴⁷ The total cash flow of Sberbank from the transaction amounted to approximately \$ 5 billion. The total volume of investments made by the credit institution for the entire period of DenizBank's ownership was estimated at 148 billion rubles.⁴⁸ According to Gref, due to the sanctions regime, Sberbank cannot receive dividends, cannot provide financing to a Turkish bank and, consequently, cannot attract money.⁴⁹

The issue of Sberbank's privatisation in 2019 has become even more acute. There was a data leak from Sberbank in October. Sberbank had had 96.2 million active private clients and 2.6 million active corporate clients in 2019.⁵⁰ Information on the number of affected customers varies depending on different sources: Sberbank announced the number of 200 customers in its press release, the Interfax information resource adds that Sberbank confirmed the data leak of 5000 people, while the "Kommersant" newspaper even writes about 60 million bank cards that appeared on the black market.⁵¹ After this

incident, the privatisation of the bank began to seem dangerous: data can leak abroad, which could become a threat to the security of all of Russia.

Sber 2020 Conference: Highlights and the Main Changes⁵²

Service in offices and ATMs

The bank's branches have adopted special zones for children with games, cartoons and consoles. Systems for recognising customers by biometric data will appear, whereas "bulletproof glass" and other barriers will disappear. Moreover, the service offices will be equipped with checkpoints where it will be possible to send and receive parcels.

The SberPay payment system was presented with the ability to choose a card for payment, which can be connected in the Sberbank Online application. Sberbank's subsidiary Bi. Zone will be responsible for transaction security. In the new generation of ATMs, transactions would be carried out without a card using biometrics with the help of commands by voice.

Transport services

Citymobil, which is part of the joint venture of Sberbank and Mail.ru Group, implemented a new function connected with the transport change. A taxi can take a client to the parking of a scooter, the rental of which has already been included in the price of the trip. It has been made in order to cut the distance through traffic jams while using the option, and the passenger can get a discount.

In the future, the service will add bike rentals and build routes in combination with public transport to speed up the trip thanks to the integration with the 2GIS map service, which will allow a person to plan a route and see reviews about the enterprise.

SberLogistika promises to launch delivery of goods within 15 minutes in Moscow and St. Petersburg this year and to expand its service throughout the territory of the Russian Federation.

Education

Sberbank launched the personalised interactive educational system Sberklass in 65 Russian regions, which will help students to review and reinforce the material they have learned and to facilitate the process of doing their homework as well as carrying out team projects.

Business services

A tool for evaluating business ideas has appeared, in which an entrepreneur can calculate a business development model for five years

⁴⁷ Sberbank of Russia OJSC announces the acquisition of 99.85% of DenizBank shares. Available at https://www.sberbank.ru/ru/press_center/all/article?newsID=11018524-1-1&bl ockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 27.11.2020).

⁴⁸ Sberbank sold its Turkish subsidiary bank for \$ 5 billion due to sanctions. Available at https://www.rbc.ru/finances/31/07/2019/5d41 85139a79470944f1b17f. (Accessed 27.11.2020).

⁴⁹ Gref explained the decision to sell Denizbank by the negative impact of EU sanctions. Available at https://tass.ru/ekonomika/5222747. (Accessed 27.11.2020).

⁵⁰ 2018 Annual Report of Sberbank of Russia. Available at https://www.sberbank.com/common/img/uploaded/redirected/ com/gosa2019/docs/sberbank-annual_report_2018_rus.pdf. (Accessed 27.11.2020).

⁵¹ Sberbank informs about the activities in connection with a possible information leak. Available at https://www.sberbank.ru/ru/press_center/all/article?newsID=e71ce593-484c-43ab-90ad-7c4681313b40&blockID=1303®ionID=77&lang=ru&type=NEWS. (Accessed 27.11.2020). Sberbank announced 5,000 victims of data breaches. Available at https://www.interfax.ru/business/679460 // (Accessed 27.11.2020). Sberbank clients hit the black market. Available at https://www.kommersant.ru/doc/4111863?from=main_1. (Accessed 27.11.2020).

⁵² Sber's digital ecosystem. Available at Экосистема — СберБанк (sberbank.com). (Accessed 27.11.2020).

ahead and find out how long it will take to pay off their investments. The Sberbank Business Online application has implemented a service that replaces a full-time accountant — "My Accounting Outsourcing". Also, business clients have access to a partner service of legal support of the company. Employee search service Rabota. ru, launched jointly with Mail.ru Group, using the auto-selection function will help an entrepreneur to find a full-time employee.

The Sbersovetnik will help to figure out the average salary in the market for a particular vacancy and determine the level of staff turnover. To select partners, entrepreneurs will have access to the bank's counterparty verification service, which analyses information from open sources and identifies the following risks. It is now possible to rent an online cashier with an acquiring terminal in the application from Evotor partners who offer to create a reliable website for business on Sber Cloud.

Food-tech industry

Now while booking a restaurant through Delivery Club's application the app's recommendation system will help clients to choose a suitable place based on previous orders, and the service's algorithms will enable to collect a grocery basket in the store based on the past orders.

Entertainment

The Sberzvuk music service was also presented during the conference. In addition to music and podcasts, "Stories" become available in the application, from which it is possible to learn about the latest events in the industry.

Sber's ecosystem also included an online cinema — Okko. Its content can be watched together with friends, with an ability to discuss the plot in the chat, and the service will also allow ordering some popcorn.

Devices and personal assistant

At Sberkonf a family of voice assistants "Salyut" was announced, which consists of three assistants: Sber that advises on financial services, Athena, which composes an assignment planner, reads the news and performs tasks, and Joy, who can order delivery in charge of leisure and entertainment, select a movie and a playlist.

Sberbank also released its gadgets with its own TV set. Sberbox TV is a set-top box with

185 TV channels, games and a voice assistant, through which it is possible to choose the image of the hero of your favourite movie while watching it or order popcorn and cola using the Scooter. Sberbox comes with special minipoysticks that can be attached to a smartphone, turning it into a gamepad to control the game on the TV screen.

Another gadget from the bank is Sberportal, which is a tablet with a smart camera that always focuses on the user. The camera allows a person to control the device by reading biometrics, and Salyut virtual assistants can make an appointment with a doctor or hairdresser.

App Store

Sberbank has created an alternative to AppStore and Google Play SmartMarket, where special applications will appear, supplemented with communication skills by text, voice, touching the screen and gestures.

It is possible to develop applications for the SmartMarket store even without writing code according to a special template. A business can create not only applications but also skills. For example, S 7 made a skill for ordering tickets while watching a movie on Okko.

Subscription

The subscription to the services of the SberPrime ecosystem includes the Okko online cinema, Sberzvuk, SberMarket, SberDisk, SberMobile, Delivery Club, Citymobil. The subscription costs 199 rubles per month and gives discounts on services and the opportunity to use some of them for free.

Covert Operation "Sberbank": Transfer of Control Stake from Central Bank to the Ministry of Finance⁵³

The Bank of Russia used to combine the roles of a shareholder, regulator, and supervisory authority for Sberbank, which inevitably lead to an inevitable conflict of interest. The sale of shares must have helped to isolate the regulator from all participants in the financial market and thus resolve this contradiction.

⁵³ The Central Bank sold Sberbank to the government. Why? And how much was the deal?, TASS [Electronic resource].—URL: https://tass.ru/ekonomika/7737581 // (Accessed 27.11.2020).

What was the true purpose behind the deal? Was the deal's rationale solely a political or an economic issue?⁵⁴

The motives of the Central Bank are explained simply and trivially: it needs to cover losses of 0.9 trillion rubles throughout the two years from 2017–2018. Although the fact that the bank that prints money incurs financial losses is quite impressive, the willingness to improve its current state at the expense of the federal budget leads to somewhat ambiguous conclusions.

The Central Bank may have another objective, which is connected with the spending money from the National Welfare Fund (NWF. According to the Budget Code, the Ministry of Finance has the right to invest at the expense of the NWF over 7 per cent of GDP. This year they appeared in the amount of more than a trillion rubles. Obviously, the queue of the richest stateowned companies and people in the country like Rosneft, Rosatom, Leonid Mikhelson, Arkady Rotenberg, Vladimir Potanin consequently appeared. Having taken almost 3 trillion rubles from the NWF, the Central Bank again "drives" NWF below the 7 per cent level and leave the Russian billionaires with no money in such a turbulent period.

Also, when transferring a package from one government agency to another, according to the law, selling a large block of shares implied that the seller (in this case the Central Bank) is obliged to make an offer to minority shareholders at the same price. And the Ministry of Finance confirmed that such a proposal is planned to be made. And suppose minority shareholders take at least 2 shares at this price (spending only a little more than 500 rubles). In that case, the Russian state will immediately erode the controlling stake, which will lead to the privatisation of Sberbank. It is worth noting that even now, 45.04 per cent of Sberbank's shares are held by non-resident legal entities. If they buy a little more, then Sberbank becomes not just a non-state, but formally a foreign bank. It may be suggested that these non-resident legal entities are not foreigners at all, but top Russian officials who, on the

eve of the transit of power in 2024, decided to buy Sberbank.

Conclusion

During the process of examining this topic, the history of the development of the Savings Bank of Russia had been studied, and its main social and economic functions had been indicated. The research group managed to describe the current state of Sber, its role in the banking system and priority directions of its further development.

Founded in 1841 by the Decree of the Russian Emperor Sberbank, as an enterprise with only two small institutions with 20 employees in St. Petersburg and Moscow grew into a network of institutions, working throughout the country and accumulating funds for the implementation of central government projects. During the Soviet era, it was transformed into a system of State Labor Savings Banks. It, later on, came into life as a modern universal bank, a large international group and an ecosystem, which is known in more than 20 countries around the world.

Nowadays this financial institution has significantly expanded its network of influence, partially taking over the functions, that were considered the monopoly of a National State (e.g. playing a role in domestic and foreign policy) and even state debts to the population. As a leader of the domestic banking system, Sber actively participates in the formation of economic policy influencing macroeconomic processes in the country, sometimes serving as the wallet (ill-wishers even say as money laundry reminding cases like Troika-Dialog or similar) of the Russian elites. Via an extensive branch network, it tries to meet the needs of various customer groups and provide a wide range of banking services, making it the most popular bank.

The rebranding strategy implemented in 2020 was a revolutionary act in the history of the bank. Introduced innovations tend to simplify peoples' lives. Still, they simultaneously may reduce privacy since the authority to store fingerprints and face metrics may be vulnerable to federal services and the government's intervention. Overall, the proposed actions will lead to a qualitatively new level of service, maintaining the position of a large competitive bank in Eastern Europe. To achieve these goals, the bank must introduce a wide range of new banking products based on new technolo-

⁵⁴ Covert Operation "Sberbank", Riddle [Electronic resource].— URL: https://www.ridl.io/en/covert-operation-sberbank // (Accessed 27.11.2020).

gies and make more efficient use of the existing competitive advantages. A significant resource base and capital will allow it to provide extensive and long-term loans and investments for raising funds in international financial markets. Improving the quality of Sberbank's economic activities

and its further functioning is connected with the overall Russian economic and political system. Thus, soon it is necessary to continue the process of bank's privatisation, reach a brand-new level of flexibility, and react quickly to changing market conditions.

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Этапы развития Сбербанка как отражение перемен в государстве

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Аннотация. Исследовательская группа, состоящая из политолога и двух молодых специалистов по международным финансам, провела междисциплинарное исследование Сбербанка, чтобы понять предпосылки его нынешнего состояния. Для этого авторы проверили историю, принципы работы и взаимоотношения Сбербанка с различными политическими институтами, в том числе с национальным государством в качестве главного из них. Авторы обнаружили, что Сбербанк кардинально изменился параллельно со сменой государства — основанный как прозрачное стабильное сберегательное учреждение во времена царской Российской империи, он впитал в себя все противоречия более поздних эпох своим «крещендо» 1990-х гг. В литературе много говорилось о вкладах граждан, сделанных до 1991 г. и позже, заявленных «сожженными» или «обнуленными», но авторы попытались добавить некоторые аргументы, пытаясь представить альтернативные точки зрения и подсчитать масштабы финансовых потерь граждан. Ключевые слова: Сбербанк; депозиты; история Сбербанка

Legal Documentation of Eurobonds from Russian Issuers

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Abstract

The Eurobond market is one of the main sources of raising international finance for leading Russian corporations and financial institutions. I presented the general description of the structural parameters of Eurobonds, as well as the main phases of the issuing process. The focus of this article is on the documentation aspects of the Eurobond market, since preparing the legal documents is one of the key goals of the transaction execution process. An overview of the primary Eurobond documents is provided, including the Prospectus, the Mandate & Engagement Letters, the Trust Deed, the Issuing & Paying Agency Agreement, the Deed of Covenant. The roles and functions of the involved parties (Issuer, Arranger, Dealers, Legal Counsels) and the documentation process of Eurobonds which I described in detail. Also, I presented a comparison of issuing Eurobonds utilising stand-alone documentation or Euro Medium Term Note Programme. The purpose of setting up a programme is to enable Eurobonds to be issued quickly and efficiently and, by using one set of documentation, to reduce the amount of paperwork and management time for the Issuer.

Keywords: Eurobonds; debt capital markets; documentation; Prospectus; Dealers; Legal Counsels; investment banking services; raising corporate finance

JEL Classification: G11, G15 © Alexey Tarasov, 2020

Introduction

The Eurobond market is one of the main sources of raising international finance for the development of the Russian economy [1–2]. Leading Russian corporations and financial institutions issue Eurobonds to fund capital expenditure, mergers & acquisitions, general corporate purposes [3]. This article focuses on the documentation aspects of the Eurobond market. Preparing the legal documents is one of the key goals of the transaction execution process [4–5]. Section 1 provides the general description of the structural parameters of Eurobonds, as well as the main phases of the issuing process. In section 2, I presented the comparison of issuing Eurobonds utilising stand-alone documentation or Euro Medium Term Note (EMTN) Programme. Section 3 is dedicated to an overview of the major documents of Eurobonds, including the Prospectus. In section 4, I described the roles and functions of the involved parties (Issuer, Arranger, Dealers, Legal Counsels) and the documentation process of Eurobonds.

1. Issuing Eurobonds

Eurobonds are issued in the international debt capital markets. They are usually issued in one of the major foreign currencies, including USD, EUR, Swiss Francs, British Pounds. The size of the Eurobond issue ranges from USD 200 mln up to USD 1,0 bln, with the so-called benchmark size being USD 500 mln. In terms of maturities, the most common tenors accepted by Investors are from 3 to 7 years, with five years being the market standard. An essential structural element is the covenants, that can include limitation on indebtedness, asset sales, liens, dividend payments, negative pledge, cross-default, change of control.

Russian corporations and financial institutions issue Eurobonds in the form of Loan Participation Notes ("LPN") scheme. The LPN structure is, in essence, an issue of debt securities by an SPV affiliate of a Russian onshore entity which funds a loan by the SPV to the Russian onshore entity, with this loan being secured for the benefit of the Investors. There are two main forms of Eurobonds by Russian issuers (i) "RegS" only — used explicitly for off-shore offerings,

i.e. Eurodollar issues. Those notes are not sellable to US-based Investors and therefore provide issuers with more limited liquidity; (ii) "RegS/144A" — this is the common method of selling Eurobonds in the US to Qualified Institutional Buyers (without registration with the Securities and Exchange Commission). It also allows for accessing a larger number of Investors.

The process for placing the Eurobonds is a rather complex one. It involves a number of participants (the Issuer, the Arranger, the Dealers, the Legal Counsels) and phases of the execution timeline: (i) structuring the Eurobonds issue (including currency, the amount, and tenor); (ii) appointing the transaction parties (including the investment banks and the legal firms); (iii) going through the ratings advisory (the process for the Issuer to receive new ratings from the international rating agencies and/ or to confirm the current ratings); (iv) preparing the legal documentation (the subject of the following three sections of this article); (v) running the marketing and syndication process (including the roadshow for Investors in major international financial centres); (vi) placing the Eurobonds and the start of trading in the secondary market.

2. Comparison of Stand-alone Documentation and an EMTN Programme

Eurobonds can be placed under either stand-alone documentation or an EMTN programme. For a single transaction, the optimal approach is the stand-alone prospectus. An EMTN programme is a framework of documentation under which a variety of instruments can be successively issued on the general terms agreed and set out in the programme. The precise terms (particularly pricing) related to any issue of securities under the programme will be agreed at the time of the particular issue. Such a programme has more complex documentation and is more time consuming (due to the requirements of its establishment, management involvement, and compliance). However, it allows for minimising the total costs of executing deals under such a programme.

From the perspective of information disclosure, Investors are generally indifferent regarding the format chosen for the issuance. An EMTN programme allows for issuing Eurobonds seizing upon current investor preferences ("issue into demand"), while a stand-alone Eurobonds issue targets to interest investors ("to seek demand to

issue"). Therefore, an EMTN programme should only be considered by Issuers with significant placement volumes that are sufficiently large to outweigh the inherent costs.

The principal difference between stand-alone documentation and an EMTN programme is in the offering mechanism: it is "one-off" transaction in the first case and a flow of transactions that can be made "from time to time" in the second case. The purpose of setting up a programme is to enable Eurobonds to be issued quickly and efficiently and, by using one set of documentation, to reduce the amount of paperwork and management time for the Issuer.

An overview of the advantages and disadvantages of stand-alone documentation and EMTN programme I present in Table 1.

3. Overview of Eurobonds Documentation

The most important document of the Eurobond issuance process is the Prospectus. The Prospectus sets out general documentation standards and terms and conditions. It also ensures that interested parties, including Investors, have access to the information. Most of the Prospectus is prepared by the Dealers' Legal Counsel and reviewed by the Issuer's Legal Counsel. The description of the Issuer inserted in the Prospectus is prepared by the Issuer and the Issuer's legal counsel.

The Prospectus must contain the following information:

- *Risk factors*: relating to the Issuer's ability to fulfil its obligations under the Eurobonds, as well as material factors necessary for the assessment of all other risks associated with the Eurobonds.
- *Financial information*: covering at least two financial years (together with audit reports). The financial information should be prepared following IFRS or an equivalent standard.
- *Interim financial statements*: required if the prospectus is dated more than nine months after the end of the last audited financial year.
- *Recent events*: occurrences which are material in the appraisal of the Issuer's solvency.
- Description of the Issuer and the Issuer's Group: comprehensive business overview, share capital, arrangements that might later result in a change of control.
- *Material contracts*: summary of all material contracts entered into by the Issuer in the ordinary course of business.

Table 1
Stand-alone documentation vs EMTN programme

Stand-alone documentation

EMTN programme

Advantages

- More appropriate for infrequent Issuers and/or Issuers that have urgent financing requirements.
- May be arranged with very insignificant lead time.
- · Has lower cost for infrequent issuers.
- No on-going effort or disclosure required.
- No need to go through the more extensive EMTN documentation process.
- Usually set up by more frequent Issuers to have a cost-efficient documentation framework in place.
- Increased flexibility by enabling financing over some time in any currency, tenor, and amount.
- Reduction of borrowing costs by enabling quick response to opportunities.
- Diversification of funding sources in the markets.
- Lower issuance costs over time.

Disadvantages

- Changes relating to Issuer disclosure may require adjustments to documentation (for example, for supplementing the Prospectus).
- Reduced flexibility may lead to losing market opportunities.
- Higher initial costs of issuance.
- Longer timeframe for setting-up an EMTN programme.

Source: The author.

- *Details of management:* information covering the administrative and supervisory bodies of the Issuer.
- *Conflicts of interest*: between the Issuer and the interests of the management of the Issuer.
- *Credit ratings*: details of the credit ratings of the Issuer from the international rating agencies.

The key agreements required for the issuance of Eurobonds I reviewed in Table 2.

In addition to the Prospectus and the agreements described in the above table, the following documents are also required for the issuance of Eurobonds:

- *Issuer corporate documents, consents and authorisations*: articles of Association of the Issuer, the Certificate of Incumbency, all relevant Issuer's resolutions and/or authorisations.
- *Legal opinions:* opinion of the Issuer's Legal Counsel regarding the Issuer's organisation, execution of documents, enforceability; opinion of the Dealers' legal counsel regarding the establishment and structure of the documentation.
- *Comfort letters*: the first comfort letter provided on the date of the EMTN programme signing and two additional comfort letters (the second dated at the signing date of an issue; the third dated at the settlement date of the issue).

Other documents that are required include the Signing Agenda (details the timing and procedure to be followed and documents to be delivered for the establishment of the Programme); Operating and

Procedures Memorandum (sets out the operating and settlement procedures of transactions according to the EMTN programme); Due Diligence questionnaire (prepared by the Arranger and relating to Issuer's financial condition, business prospects and all information material to the Investors); Listing Application (prepared by the Listing Agent to be filed with the respective Listing Authority); letters from the rating agencies (confirming the ratings); regulatory notifications.

4. The Involved Parties and the Documentation Process of Eurobonds

Preparation of the documents is one of the key phases of the Eurobonds transaction process. It involves a significant amount of parties and takes place from the beginning to the end of the entire deal timeline.

The overview of the roles and functions of the parties to the documentation process I present below:

- *Issuer*: appoints all the parties of the Eurobonds transaction process; participates in the Due Diligence; obtains all of the required consents and authorisations; reviews the Issuer description in the Prospectus; reviews all the documents.
- *Arranger*: investment banks that are mandated by Issuer to manage the documentation process.
- *Dealers*: investment banks that are actively involved in marketing and placing the Eurobonds with investors.

Table 2
The main documents of Eurobonds

Document	Description	Parties
Mandate & Engagement Letters	Agreements to arrange the documentation. Include the terms & conditions and the rights and obligations of both parties.	lssuer and Arranger
EMTN Programme Agreement	Legal agreement concerning the establishment and maintenance of an EMTN programme.	Issuer, Arranger, Dealers
Subscription Agreement	The document setting out the terms upon which the Issuer agrees to issue, and the Dealers agrees to purchase, the Eurobonds.	Issuer and Dealers
Trust Deed	Document covering the responsibilities of the Trustee, whereby it agrees to act as a representative of the Investors.	Issuer and Trustee
Issuing & Paying Agency Agreement	This Agreement details the mechanics of the issuance of and payments under the Eurobonds. It describes the responsibilities of the Issuer and the Paying Agents.	Issuer and Paying Agent
Deed of Covenant	Agreement by which the Investors, if a Eurobond becomes void, have direct rights against the Issuer as if they were holding Eurobonds in definitive form.	lssuer and Investors

Source: The author.

Table 3
The documentation process for Eurobonds

Timing	Events and participating parties
Week 1	 Selection and appointment by the Issuer of Arranger, Legal Counsels, Fiscal & Paying Agent, Listing Agent, Trustee. Start of drafting work on Mandate & Engagement Letters.
Week 2	 Agreement by the parties and subsequent signing of the Mandate & Engagement Letters. Start of work on the Prospectus: preparation of the issuer description.
Week 3	 Continuation of work on the Prospectus: preparation of terms & conditions. Start of work on other documents (EMTN Programme Agreement, Trust Deed, Issuing & Paying Agency Agreement, Deed of Covenant).
Week 4	 Start of work on the Comfort Letter by the Auditor. Continuation of work on the Prospectus: Due Diligence questionnaire.
Week 5	 Listing on the stock exchange via the Listing Agent. Continuation of work on the Prospectus: incorporation of Due Diligence results.
Week 6	 Start of work on the Legal Opinions by the Legal Counsels. Continuation of work on the Prospectus: a collection of comments from all involved parties.
Week 7	 Start of work on the Rating Letter by the Rating Agencies. Continuation of work on the Prospectus: putting the document into substantially final form.
Week 8	 Finalisation of work on all the documents, including the Legal Opinions, Comfort Letter, Rating Letter. Finalisation of the Prospectus.

Source: The author.

- *Issuer's Legal Counsel:* a reputable international legal firm that assists the Issuer in the negotiation of the Prospectus, drafts the Issuer description in the Prospectus, prepares the required legal opinions.
- Dealers' Legal Counsel: a reputable international legal firm that drafts the Prospectus (except the Issuer description), prepares the EMTN Programme Agreement, Issuing & Paying Agency Agreement, Deed of Covenant, Signing Agenda, Operating and Procedures Memorandum.
- *Paying Agent*: responsible for the payments related to the Eurobonds and administration of the Eurobonds during their tenor.
- *Listing Agent*: mandated by Issuer to arrange the listing process and to liaise with the Stock Exchange.
- *Competent Authority/Stock Exchange*: provides approval of the EMTN programme and enables listing of the Eurobonds.
- *Auditor*: provides the comfort letter certifying that the financial information of the Issuer

provided in the Prospectus is true and fair in all material aspects.

• *Rating Agencies*: EMTN programme may be rated to help achieve credit comfort for Investors.

The schedule of the Eurobonds documentation process every week I provide in Table 3.

Conclusion

In this article, I considered the documentation aspects of the Eurobond market. An overview of the main Eurobond documents has been provided, including the Prospectus, the Mandate & Engagement Letters, the Trust Deed, the Issuing & Paying Agency Agreement, the Deed of Covenant. I described in detail the roles and functions of the involved parties (Issuer, Arranger, Dealers, Legal Counsels) and the documentation process of Eurobonds. We have also provided an overview of the comparison of issuing Eurobonds utilising stand-alone documentation or EMTN Programme.

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Юридическая документация еврооблигаций российских эмитентов

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Аннотация. Рынок еврооблигаций является одним из основных источников привлечения международного финансирования ведущими российскими корпорациями и финансовыми институтами. В статье приведено общее описание структурных параметров еврооблигаций, а также основных этапов процесса размещения бумаг. Главной темой работы являются документационные аспекты рынка еврооблигаций, так как подготовка юридической документации является одной из основных целей транзакционного процесса. В статье приводится обзор основных документов еврооблигаций, включая проспект ценных бумаг, мандатные письма, трастовый договор, соглашение с платежным агентом. Рассматриваются роли и функции основных участников процесса по подготовке документации (эмитент, организатор, дилеры, юридический консультант), а также основные этапы данного процесса. Приводится сравнение размещения еврооблигаций, используя документацию для одного выпуска или программу Euro Medium Term Note. Целью подобной программы является более оперативный и эффективный процесс размещения еврооблигаций с точки зрения требований к документации и вовлечения топ-менеджеров эмитента.

Ключевые слова: еврооблигации; рынки долгового капитала; документация; проспект ценных бумаг; дилеры; юридические консультанты; инвестиционно-банковские услуги; привлечение корпоративного финансирования

Attitudes Towards Advertising of Banking Loans Among Russians

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Abstract

The article presents the results of an empirical study of the features of evaluating advertising of banking products. 99 respondents with a different experience of borrowing behaviour, aged 18 to 66, 37 per cent males, were assessed. The respondents were asked to rate, using the semantic differential methodology, two pictures depicting mortgage advertisements from VTB and Otkritie banks. By comparing the average values of the ratings, we found that advertising for banking products is evaluated more negatively, even if the ideal option is presented. Actual advertising images are rated significantly lower than ideal images — people with real experience of taking loans rate advertising for banking products as more benevolent.

Keywords: advertising of banking loans; social advertising; political advertising; semantic differential; experience of taking loans.

JEL Classification: G41, G51

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The Relevance of the Study and Background

This study is carried out as part of a series of studies devoted to the analysis of the assessment of commercial, political and social advertising by Russian consumers (Gordyakova et al., 2019; Vlasenkova & Gagarina, 2019). According to empirical data, political advertising is rated more negatively than social advertising, but the difference is not significant (Vlasenkova & Gagarina, 2019). Because mortgage rates have changed significantly in Russia recently, we turned to the question of how the respondents evaluate the advertising of banking products. Researchers interest in understanding the relationship between advertising banking products and consumer satisfaction is rather high. The main question for banks is how to make advertising more effective, but at the same time, satisfy consumers of bank services (Mehmood & Ul Sabeeh, 2018; Sulthana, 2018). Another issue is the honesty and reliability of the information presented in the advertisement and method

used to manipulate consumers' choices (Gurun et al., 2016; Fedulova & Vinokurova, 2018; Melnichuk et al., 2019).

Using information about advertisements and mortgages obtained from lenders, G. Gurun et al. (2016) examined whether advertisements help consumers find cheaper mortgages? It was found that lenders who advertise more within the region sell more expensive mortgages. Mortgage advertisements contain very little information about the characteristics of the mortgage conditions and give information only about the initial (lower rate), keeping silent about reset rate — the fact that this rate will then increase (Gurun et al., 2016).

In Russia the situation is different because of the peculiarities of the credit market and national mentality. Fedulova A. V. and Vinokurova A. studied social and communication technologies used in advertisements that are directly related to the provision of credit services by the banks in Russia. Based on the content analysis, two groups of videos were identified — informational and motivational: the former communicate informa-

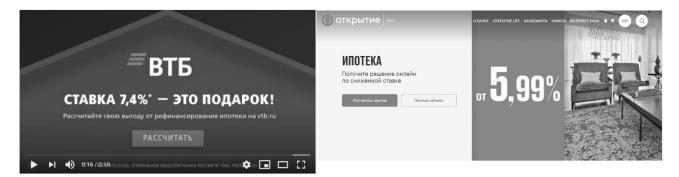


Figure 1. On the left: Bank VTB "Interest rate 7,4 per cent — it is a gift; calculate your benefit from mortgage refinancing"; on the right: Bank Otkritie "Mortgage get a solution online on reduced interest rate from 5,99 per cent"

tion, while the latter motivates using manipulative techniques (Fedulova & Vinokurova, 2018). The manipulation of the behaviour of potential borrowers is based on the exploitation of various symbols, myths, and stereotypes. The authors found that the most convincing stereotypes were the following: the myth of magic suddenly opening up opportunities; "everything is possible to achieve" — this stereotype is more susceptible to women in the age category from 21 to 40 years old (70 per cent of them had credit experience, including 20 per cent it entailed negative consequences); "on a holiday you cannot be left without a gift"; "poverty is a vice"; "the main thing is to want, but there will be opportunities"; "money solves any problem" — this stereotype would overwhelmingly convince women (in the age category from 31 to 40 years old) to apply to the advertised bank; the symbol "heart" had a greater impact on young people (from 21 to 31 years old), and 46 per cent of respondents had credit experience; the symbol "home" was almost equally convincing for both sexes in the age group, mainly from 21 to 30 years old, more than half of the respondents had credit experience, including mortgage lending (Fedulova & Vinokurova, 2018, pp. 300–301).

In M. Melnichuk et al. (2019) the phenomenon of neurolinguistic manipulation has become the object of research. Authors identified criteria for selecting linguistic means to create a manipulative communicative effect in advertising: linguistic, pragmalinguistic, neurolinguistic and neuropsychic criteria. The authors conclude that the combination of the four groups of criteria provides for the selection of language means to realize the advertiser's manipulative intentions which operationalize the consumer's mind by starting the neuroprocesses modelling his/her behaviour (Melnichuk et al., 2019).

The aim of our study is to examine the emotional assessment of bank loan advertising and its relationship with real-life borrowing experience.

Hypothesis: the Russians have a negative attitude to the advertising of bank loans; there is a difference between attitude to the advertising of bank loans between respondents with and without borrowing experience.

Methodology

Respondents: 99 participants aged from 18 to 66 years, mean 58, 37 per cent males. Borrowing experience: 23 per cent no loan, 26 per cent mortgage, 18 per cent different types, 15 per cent consumer credit, 9 per cent loans from friends and relatives, 6 per cent auto, 3 per cent microfinance organizations.

Methods: Along with socio-demographic data, we received respondents' answers to debt behaviour questionnaire to identify their readiness to borrow, payback and lend money. To determine attitudes toward bank loans advertising, we used the method of semantic differential; as an incentive, respondents were presented with images of advertising (Fig. 1). In both cases, there was a mortgage, but in advertising of VTB it was with an *exact* interest rate 7.4 per cent, and in advertising of "Otkritie" it was with an interest rate *from* 5,99 per cent.

The respondents were given an instruction to evaluate advertising (Fig. 1) respondents had to choose for each pair of opposite (positive and negative) characteristics (ten in total), a number that more closely matches their perception. Thus, the range of answers was from "-3" to "3".

Results and Discussion

First, we compared representations of ideal advertising from our previous research [Vlasenkova & Gagarina, 2019] and representations of the

Table 1

Descriptive statistics and t-test for expectations from advertising of bank loans and advertising on public transportation

Scales of semantic	Ideal ad ba	Ideal ad bank (N=99)		Ideal ad transportation (N=65)		р
differential	М	SD	М	SD		
Aggressive/Benevolent*	1.0	1.9	1.6	1.7	-2.1	0.041
Hostile/Friendly	1.3	1.7	1.6	1.4	-1.4	0.178
Unpleasant/Pleasant*	1.2	1.8	2.3	1.1	-4.4	0.000
Stupid/Clever	0.9	1.9	1.6	1.6	-2.4	0.017
Ugly/Nice*	1.2	1.7	2.2	1.3	-4.0	0.000
Deceitful/Sincere*	0.8	2.1	1.6	1.5	-2.8	0.007
Indifferent/Caring	0.8	1.8	1.1	1.5	-1.0	0.296
Sad/Joyful	1.0	1.6	1.4	1.3	-1.9	0.056
Relaxing/Annoying*	0.1	1.8	-1.0	1.5	4.1	0.000
Unconvincing/Convincing	1.2	1.9	1.6	1.5	-1.4	0.165

Table 2
Descriptive statistics for expectations from advertising of bank loans and real bank advertisings of VTB and Otkritie banks

Scales of semantic differential	VTB (N=99)		Otkritie	e (N=99)	Ideal bank ad (N=99)		
	М	SD	М	SD	М	SD	
Aggressive/Benevolent	0.3	1.51	0.6	1.38	1.0	1.9	
Hostile/Friendly	0.7	1.24	0.7	1.43	1.3	1.7	
Unpleasant/Pleasant	0.4	1.50	0.6	1.48	1.2	1.8	
Stupid/Clever	0.4	1.47	0.3	1.36	0.9	1.9	
Ugly/Nice	0.4	1.39	0.7	1.46	1.2	1.7	
Deceitful/Sincere	0.1	1.60	0.1	1.58	0.8	2.1	
Indifferent/Caring	0.1	1.54	0.4	1.28	0.8	1.8	
Sad/Joyful	0.2	1.36	0.5	1.42	1.0	1.6	
Relaxing/Annoying	0.3	1.24	0.3	1.45	0.1	1.8	
Unconvincing/Convincing	0.0	1.67	0.0	1.49	1.2	1.9	

ideal advertising of bank loans. The results we present in Table 1.

It can be noted that the estimates of the ideal advertising of banking products lie in the area of weakly positive values. We found several significant differences between ideal bank advertising and advertising on transportation. Respondents expect bank loans advertising to be less benevo-

lent less pleasant, less nice, less sincere and less relaxing. In general, we can admit more negative expectation from bank advertising than for social and political ad on transport.

After that, we compared real advertising of bank loan (VTB and Otkritie) and expectation from ideal advertising, descriptive statistics presented in Table 2.

Table 3

Descriptive statistics estimates of VTB bank and Otkritie bank advertisings, respondents with and without borrowing experience.

Scales of semantic differential	VTB				Otkritie			
	Resp. with loans (N=71)		Resp. without loans (N=28)		Resp. with loans (N=71)		Resp. without loans (N=28)	
	М	SD	М	SD	М	SD	М	SD
Aggressive/Benevolent	0.5	1.5	-0.2	1.5	0.7	1.3	0.4	1.5
Hostile/Friendly	0.7	1.3	0.6	1.1	0.7	1.3	0.6	1.7
Unpleasant/Pleasant	0.5	1.5	-0.1	1.5	0.6	1.5	0.6	1.5
Stupid/Clever	0.4	1.5	0.3	1.5	0.4	1.2	0.2	1.7
Ugly/Nice	0.4	1.4	0.4	1.5	0.7	1.4	0.7	1.6
Deceitful/Sincere	0.1	1.6	0.1	1.7	0.0	1.6	0.3	1.6
Indifferent/Caring	0.2	1.4	-0.1	1.8	0.4	1.2	0.5	1.4
Sad/Joyful	0.2	1.4	0.3	1.4	0.5	1.3	0.7	1.6
Relaxing/Annoying	0.3	1.2	0.3	1.3	0.4	1.3	0.1	1.8
Unconvincing/Convincing	0.2	1.6	-0.3	1.7	0.0	1.5	0.2	1.5

The descriptive statistics of the results showed that the scores for real advertisements are quite low and lie around the neutral value.

For VTB Bank T-test identified significant differences for all scales except Relaxing/Annoying, so respondents have a more negative attitude towards real advertisement than to expected advertising.

For Otkritie Bank T-test identified significant differences for all scales except Aggressive/Benevolent, Indifferent/Caring, Sad/Joyful and Relaxing/Annoying and in this case, we also have a more negative attitude towards real advertising.

There are no significant differences between estimates for real VTB and Otkritie advertisings. We expected difference on scale Deceitful/Sincere because in the case of VTB Bank, a higher rate is presented (presumably, more sincere), in the case of Otkritie Bank, the rate is stated "from". Specifying a "from" rate could be perceived as dishonest, but the respondents did not think so.

We compared estimates of real advertising of bank loans for respondents with and without borrowing experience, and descriptive statistics we present in Table 3.

In general, we can say that respondents without the experience of taking loans perceive advertising more negatively. Still, significant differences found only for VTB advertising on scale Aggressive/Benevolent (T-test, p<0.05).

Conclusions

Based on the study, we have drawn the following conclusions. The Russians have a neutral attitude to bank loans advertising. They expect advertising to be slightly positive, but in comparison with the expectation from other types of advertising, bank loans people perceived more negatively. Possibly this is due to the general level of distrust in the banking system in Russia (Yurevich, 2019).

Respondents rate real advertising of bank loans more negatively in comparison with ideal advertising. Real advertisings people perceived as not so friendly, pleasant, clever, nice, sincere, and convincing as they should be.

Presenting the respondents with two advertising options: with the exact interest rate and the rate "from" did not give significant differences in ratings.

Respondents with real experience of taking loans rate real advertising as more benevolent than respondents without such experience: as an explanation of such difference famous Russian proverb "the devil is not so terrible as he is painted" could be used.

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Отношение россиян к рекламе банковских займов

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Аннотация. В статье приводятся результаты эмпирического исследования особенностей оценки рекламы банковских продуктов. Опрошены 99 респондентов с разным опытом кредитного поведения, в возрасте от 18 да 66 лет, 37% мужчин. Респондентов просили оценить с помощью методики семантического дифференциала две фотографии с изображением рекламы ипотеки от банков ВТБ и Открытие. Путем сравнения средних значений оценок установлено, что реклама банковских продуктов оценивается более негативно даже в случае представления идеального варианта. Реальные рекламные изображения оцениваются достоверно ниже, чем идеальные. Люди с реальным опытом заемного поведения оценивают рекламу банковских продуктов как более доброжелательную.

Ключевые слова: реклама банковских займов; социальная реклама; политическая реклама; семантический дифференциал; опыт заемного поведения

Rereading Marx Again and Again

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Abstract

Theory, which most accurately captures reality, is a fundamental prerequisite of any analysis of some phenomenon, even hypothetical ones. If dialectical laws of motion exist than, how dialectics of reality express itself in the human mind, i.e. in the form of man's thoughts (categories)? How we ought to read Marx? I prefer to read all of Marx's manuscripts, where he made a vast number of notes, comments, etc. These writings were "for himself", for "clarification for himself". They are draft research papers intended to clarify things for him. For example, in *Grundrisse* is Marx's talking to yourself. It does not only reflect results but, first of all, the process of their emergence. The most interested are so-called digressions, unexpected retreat from the main theme. It was not isolated provocation Jacques Derrida's affirmation of 1994, that "it will always be a fault not to read and reread and discuss Marx".

Keywords: Marx; dialectic logic; law of value; alienation; totality; social forms

JEL Classification: B24, B51 © Zbigniew Mierzwa, 2020

Introduction

Theory cannot be absurd if it only reflects absurd reality.

Once Oscar Wilde wrote that "If one cannot enjoy reading a book over and over again, there is no use in reading it at all". I read and reread all volumes Marx's and Engels' writings in Polish, Russian, and English. Unfortunately, I cannot read it in German. However, I carefully studied all comments concerning translations of Marx's writings into English. It is difficult to agree with the position of The Neue Marx Lektüre school that one should only read specific texts of Marx in German, rendering all international non-German interpretations invalid. But the language barrier does not prohibit thinking.

The work of translating is not an easy deal, but if you read in three languages simultaneously, you are able to compare these texts. It can help to understand what the author really said. Frederick Engels described interesting fact in the article Frederick Engels "How not to translate Marx". [MECW, vol. 26, pp. 335–334]. The

first English translation of Volume I of Capital was prepared in 1887 by Samuel Moore, Edward Aveling, and Marx's daughter Eleanor Marx-Aveling, under supervision of and edited by Frederick Engels. Engels wrote: "To translate such a book, a fair knowledge of literary German is not enough. Marx uses freely expressions of everyday life and idioms of provincial dialects; he coins new words, he takes his illustrations from every branch of science, his allusions from the literatures of a dozen languages; to understand him, a man must be a master of German indeed, spoken as well as written, and must know something of German life too". [ibidem, p. 335]

Marx, according to Engels, was not only "the most untranslatable of German prose writers" but also "one of the most vigorous and concise writers of the age. To render him adequately, a man must be a master, not only of German but of English too. [...] Powerful German requires powerful English to render it". [ibidem, p. 336] "...technical term has to be always rendered by one and the same equivalent" [ibidem.]. Analysis of exchange value is "one of the most delicate analyses in Marx's book" [ibidem, p. 337]. Oth-

erwise, it means the turning of German sense into English nonsense.

Let us call things by their names. Thus, it is an urgent necessity to brush Augean stable of so-called "modern interpretation" of Marx. Notably, it concerns to kind of "Marxism". What do I understand under the term 'Shallow Marxism'? It is when shallowness of the criticism stems from the depth of misunderstanding. It also involves a "particular confusion among Marxists, who devote, on average, substantially more labour time to finding fault with Marx's theory than to understanding it" [Freeman, 2016]. What do I understand under the term 'Monkey Marxism'? It is when they jump from one level of abstraction to another without taking into account intermediate links. In Grundrisse Marx wrote: "It is just as impossible to pass directly from labour to capital as from the different races of men directly to the banker, or from nature to the steam-engine" [MECW, vol. 28, p. 190]. Is it possible to interpret the first Volume of Capital without taking into account all that Marx said in the third Volume and Notes on Adolph Wagner's "Lehrbuch der politischen Ökonomie"? As Marx wrote: "The direct transition from the fetish of the African to Voltaire's être supreme, or from the hunting gear of a North American savage to the capital of the Bank of England, is not as absurdly anti-historical as is Bastiat's transition from the fisherman to the wage labourer" [MECW, vol. 28, p. 15].

Marx's political economy is shooting at a moving target. The subject matter of Marx's political economy is infinite movement. To analyse theoretically dialectics of this movement we should make many, many freeze frames. But it is not the state of equilibrium. Marx's political economy is anti-equilibrium one. In Afterword to the Second German Edition Marx wrote: ... dialectic ... [I]n its rational form ... regards every historically developed social form as in fluid movement, and therefore takes into account its transient nature not less than its momentary existence [MECW, vol. 35, p. 20]. This "momentary existence" is snapshots of reality as it is. Such frozen movement is a domain of algebra.

Karl Marx's writings provide a uniquely insightful explanation of the inner workings of capitalism, which other schools of thought generally have difficulty explaining. From this vantage point, Marx's works can help to explain important features and economic problems of our age, and the limits of their possible solutions

Ethical Position

Marx was one of the greatest humanists in the history of humankind. In a letter to Sigfrid Meyer of 30 April 1867 [MECW, vol. 42, p. 366] he wrote: "Why then did I not answer you? Because I was the whole time at death's door. I thus had to make use of every moment when I was capable of work to complete my book, to which I have sacrificed my health, happiness, and family. I hope this explanation suffices. I laugh at the so-called 'practical' men and their wisdom. If one wanted to be an ox, one could, of course, turn one's back on the sufferings of humanity and look after one's own hide. But I should really have thought myself unpractical if I had pegged out without finally completing my book, at least in the manuscript." It is because, as Marx wrote in a letter to Auguste Jean Marie Vermorel of 27 August 1867, "We are both pursuing the same aim, the emancipation of the proletariat" [MECW, vol. 42, p. 414].¹

Some time later in a letter to Engels, he wrote "In a few days I shall be 50. As that Prussian lieutenant said to you: "20 years of service and still lieutenant", I can say: half a century on my shoulders, and still a pauper. How right my mother was: "If only Karell had made capital instead of etc." [MECW, vol. 43, p. 25].

Very many writers who consider themselves Marxists have a strange habit of throwing out the baby with the bathwater — and, as a rule, along with Marx too. All of Marx's economic writings are a tremendous humanistic message. Their vital theme is Man. All of Marx's writings are devoted to one essential theme — to Man. And Marx's political economy is also about Man. It is not only about the material and social re-

¹ Meyer, Sigrid (c. 1840–1872) — prominent figure in the German and American working-class movement; engineer; member of the General Association of German Workers; opposed Lassalleanism; member of the International; in 1866 emigrated to the USA, member of the New York Communist Club and an organiser of the International's sections in the USA; follower of Marx and Engels. Vermorel, Auguste Jean Marie (1841–1871) — French journalist, editor of Le Courrier français (1866–67), member of the Paris Commune (1871).

ality of the world but also about reflecting the consciousness of Man.

Marx stated that Feuerbach's outstanding achievement was, among others, "the establishment of *true materialism* and of *real science*, by making the social relationship of 'man to man' the basic principle of the theory" [MECW, vol. 3, p. 328]. And Marx, by making the social relationship of 'man to man' the basic principle of his own theory, was the world's first theorist of *globalisation*.

Prejudgements

Some time ago Tony Norfield wrote, "So the logic of the question was: what is the point of Marx's theory if one can do without it when explaining what is going on in the world?" Of course, the system has developed a great deal in the more than 150 years since *Capital* was written. Therefore, the changing forms of capitalism have led many to argue that Marx's theory is outdated or invalid today.

As the case with Borkiewicz shows, the socalled inconsistency/contradiction arises from trying to turn Marxism into bourgeois economics, in particular through completely inappropriate and absurd use of reproduction schemes to 'solve' for equilibrium market prices using *matrix algebra*.

Many authors concluded that Marx suffered from 'unclarity' or a 'lack of clarity' as to his own abstractions, a judgment more appropriate for their own arguments. It is always so when shallowness of the criticism stems from the depth of misunderstanding.

I do not like the word 'theory' concerning Marx's economic works. It is because many authors of articles and books understand the word 'theory' as a product of Marx's thinking, as a random or unexpected turn of concepts and definitions. It implies the possibility of logical errors in the process of thinking, false or unrealistic assumption etc. For example, they write whole books state that 'for Marx money must be commodity'. Of course, it is an absurd statement. Indeed, as Charles Dickens already said: "There are books of which the backs and covers are by far the best parts".

As Engels already wrote, "For the people who cannot or do not want to read, who, even in

² https:// economicsofimperialism.blogspot.com

Volume I, took more trouble to understand it wrongly than was necessary to understand it correctly — for such people it is altogether useless to put oneself out in any way" and added, "if it were not labour in vain to open the eyes of those who do not want to see".

As already said, Alan Freeman "presuppose" is not an idle word and the assumption is not a simplification, an approximation, or an option. Without it, there is no theory. Notably, it concerns those who conclude that Marx's economic arguments do not stand up to critical examination. This judgement, however, stemmed from a particular reading, or interpretation, of Marx.

I rely on Marxist concepts as starting points for understanding the world today because they provide the best way to explain what is going on. The significance of Marx's theory is that it so clearly spelt out the dynamic of capitalism that his analysis provides critical building blocks from which to understand significant features of the world economy today.

I want to reiterate that we cannot prove things by quoting authorities, even such an authority as Karl Marx. Because Marx said something, it does not make it true. However, a man like Marx has the right to be heard himself [MECW, vol. 37, p. 875].

Marx was an economist not by vocation, but by necessity. His passion was history and philosophy. Marx studied political economy and capitalist society through the eyes of a philosopher. He looked at the economy by the philosophical magnifying glass. Therefore, you cannot read Marx's texts through the eyes of a contemporary accountant. It means to change the power of abstraction to the pettiness of the accountant. For example, Marx determines general aggregate laws which apply regardless of the outcome and makes no pretence of calculating individual prices.

Every Marx's text was written in a specific context and time. Also, the world in which Marx lived is different from the world in which we live. Therefore, the main question is how to interpret these writings to understand the sense of contemporary events, phenomena, and crises. However, for the modern reader, the most significant difficulty is to read Marx's writings through Marx's eyes.

Our reading of Marx is severely distorted by our knowledge as well. It leads to a tendency to perceive Marx's writings as obsolete by definition. Moreover, as Alan Freeman already noted, Marx's concepts, when summarised or 'interpreted', have mutated to the point where readers cannot see what he actually wrote, and writers systematically attribute things to him which he simply did not say at all.

In every case, we can only comprehend the person's theories after clearly grasping the problems he set out to answer, what he wants his theories to do. However, the objectivity of the study does not exclude personal attitude to the analysed issues. This personal attitude is primarily due to the purpose of the study. So, what was the purpose of all Marx's multitudinous activities, including his economic writings?

Many authors concluded that Marx suffered from 'unclarity' or a 'lack of clarity' as to his own abstractions, a judgment more appropriate for their own arguments. It is always so when shallowness of the criticism stems from the depth of misunderstanding. For example, the most frequently used in 'Marxists' literature is the term 'labour theory of value'. Those who carefully read Marx's economic writings know well that it is absurd collocation. Oiled oil — no more.

Another example. Anitra Nelson, which some Marxists consider to be a great specialist in money theories wrote: "It is due to the fact that Marx assumes labour 'value', as an already established concept in the school of political economy, and reconstructs the category 'labour-time' — as 'abstract labour' and 'socially necessary labourtime' — in order to explain the everyday world of prices, non-commodity currencies and the legal standard of price, the money commodity. He was conscious that he failed to do this in a transparent way, emphasised later by many Marxians in terms of the 'transformation problem'. This failure arises from the fact that in Capital I (1976a) price is proportional to value, whereas in the third volume (1981) prices are not proportional to values" [Nelson, 2001, p. 51]. It is a striking example of how to turn every Marx's sentence into 'marksists' nonsense.

Premises

Unfortunately, Marx's early work is usually seen to carry little weight. Vainly! It was not only for

self-clarification, even if left to the gnawing criticism of the mouse, but at the same time levelling the field and marking it. It is impossible to understand the *Poverty of Philosophy*, Grundrisse, all volumes of Capital (including Theories of Surplus Value) without Contribution to the Critique of Hegel's Philosophy of Law. Introduction, Holy Family, German Ideology, Economic & Philosophic Manuscripts of 1844, Reflections, Comments on James Mill Elémens d'économie politique, Summary of Frederick Engels' article "Outlines of a Critique of Political Economy" (written in the first half of 1844), Frederick Engels' Outlines of a Critique of Political Economy (Written in October and November 1843 and published in the *Deutsch-Fraraösische* Jahrbücher, 1844) and his book The Condition of the Working-Class in England published in 1845. (see MECW, vol. 4), Moses Hess The Essence of Money written in 1845.

In Contribution to the Critique of Hegel's Philosophy of Law. Introduction Marx determined the main aim of his scientific activity: "Theory is capable of gripping the masses as soon as it demonstrates ad hominem, and it demonstrates ad hominem as soon as it becomes radical. To be radical is to grasp the root of the matter. But for man the root is man himself" [MECW, vol. 3, p. 182].

Marx always was analysing only the facts. Already in the Economic & Philosophic Manuscripts of 1844, Marx wrote: "It is hardly necessary to assure the reader conversant with political economy that my results have been attained by means of a wholly empirical analysis based on a conscientious critical study of political economy" [MECW, vol. 3, p. 229]. He hated speculative philosophising, aka metaphysics that is juggling categories.

Some time later, in the famous *German Ideology* Marx and Engels formulated what is today known as premises of the materialist conception of history: "The premises from which we begin are not arbitrary ones, not dogmas, but real premises from which abstraction can only be made in the imagination. They are the real individuals, their activity, and the material conditions of their life, both those which they find already existing and those produced by their activity. These premises can thus be verified in a purely empirical way" [MECW, vol. 5, p. 31].

In unpublished 'Introduction' of 1857 (Economic Manuscripts of 1857–58) Marx precisely determined scope of his analysis "To begin with, the subject to be discussed is *material production*. Individuals producing in a society — hence the socially determined production by individuals is of course the point of departure" [MECW, vol. 28, p. 17].

In *A Contribution to the Critique of Political Economy* Marx concretised: "As useful activity directed to the appropriation of natural factors in one form or another, labour is a natural condition of human existence, a condition of material interchange between man and nature, quite independent of the form of society" [MECW, vol. 29, p. 278].

"So far therefore as labour is a creator of usevalue, is useful labour, it is a necessary condition, independent of all forms of society, for the existence of the human race; it is an eternal nature imposed necessity, without which there can be no material exchanges between man and Nature, and therefore no life" [MECW, vol. 35, p. 53].

The same is repeated in. *Marginal Notes* on Adolph Wagner's *Lehrbuch der politischen Oekonomie* [MECW, vol. 24].

More fully the starting point of the analysis Marx presented in a letter to Ludwig Kugelmann 11 July 1868 "Every child knows that any nation that stopped working, not for a year, but let us say, just for a few weeks, would perish. And every child knows, too, that the amounts of products corresponding to the differing amounts of needs demand differing and quantitatively determined amounts of society's aggregate labour" [MECW, vol. 43, p. 67]. Unfortunately, every child becomes an adult, and many forget about it, especially when they become economists.

Totality

What is *totalität* (totality) in Marx economic writings? I think the whole of Marx's writings is the study of the infinitely complex organism that is modern society as it evolves and changes over time. But once "useful labour, it is a necessary condition, independent of all forms of society, for the existence of the human race" more factual determination of totality is the sum total of labour of society.

The total labour-power of society, which is embodied in the sum total of the values of all

commodities produced by that society, counts here as one homogeneous mass of human labour-power, composed though it is of innumerable individual units [MECW, vol. 35, p. 49]. The sum total of the labour of all these private individuals forms the aggregate labour of society [ibidem, p. 83].

The main question — how the total disposable time of society is disposed of. Law of value describes the mechanism of this disposition. The law of competition requires to sell cheaper than all other producers. It is possible only when you spend less time to produce than all other producers. Time is the sole *criterium* and nothing else. Moreover, there is no choice for the producer — he/she must sell. Anyway, and at market price, that is at definite socially determined value.

Division of labour is a distribution of total disposable time of society. What is the mechanism of that distribution? What is a mediator in the definite mechanism? What is the only mechanism that exists in societies founded on individual exchanges (market economy) for determining whether a given product meets a social need?

Thus, there arises the question of what are the inner driving forces, determining purpose, the driving concern, etc. of these different movements as it concerns social life? What is the mechanism of the renewal and continuity of the production process itself? What is the mechanism of distribution the total mass of social labour-time *among the various spheres of production* according to the social need?

Indeed, since commodity production necessitates a division of labour, society pays for this article by devoting a portion of the available labour-time to its production. Therefore, society buys it with a definite quantity of its disposable labour-time [MECW, vol. 37, p. 185].

Purely Ideal or Mental Form

Marx never wrote "in my opinion," because "Our 'meaning' has nothing at all to do with the essential characters of the thing we consider" [MECW, vol. 32, p. 315]. It is of fundamental meaning when we talk about abstraction — who does make (or has made) this abstraction. Is it abstraction made by humanity in the course of development of human

reasoning? Or it is the pure scientific method of inquiry?

Besides material products, we also have products of human thinking. Thinking is a reflection of the material world. It is about the human practice and comprehension of this practice. As Engels wrote, we are dealing here not only with a purely logical process but with a historical process and its explanatory reflection in thought, the logical pursuance of its inner connections. [MECW, vol. 37, p. 882]. The ideal is nothing else than the material world reflected by the human mind and translated into forms of thought. Taken it more concrete Marx clearly indicated that the price or money-form of commodities is, like their form of value generally, a form quite distinct from their palpable bodily form; it is, therefore, a purely ideal or mental form. If some phenomenon "is presented to them" or is perceived by them it means that it is ideally reflected as in a mirror, that the life of the subject-matter is ideally reflected as in a mirror.

How dialectics of reality express itself in the human mind, i.e. in the form of man's thoughts (words, terms, categories, concepts)? The full answer you can get from *Anti-Dühring*. We ought to remember that Marx took a direct part in the writing of *Anti-Dühring* (he wrote a critical outline of Dühring's views on the history of economic doctrines), read and approved the whole manuscript. *Anti-Dühring* was thus the result of creative collaboration by Marx and Engels, reflecting their joint views.

Can we make abstraction though may not be aware of it? Of course, the ability to abstract thinking is a property of the human psyche. A person can abstract even without knowing it. It is the same as with Molière's newly baked nobleman Monsieur Jourdain is treated by the wag who announces to him the news that all through his life, he has been speaking prose without knowing it.³

Maybe people had the ability to abstract thinking, and Marx only explained why and how it happened? Therefore, the question is how categories or concepts as a mental reflection of reality fit to reality. In dialectics, we saw the science of the general laws of change, not only in society and in human thought, but in the external world, which is mirrored by human thought.

As concerns abstract labour (or, precisely, *labour in the abstract*) the issue is to explain *how* humankind in the course of development of commodity exchange abstracted this common for all commodities 'element' (*identity* between different concrete labours) which fulfilled the principle of equivalence. This comparative analysis lasting centuries led to reduction of all differences (measurable and no measurable as well) to unique one — *time as such*. On what basis could humankind come to such an abstraction and why?

Marx investigated and discussed the fundamental, major problems of the classical political economy of his time. He does not consider the vulgar political economy as a topic of his research. Marx has not written the textbook on how to calculate the value of each and every commodity produced. Ian Steedman as a representative of "Monkey Marxism" where they do not make a difference between accounting practice and political economy.

Basic principles of exchange reciprocity and equivalence (or equivalent reciprocity) implies comparison. So, the exchange needs a comparison. Comparison implies measurement. What features of labour make it possible to see it as a labour in the abstract and to find a common feature of all kinds of labour?

If somebody states that categories of labour and value are redundant in economic sciences, it is tantamount to saying that **time does not exist**. Indeed, there is possible only a very futile metaphysical discussion or a still more discreditable purely verbal dispute.

Appropriation and Alienation

Marx devoted the period between 1844 and 1847 to an intensive study of the political economy. Already in the "Poverty of philosophy" it is evident that at that time, Marx had a holistic understanding of the mechanism of functioning and development of capitalism. The main question that should be investigated was the discovery and description of the underlying mechanisms and forces driving the phenomena visible on the surface. Even then, it was clear to Marx that capitalism is just as

³ J.B. Molière, *Le Bourgeois gentilhomme*, Act II, Scene 6.

absurd and barbarous and, at the same time, an inevitable way of satisfying human needs.

"Hegel's standpoint is that of modern political economy. He grasps *labour* as the *essence* of man — as man's essence which stands the test: he sees only the positive, not the negative side of labour. Labour is *man's coming-to-be for himself* within *alienation* or as an *alienated* man. The only labour which Hegel knows and recognises is *abstractly mental* labour" [MECW, vol. 3, p. 333].

He was analysing the facts. Even in the *Economic & Philosophic Manuscripts of 1844*, Marx wrote: "It is hardly necessary to assure the reader conversant with political economy that my results have been attained by means of a wholly empirical analysis based on a conscientious critical study of political economy." [MECW, vol. 3, p. 229] He hated speculative philosophising aka metaphysics that is juggling with words and categories and justifies "starting out from the positive facts which we know by the senses."

The key to understanding Marx's economic work is in his early writings. And Marx asks himself "Is it a high appreciation of man for him to figure as a 'force' alongside horses, steam and water?" [MECW, vol. 4, p. 285] and "What in the evolution of mankind is the meaning of this reduction of the greater part of mankind to abstract labour?" [MECW, vol. 3, p. 241], "political economy knows the worker only as a working animal — as a beast reduced to the strictest bodily needs" [ibid., p. 242], "Political economy considers labour in the abstract as a thing; labour is a commodity' [ibid.].

Here Marx formulated not only his understanding of the essence of private property but determined two laws of appropriation. 1) The law of appropriation through the labour, i.e. "labour as the original mode of appropriation" [MECW, vol. 29, p. 461–462]. 2) The law of appropriation through the alienation — "the alienation of the product as the necessary form of its appropriation" [MECW, vol. 34, p. 355]. "It is therefore only with the coming of capitalist production that use value is first generally mediated through exchange value" [ibidem]. How, we now ask, does man come to alienate, to estrange, his labour? How is this estrangement rooted in the nature of human development? [MECW, vol. 3, p. 281].

His chief concern is with a question other political economists have never asked: "Why is labour represented by the value of its product and labour-time by the magnitude of that value?" I share the opinion expressed by Bertell Ollman [1976] that it is the widespread misconception that in his later life Marx left the theory of alienation behind him bears most of the responsibility for the equally widespread misunderstanding of his term "labour." Grasping "labour" in Capital as alienated labour is the key to understanding Marx's economic theories. "Only by its alienation does individual labour manifest itself as its opposite. The commodity, however, must have this general expression before it is alienated. This necessity to express individual labour as general labour is equivalent to the necessity of expressing a commodity as money" [MECW, vol. 32, p. 323]. He must sell means he must alienate. And selling becomes the extreme condition of living. I return to these questions in the next paper.

Perverted Forms or Fetishism

The next question which has a principal meaning in Marx's economic writings is how dialectics of reality express itself in the human mind, i.e. in the form of man's thoughts (categories)? What is the interaction between man and Nature where results are not only material products but also products of man's thinking? What is the source of perverted man's conscious?

"Objects separated from this mediator have lost their value. Hence the objects only have value insofar as they *represent* the mediator, whereas originally it seemed that the mediator had value only insofar as *it* represented *them*. This reversal of the original relationship is inevitable. This *mediator* is, therefore, the lost, estranged *essence* of private property, private property which has become *alienated*, external to itself, just as it is the *alienated* species-activity of man, the *externalised mediation* between man's production and man's production" [MECW, vol. 3, p. 212].

The aim is the demystification aims to reveal the social constitution of the relations between things to show their human content.

Or, in other words, "[...] because in it the social character of men's labour appears to them

as an objective character stamped upon the product of that labour; because the relation of the producers to the sum total of their own labour is presented to them as a social relation, existing not between themselves, but between the products of their labour" [MECW, vol. 35, p. 82].

"Bailey is a fetishist in that he conceives value, though not as a property of the individual object (considered in isolation), but as a relation of objects to one another, while it is only a representation in objects, an objective expression, of a relation between men, a social relation, the relationship of men to their reciprocal productive activity" [MECW, vol. 32, p. 334].

I will return to this question in the next paper, where I will discuss the validity of Marx's understanding of money.

Panta Rhei – Mors Immortalis

Marx's Political Economy is not only a matter of algebra but a matter of probability as well. And "Probability always entails from objective regularity," wrote Marx [MECW, vol. 32, p. 143]. It is the political economy of motion. Why is it so? It was first clearly formulated by Heraclitus in his famous concept "Panta rhei" (πάντα ρεῖ): everything is and is not, for everything is fluid, is constantly changing, constantly coming into being and passing away — "Everything changes and nothing remains still, and you cannot step twice into the same stream" (Seneca in Epistulae, VI, 58, 23). Thus, we ought to see the economic life of a capitalistic society as a stochastic process — even as Brownian movement or chaos [Farjoun & Machover, 1983].

Maybe, "The only wheels which political economy sets in motion are *greed* and the *war amongst the greedy* — *competition*" [MECW, vol. 3, p. 271].

At the same time, Marx's political economy is shooting at a moving target. The subject matter of Marx's political economy is infinite movement. To analyse theoretically dialectics of this movement we should make many, many freeze frames. But it does not mean to fix the state of equilibrium. It is snapshots of reality as it is. As already said, Alan Freeman "presuppose" is not an idle word and the assumption is not a simplification, an approximation, or an option.

Without it, there is no theory. Notably, it concerns those who conclude that Marx's economic arguments do not stand up to critical examination. This judgement, however, stemmed from a particular reading, or interpretation, of Marx.

In written in the first half of 1844 comments on James Mill Élémens d'Économie Politique Marx has formulated his principal understanding of the stochastic, chaotic movement of economic variables. He wrote "[...] Mill commits the mistake — like the school of Ricardo in general — of stating the *abstract law* without the change or continual supersession of this law through which alone it comes into being. [...] In political economy, the law is determined by its opposite, absence of law. The true law of political economy is chance, from whose movement we, the scientific men, isolate certain factors arbitrarily in the form of laws" [MECW vol. 3, p. 211].

Engels in *Anti-Dühring* wrote "When we consider and reflect upon nature at large or the history of humanity or our intellectual activity, at first, we see the picture of an endless entanglement of relations and reactions in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes away. This primitive, naive but intrinsically correct conception of the world is that of ancient Greek philosophy, and was first clearly formulated by Heraclitus: everything is and is not, for everything is fluid, is constantly changing, constantly coming into being and passing away." [MECW, vol. 25, p. 21]

But this conception, correctly as it expresses the general character of the picture of appearances as a whole, does not suffice to explain the details of which this picture is made up, and so long as we do not understand these, we have not a clear idea of the whole picture. To understand these details, we must detach them from their natural or historical connection and examine each one separately, its nature, special causes, effects, etc. [MECW, vol. 25, 21–22].

The connection between Marx's economic writings and his mathematical studies will be the theme of another paper. In *Preface* to the second edition of *Anti-Dühring* Engels wrote about "the extremely important mathematical manuscripts left by Marx" [MECW, vol. 25, p. 13]. At that time, Marx comprehended that many questions could not satisfactorily be solved

without the use of mathematics. The first question was the stochastic character of exchange relations, i.e. emergence and movement of average market values. The second question concerns the difference between constant and variable. Simultaneously, Marx has begun to differentiate between time past, time present, future time.

Carefully reading of Marx's economic writings makes it possible to find the following kinds of movement:

Elliptical movement

Circular movement

Spiral movement

Oscillating movement

Rotational movement

Recurrent movement

Perpetual movement

Repetitive movement

This is generally the way in which real contradictions are reconciled. For instance, it is a contradiction to depict one body as constantly falling towards another, and as, at the same time, constantly flying away from it. The ellipse is a form of motion which, while allowing this contradiction to go on, at the same time reconciles it. [MECW, vol. 35, p. 113

In *Poverty of Philosophy*, Marx wrote: "All that exists, all that lives on land and under water, exists and lives only by some kind of movement" [MECW, vol. 6, p. 163] and further continued "There is a continual movement of growth in productive forces, of destruction in social relations, of formation in ideas; the only immutable thing is the abstraction of movement — *mors immortalis* [ibidem, p. 166].

In Statu Nascendi

The fact that most of Marx's writings were not published during his lifetime is of fundamental importance. However, even in the case of published works, Marx maintained a farreaching criticism. In a letter to Kugelmann of 10 June 1867, he wrote: "I am always very dissatisfied with my things when I see them printed, especially at first sight" [MECW, vol. 42, p. 380]. But even not "at first sight" Marx critically reviewed his previous works. In a letter to Kugelmann of 13 October 1866, he wrote: "It was, in my opinion, necessary to begin again *ab ovo* in the first book, i.e., to summarise the book of mine published by Dunck-

er⁴ in one chapter on commodities and money. I judged this to be necessary, not merely for the sake of completeness, but because even intelligent people did not properly understand the question, in other words, there must have been defects in the first presentation, especially in the analysis of commodities" [MECW, vol. 42, p. 328].

As concerns the first Volume of Capital Engels witnessed in *Preface* to the third German edition of Capital "It was Marx's original intention to re-write a great part of the text of the first volume, to formulate many theoretical points more exactly, insert new ones and bring historical and statistical materials up to date" [MECW, vol. 35, p. 27].

On the other hand, the matter was further complicated by the circumstance of which Marx wrote in a letter to Engels of 31 July 1865: "But I cannot bring myself to send anything off until I have the whole thing in front of me. Whatever shortcomings they may have, the advantage of my writings is that they are an artistic whole, and this can only be achieved through my practice of never having things printed until I have them in front of me in their entirety [MECW, vol. 42, p. 173].

There is not something finished forever — the only fluid movement of thought. Therefore, follow the flow of thoughts, not the letters. It is relevant to reconstruct the reasoning, the method of enquiry, and the conceptual framework which allowed him to draw these conclusions.

Time, Natural Laws, and Social Laws

Marx devoted the period between 1844 and 1847 to an intensive study of the political economy. Already in the *Poverty of Philosophy*, it is evident that at that time, Marx had a holistic understanding of the mechanism of functioning and development of capitalism. The main question that should be investigated was the discovery and description of the underlying mechanisms and forces driving the phenomena visible on the surface. Even then, it was clear to Marx that capitalism was just as **absurd** and **barbarous** and, at the same time, an **inevitable way** of satisfying human needs.

⁴ A Contribution to the Critique of Political Economy [MECW, vol. 29].

How to establish a relation between needs and disposable time? Distribution of disposable time is, at the same time, division of labour time. The basis of the exchange of commodities is the division of labour. This social division of labour is the division of disposable time of whole society. There is no production of commodities without division of labour, for there would in such circumstances be no need to exchange one thing for another. The exchange of commodities is based on the socially recognised principles of ownership, equality, mutual and equal benefit (equivalence), freedom of will. The basic underlying principles of exchange were reciprocity and equality (equivalence). It is an illusion, fiction because as Marx noted "However, individual exchange, as the bourgeois conceives it, is far from resembling individual exchange as it is practised [MECW, vol. 6, p. 144].

It was in 1846 when in *The Poverty of Philosophy* Marx formulated his understanding of the main characteristic of "societies founded on individual exchanges": "If M. Proudhon admits that the value of products is determined by labour time, he should equally admit that it is the fluctuating movement alone that in societies founded on individual exchanges make labour the measure of value. There is no ready-made constituted "proportional relation," but only a constituting movement. [MECW, vol. 6, p. 135].

Why labour time but not anything else? Because labour time is the most in-depth and objective criterion of comparison. If we abstract from so-called psychological time — the time is the only objective criterion of comparison of expended labour-power.

The main question that faced Marx was what mechanism determines the necessary labour time. It is "[t]he general law and to the basis of political economy, that the values of commodities are determined by the labour-time contained in them, ..." [MECW, vol. 37, p. 311].

Before exchanging something for anything else, we ought to *compare* these two things. It means we should find a *similarity* between what we offer and what we require. We have here three entities: human labour (disposable working-time), human needs, and useful things (use values). All we ought to do is to reduce them to one denominator. What are the means to ascertain the minimum of labour necessary

for the production of a commodity? An overall mode of evaluation in exchange relation is the evaluation of commodities by labour time. [MECW, vol. 6, p. 136]

The reduction of all three entities to time was a well-documented historical process of humanity's development. Time is objective and independent of the human will. As such, time can serve as an ideal measure. However, it was needed the social validation for time to be an ideal measure. Human labour is the prime basic condition for all human existence, and this to such an extent that, in a sense, we have to say that labour created man himself. As Karl Marx wrote in Capital "In all states of society, the labour time that it costs to produce the means of subsistence must necessarily be an object of interest to mankind, though not of equal interest in different stages of development. And lastly, from the moment that men in any way work for one another, their labour assumes a social form" [MECW, vol. 35, p. 47].

It is self-evident that this necessity of the distribution of social labour in specific proportions is certainly not abolished by the specific form of social production; it can only change its form of manifestation. Natural laws cannot be abolished at all. The only thing that can change, under historically differing conditions, is the form in which those laws assert themselves. And the form in which this proportional distribution of labour asserts itself in a state of society in which the interconnection of social labour expresses itself as the private exchange of the individual products of labour is precisely the exchange_value of these products.

What really counts are the physical variables: use-value, people, needs and time. Maybe it is so why in the letter to Ludwig Kugelmann of 11 July 1868 Marx wrote: "[e]ven if there were no chapter on 'value' at all in my book, the analysis I give of the real relations would contain the proof and demonstration of the real value relation" [MECW, vol. 43, p. 67].

And in a letter to Engels of 8 January 1868 he wrote: "Actually, no form of society can prevent the labour time at the disposal of society from regulating production in ONE WAY OR ANOTHER. But so long as this regulation is not effected through the direct and conscious control of society over its labour time — which is

only possible under common ownership — but through the movement of commodity prices..." [MECW vol. 42, p. 515].

Marx discovered the *natural* laws of capitalist production. As he wrote in Preface to the First German Edition of Capital 1 "It is a question of these laws themselves, of these tendencies working with iron necessity towards inevitable results". Here Marx mentions the dialectics of elliptical motion. On the other hand, Lukacs claimed that that dialectical principles and methods do not apply to Nature and that the 'dialectics of nature' is a misinterpretation of Marx's thought initiated by Engels.

However, it seems that what Marx wrote about elliptical motion and some other topics shows that he did indeed find dialectical features in nature. If there are contradictions in Nature, then there is a dialectics of nature, a conclusion that follows from the contradictory nature of elliptical motion. At the same time, we ought to determine how the relationship between dialectics as a theory of historical development and as a logic of conceptual relationships matches with the natural laws of motion.

Meaning of the mathematical writing of Marx will be the theme of the next our paper. Examination of Marx's statements about elliptical motion will throw light on his views on how dialectical contradictions in society or nature cause change and find a resolution. During the last four decades of his life, Marx spent a great deal of effort studying various areas of natural science, including physics, astronomy, geology, physiology, chemistry, and mathematics [Antonova, 2004].

Marx's extensive mathematical manuscripts, written in the 1880s, are well known, but his letters, manuscripts, and his personal library are evidence of his earlier mathematical studies, in the 1840s, '50s, and '60s. As in the case of natural science, there is still no sufficiently convincing answer to the question of the reasons and goals of Marx's studies in mathematics, and in particular, differential calculus. The elaboration of this problem would make it possible to determine the place of these studies of Marx in mathematics in his work as a whole. Marx's mathematical works still need adequate evaluation.

Although Marx recognised contradictions within theories and concepts, contradictions between theories, between what is apparent and what is real, between theory and practice, and between theories and reality, he also maintained that there are contradictions in reality itself. It 'goes without saying', Marx wrote, that 'paradoxes of reality [Wirklichkeit]' are expressed in 'linguistic paradoxes [Sprachparadoxen]', but 'these contradictions lie in the thing [liegen in der Sache], not the linguistic expression of the thing'.

Why and for Whom?

A big deal like Capital should have a clearly defined aim and addressee. As a rule, the authors cite from Preface to the First German Edition "[...] it is the ultimate aim of this work, to lay bare the economic law of motion of modern society" [MECW, vol. 35, p. 10]. What concerns addressee in the second German edition of *Capital I* he wrote: The appreciation which Das Kapital rapidly gained in wide circles of the German working class is the best reward of my labours [MECW, vol. 35, p. 13].

Marx deliberately downplayed the method of Capital to make the book more accessible to his working-class readers. It is the source of the tension between the complexity of the book's content and Marx's desire to find an attractive form of exposition because, as he wrote in the preface to the French edition of *Capital 1* where Marx approves of the transformation of his book into a serial, in which case "the book will be more accessible to the working class, a consideration which to me outweighs everything else".

In a letter to Engels of 22 June 1867 he wrote "With regard to the development of the form of value, I have both followed and not followed your advice, thus striking a dialectical attitude in this matter, too. That is to say, 1. I have written an appendix in which I set out the same subject again as simply and as much in the manner of a school textbook as possible, and 2. I have divided each successive proposition into paras, etc., each with its own heading, as you advised. In the Preface I then tell the 'non-dialectical' reader to skip page x-y and instead read the appendix. It is not only the philistines that I have in mind here, but young people, etc., who are thirsting for knowledge" [MECW, vol. 42, p. 384]

Averages and Ideal Types

One of the well-known "Marxist" authors, wrote, "Marx often fails to be explicit about the level of aggregation at which he is working. He frequently explains the aggregate behaviour of a system by discussing a typical or average element of it". There are three answers to the question of where these judgments come from. First, he did not read Marx's writings. Second, he understood nothing. Third, he did not want to understand what he really has read. His own confusion thus achieves the certain effect of confusing his readers.

Marx has repeatedly pointed to the source of average quantities: Each of these individual commodities is a repository of the value of the capital and the surplus value produced by it. The labour applied to the individual commodity can no longer be calculated at all — if only because this would be a calculation of the average, hence a notional estimate, which covers the part of the constant capital which enters into the value of the total product merely as depreciation, and also the conditions of production that are consumed communally, and finally because it is the directly social labour, which is balanced out and estimated as the average labour of the many cooperating individuals. The labour applied to the individual commodity counts only as the aliquot part of the total labour which falls to this commodity and is estimated notionally [MECW, vol. 34, p. 363].

Therefore, in a general analysis of this kind it is usually always assumed that the actual conditions correspond to their conception, or, what is the same, that actual conditions are represented only to the extent that they are typical_of their own general case [MECW, vol. 37, p. 142].

The main interest of Marx was the motion of moving weighted averages of analysed variables. For example, he wrote: "The formation of the average rate of profit is, therefore, not merely a matter of obtaining the simple average of the different rates of profit in the various spheres of production, but rather one of the relative weight which these different rates of profit have in forming this average [MECW, vol. 37, p. 161].

Moreover, "[i]t is evident that the balance among spheres of production of different composition must tend to equalise them with the spheres of average composition, be it exactly or only approximately the same as the social average. Between the spheres more or less approximating the average there is again a tendency toward equalisation, seeking the ideal average, i.e., an average that does not really exist, i.e., a tendency to take this ideal as a standard. In this way, the tendency necessarily prevails to make the prices of production merely converted forms of value, or to turn profits into mere portions of surplus-value [MECW, vol. 37, p. 171].

Marx has stressed that in theory, it is assumed that the laws of the capitalist mode of production operate in their pure form. In a general analysis of this kind, it is usually always assumed that the actual conditions correspond to their conception, or, what is the same, that actual conditions are represented only to the extent that they are typical of their own general case [MECW, vol. 37, p. 142]. And once more, "Under capitalist production, the general law acts as the prevailing tendency only in a very complicated and approximate manner, as a never ascertainable average of ceaseless fluctuations" [MECW, vol. 37, p. 160].

Marx's statement on the statistical nature of economic mechanisms as mechanisms of large-scale processes has an exceptionally great methodological significance for mathematical statistics. These mechanisms express the interactions of individual processes in the laws of probability; they dominate over any variations from the mean. Marx repeatedly returned to this problem. For example, in the Grundrisse, he wrote, in the chapter on money: "The value of commodities as determined by labour-time is only their average value. This average appears as an external abstraction if it is calculated out as an average figure of an epoch, e.g. a pound of coffee is one shilling if the average price of coffee is taken over, let us say, 25 years; but it is very real if it is at the same time recognised as the driving force and the moving principle of the oscillations which commodity prices run through during a given epoch. This reality is not merely of theoretical importance: it forms the basis of mercantile speculation, whose calculus of probabilities depends both on the median price averages which figure as the centre of oscillation, and on the average peaks and average troughs of oscillation above or below this centre".

Conclusion

Capital must rank as one of the best known, but least read works ever published. Indeed, most of us will have gleaned what we know about Capital through commentators or interpreters. And there lies the problem. Marx's explanation of capitalist development is so far removed from conventional accounts of how our society functions, that it is particularly difficult to appreciate. In Anti-Dühring Marx and Engels wrote the credo of dialectics: "A system of natural and

historical knowledge, embracing everything, and final for all time, is a contradiction to the fundamental laws of dialectic reasoning [MECW, 25, p. 25]. One of the finest researches of Marx is that revealing the duplex character of labour. And his economic writings are the history of the development of congealed, homogenous, undifferentiated human labour. There is no end of history. This history is going on. What should an orthodox Marxist do? To follow Marx's advise "Segui il tuo corso, e lascia dir le genti."

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Перечитывая Маркса вновь и вновь

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Аннотация. Теория, наиболее точно отражающая реальность, является фундаментальной предпосылкой любого анализа какого-либо явления, даже гипотетического. Если существуют диалектические законы движения, то как диалектика реальности выражается в человеческом сознании, то есть в форме человеческих мыслей (категорий)? Как следует читать Маркса? Я предпочитаю читать все рукописи Маркса, где он сделал огромное количество заметок, комментариев и т.д. Эти сочинения были «для себя», для «разъяснения для себя». Это черновики исследовательских работ, призванные прояснить для него ситуацию. Например, в Grundrisse Маркс разговаривает сам с собой. Он отражает не только результаты, но прежде всего процесс их появления. Наибольший интерес вызывают так называемые отклонения, неожиданный отход от основной темы. Это не была единичная провокация, когда Жак Деррида заявил в 1994 г., что «всегда будет ошибкой не читать, перечитывать и обсуждать Маркса». Ключевые слова: Карл Маркс; Капитал; теория стоимости Маркса; отчуждение; диалектическая логика; закон стоимости; отчуждение; тотальность; социальные формы

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