# Cornell University School of Hotel Administration The Scholarly Commons

Working Papers

School of Hotel Administration Collection

5-5-2003

# Financial Innovation and Russian Government Debt Before 1918

Andrey D. Ukhov Cornell University, au53@cornell.edu

Follow this and additional works at: https://scholarship.sha.cornell.edu/workingpapers

🔮 Part of the Finance and Financial Management Commons, and the International Business Commons

### **Recommended Citation**

Ukhov, A. D. (2003). *Financial innovation and Russian government debt before 1918* (Working Paper No. 03-20) [Electronic version]. New Haven, CT: Yale International Center for Finance. Retrieved [insert date], from Cornell University, SHA School site: http://scholarship.sha.cornell.edu/workingpapers/5

This Working Paper is brought to you for free and open access by the School of Hotel Administration Collection at The Scholarly Commons. It has been accepted for inclusion in Working Papers by an authorized administrator of The Scholarly Commons. For more information, please contact hotellibrary@cornell.edu.

If you have a disability and are having trouble accessing information on this website or need materials in an alternate format, contact web-accessibility@cornell.edu for assistance.

# Financial Innovation and Russian Government Debt Before 1918

### Abstract

In this paper I describe debt instruments issued by the Russian Imperial Government. At the beginning of the 20th century, the Russian government was the largest borrower in the world. Russian government bonds were traded in all major financial centers, including London, Paris, Amsterdam, and New York. Russia was integrated into the world financial system. In 1913 foreign investors held 49.7% of Russian government debt. Innovative financial instruments were developed to attract foreign and domestic investors.

### Keywords

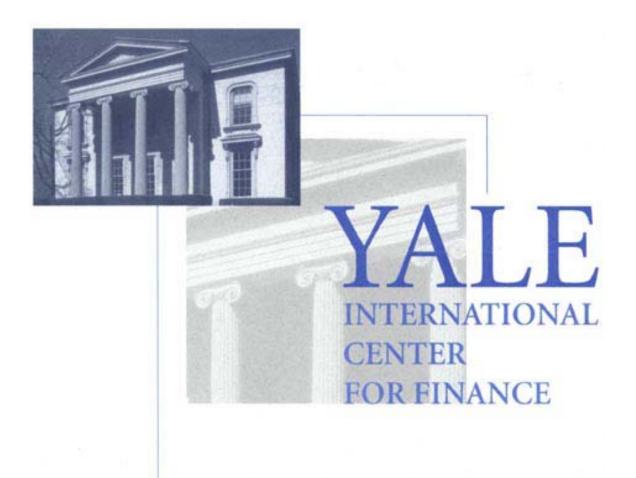
financial history, financial innovation, government debt, Russia

### Disciplines

Finance and Financial Management | International Business

### Comments

Copyright held by the author.



# Yale ICF Working Paper No. 03-20 May 5, 2003

# Financial Innovation and Russian Government Debt Before 1918

Andrey D. Ukhov Yale School of Management

This paper can be downloaded without charge from the Social Science Research Network Electronic Paper Collection: http://ssrn.com/abstract\_id=416620

# Financial Innovation and Russian Government Debt Before 1918

Andrey D. Ukhov<sup>\*</sup> Yale School of Management

This Version: 5 May  $2003^{\dagger}$ 

#### Abstract

In this paper I describe debt instruments issued by the Russian Imperial Government. At the beginning of the 20th century, the Russian government was the largest borrower in the world. Russian government bonds were traded in all major financial centers, including London, Paris, Amsterdam, and New York. Russia was integrated into the world financial system. In 1913 foreign investors held 49.7% of Russian government debt. Innovative financial instruments were developed to attract foreign and domestic investors.

JEL Classification: N24, N24, G15. Keywords: Financial history, financial innovation, government debt, Russia.

<sup>\*</sup>I am grateful to William N. Goetzmann, Geert Rouwenhorst, Svetlana Uhova, and Dmitry Zelyah for their help and comments. Financial support from the John Perry Miller Research Fund at Yale University for a portion of this research is gratefully acknowledged. Address correspondence to: Andrey D. Ukhov, International Center for Finance, Yale School of Management, 135 Prospect St., New Haven, CT 06520-8200, USA. Telephone: 203-773-3382, Fax: 203-432-8931 E-mail: andrey.ukhov@yale.edu

<sup>&</sup>lt;sup>†</sup>Copyright © 1998 - 2003 Andrey D. Ukhov. All Rights Reserved.

# Financial Innovation and Russian Government Debt Before 1918

#### Abstract

In this paper I describe debt instruments issued by the Russian Imperial Government. At the beginning of the 20th century, the Russian government was the largest borrower in the world. Russian government bonds were traded in all major financial centers, including London, Paris, Amsterdam, and New York. Russia was integrated into the world financial system. In 1913 foreign investors held 49.7% of Russian government debt. Innovative financial instruments were developed to attract foreign and domestic investors.

JEL Classification: N24, N24, G15. Keywords: Financial history, financial innovation, government debt, Russia.

# Contents

1	Introduction	1
<b>2</b>	The First Hundred Years	4
3	Alexander II (1855–1881)   3.1 Lottery Bonds   3.2 Loans Abroad	
4	Alexander III (1881–1894)4.1 Gold Bonds (Gold Loans)4.2 Perpetuities4.3 The Treaty Between China and Russia of 18964.4 The Russo-Chinese Bank	21 22
5	Nicholas II (1894–1917)	<b>25</b>
6	Provisional Government	32
7	Dependence on Foreign Capital Markets	35
8	Concluding Remarks	38
$\mathbf{A}$	Appendix	40

## 1 Introduction

This work is about debt issued by Russia before the Socialist Revolution. Imperial Russia was the largest borrower on the world capital markets. Russian government debt, structured through a variety of short-term and long-term instruments, was truly global in nature, with trading in London, Paris, Amsterdam, Vienna, Berlin, and New York.

Despite being viewed historically as an unsophisticated economy that came late to the industrial revolution, Russian finances were often on the frontier of innovation in the world capital markets. Historians have puzzled why the Marxist Revolution took lead in a largely pre-industrial economy, however the sophistication of Russian financing may offer a partial explanation. Beginning in the late 18th century Russia adopted fiat money and used it for decades to regulate and stimulate the growth of its economy and financing of wars. In the early 19th century Russia adopted an intermediate form of financial instrument, like commercial paper, which was a bearer security circulating like money, but which paid interest. Russia was the first major country to issue a "Eurobond," a security that implicitly controlled for the outcomes of European wars by paying off at a number of different capitals.

Russia was a leader in using public capital markets and especially foreign markets and foreign intermediaries to finance her ambitions and development. Russia continued its innovative financing strategies through the late 19th century by establishing and regulating a stock exchange by 1855, financing far-flung exploration of Asia and America via equity for corporate enterprises, and being the most aggressive of nations to employ foreign capital to finance domestic infrastructure such as railway and tramway construction, electrification, and utilities. The story of Russian finance is one of brilliant finance ministers seizing the modern technology of money to facilitate the largest territorial expansion the world has ever known, to move a country from feudalism to industrial development.

Borrowing by the Russian government was important for both European and Russian domestic financial markets. It was the government's need to finance its budget deficit that stimulated the progress of the Russian financial system. The sophisticated structure of government debt that prevailed in the 1910s did not appear overnight. Many challenges were encountered along the way, and innovative securities were designed to overcome these. Among them there were Lottery Bonds, popular with individual investors, and globally held Gold Loans that were hedged against exchange rate risk.

The importance of government debt stems from the structure of Russian economy. Relatively slow development of capitalism in Russia compared with Europe or the United States resulted in less private demand for capital and, in turn, in slower formation of the financial system. Only in 1861 was the system of peasant slavery abolished and a labor market emerged. Until then, the economy was dominated by agricultural production, most of which was locally consumed and therefore did not stimulate the creation of a nationwide marketplace. The industry that began emerging in the 18th century at first consisted of small, privately held enterprises, mostly in manufacturing. Until 1861 the workforce employed by these enterprises mainly consisted of serfs, who were owned by the owner of the enterprise, and not of free, hired, labor. As a result of this arrangement, labor productivity was low. Also, during the 18th and the first half of the 19th century, the government placed restrictions on the type of economic activity that could be carried out by private enterprises. This also slowed industrial growth. Liberal economic reforms of Alexander II and Alexander III set the country on the path of economic growth, and the ability to borrow was largely responsible for the success of these policies. When funds were needed, the Russian government frequently turned to the world capital markets. Russia was well integrated into the world financial system. In 1893, 43.5% of Russian government bonds was held by foreign investors. This number grew to 49.7% in 1913. Foreign banks actively conducted business in Russia, and the St. Petersburg-based Russo-Chinese bank, with 5/8 of its capital coming from France, was a tool of the government in achieving political objectives in the Far East. It was a remarkable evolution from using seigniorage to finance the deficit to becoming a fiscally responsible world borrower with stable currency. Peter the Great melted church bells into copper coins. Alexander III issued stable Gold Bonds. This sophisticated financial system was destroyed in 1918 when the Soviet of People's Commissars of the Russian Soviet Federated Socialist Republic (RSFSR) cancelled all previously issued Russian government debt. For investors this was a default of staggering proportions. It is interesting that it was not immediately recognized by investors. Even in 1924, after the Russian Civil War was over, *The Investor's Monthly Manual* in London published quotes for Russian bonds.

The paper is structured as follows. The next section describes Russian government borrowing from 1762 until the 1850's. Section 3 discusses the debt issued when Tsar Alexander II occupied the throne. Section 4 does the same for 1881–1894, the reign of Alexander III. Section 5 describes the debt issued by the government of the last tsar, Nicholas II. Section 6 discusses the Provisional government. Section 7 focuses on Russia's dependence on foreign capital markets. Section 8 concludes.

## 2 The First Hundred Years

The first hundred years constitute the period when Catherine II (1762–1796), Pavel I (1796–1801), Alexander I (1801–1825), and Nicholas I (1825–1855) occupied the throne. The first 90 years of Russian international borrowing, from the 1760s to 1850s, are the years of budget deficits brought about by large military and war expenses and attempts to cover the deficits by printing paper currency. During these years the Russian government gradually came to realize the problems with using the printing press to finance government spending and increasingly turned its attention to interest-bearing debt.

The first foreign loan in Russian history was obtained in 1769 by the government of Catherine II. At the time, the Russian government could not successfully sell an international bond issue directly to foreign investors because of several factors: the lack of direct access to the money centers of London, Amsterdam, and Paris, and the unfamiliarity of foreign investors with the prospects of the economy. For these reasons, the loan was placed through the Dutch investment banking firm Hope & Co. under the following arrangements. The Russian government issued bonds to the investment bank. The face value of each bond was 500,000 Dutch guldens-a very large amount at that time. Bonds with such high face value were not suitable for trading, and Hope & Co. issued bonds on its own behalf in smaller denominations, collateralized by Russian government obligations. Each bond issued by Hope & Co. was cosigned by a representative of the Russian government stating that the bond was in fact backed by the debt of the Russian government and confirming the terms of the issue. For its services, Hope & Co. received a 6.5% placement fee. The firm arranged for a few more loans under similar terms. By the time of the death of Catherine II in 1796, the total amount of outstanding international debt was 62 million Dutch guldens (41.5 million rubles). To cover the expenses caused by the second war with Turkey (1768–1774) and the third war with Turkey (1787–1791), the government of Catherine II relied on emission of paper currency. The government of Pavel I also used the printing press to finance the deficit. It is worth noting that the printing of US Continental currency and the French Assignet of 1780's may both have stimulated a renewed interest in paper money in Europe after the failure in 1720 of John Law's scheme. Nevertheless, several attempts were made to stabilize the paper currency. The decree of December 18, 1797, announced that paper currency was "a true government debt." The decree also announced the exchange of paper rubles into copper or silver coins upon first request at a fixed exchange rate (1.3 paper rubles per 1 ruble in silver). The coin reserves of the State Banknote Bank were limited, however, and soon the exchange was terminated.

During the wars with Turkey (1806–1812) and with Sweden (1808–1809), Russia incurred enormous military expenses and once again covered the deficit in part by printing paper currency. Toward the end of 1810, one paper ruble was worth merely 0.254 silver rubles.

The continuous printing of paper money that could not be freely exchanged into copper, silver, or gold coins created several problems. First was inflation. In 1809 Speransky, with assistance from Count N. S. Mordvinov, proposed a plan for reforming government finances, "The Financial Plan." One of the proposed measures was consolidation of government debt, thus far existing in the form of paper currency. The plan called for new long-term interest bearing debt to be issued. Paper rubles received as payment for the new debt were to be retired from circulation and destroyed, decreasing the supply in circulation. Speransky believed that a more stable national currency would provide a much-needed foundation for national economic growth. The ideas expressed in the "Financial Plan" were reflected in the government decree (manifest) issued on February 2, 1810. This decree announced that all previously issued paper money was government debt, collateralized by all the property of the Russian Empire. It was also announced that further issuance of paper money would be terminated and that the decision had been made to repay this debt by issuing internal interest-bearing bonds. By the same decree the government raised taxes and fees to increase budget revenues.

The implementation of Speransky's ideas began very soon. To decrease the amount of paper money in circulation and thereby put the monetary system in order, on May 27, 1810, Tsar Alexander I issued a manifest announcing an internal bond issue in the total amount of 100 million paper rubles. The issue consisted of five parts, each in the amount of 20 million paper rubles. The paper money raised as payment for these bonds was to be subjected to public burning.<sup>1</sup> The bonds had a 6% annual coupon and a seven-year maturity. The face value of individual bonds was 1,000 rubles and above. At maturity, the bonds were payable in silver rubles, at the exchange rate to paper rubles that prevailed on the maturity date. In the same decree the government announced that the deficit would no longer be financed through seigniorage. The placement of this issue failed. Because of the lack of long-term investment capital in the country, only 3.2 million rubles worth of bonds were sold. In addition, Russians were not accustomed to purchasing government bonds as an investment. They preferred to invest in bank demand deposits that paid relatively high interest (5% annual) and could be withdrawn upon request. The holder of a bond had a risk of capital loss when selling it before maturity on the secondary market.

In 1812, the army of Napoleon entered Russia and the Patriotic War began. The war required large outlays and the government could not continue to implement tight fiscal policy reforms proposed by Speransky. To finance the expenses of the war on Russian territory, and later during the war campaign in Europe, in 1812–1815 the Russian government continued to print currency and

<sup>&</sup>lt;sup>1</sup>At the time, the total amount of paper rubles circulating in the country was 577,510,900.

issued short-term (one-year) bonds in the amount of 6 to 10 million rubles per annum. The bonds were to be repaid in paper rubles and had an annual coupon of 6%.

In 1815, after the victory over the armies of Napoleon, Russia used its soaring political prestige to restructure its foreign debt. Again with the assistance of the investment bank Hope & Co., the government managed to arrange the delay of the debt repayment in the full amount of 101.1 million Dutch guldens. The Dutch debt went through several reorganizations and was finally repaid in full only in 1891. At the same time, the government began reorganization of domestic borrowing in accordance with the *Financial Plan* created by D. A. Gur'ev, the finance minister at the time. Beginning in 1818 one could lend money to the government and obtain 6% interest (the interest was later changed to 5%). The lender gave the money, and details of the transaction, including the amount and lender's name, were entered into the State Book of Debt. This book was established in 1817 and existed until 1917. The lender also received a certificate issued by the State Commission on Debt Repayment. These loans were perpetual. The lender received interest payments but if the lender wanted to receive the principal back, he had to sell this security on the secondary market. Such a sale was also recorded in the State Book of Debt and on the reverse side of the certificate. The records maintained by the government established clear property rights and facilitated trust in these securities. The demand for liquidity supported the development of the secondary market in these securities. This was an important step in the development of the market for government debt. At the same time, in addition to the perpetual debt recorded in the State Book of Debt, the Russian government made an attempt to issue long-term bonds in the amount of 100 million paper rubles.

Russia continued to borrow abroad. In 1820–1822 two foreign loans were obtained. The issues were organized as previously–not directly to the public, but through intermediary investment bankers. The first loan in the amount of 40 million silver rubles was obtained through Bearing & Co. of London and Hope & Co. of Amsterdam. The second loan in the amount of 43 million rubles was arranged by N. Rothschild.

Toward the end of the term of Tsar Alexander I in 1825, the foreign debt of Russia stood at 102 million silver rubles, and internal interest-bearing debt was 106 million silver rubles. At the time, 208 million silver rubles were equal to 728 million paper rubles.

In April 1823, two years before the death of Tsar Alexander I, E. F. Kankrin became finance minister. Kankrin thought issuance of internal interest-bearing loans to decrease the amount of paper money in circulation was a very expensive and, a useless measure. Kankrin suggested keeping the amount of paper money in circulation constant. Tsar Nicholas I, who was on the throne from 1825 until his death in 1855, kept Kankrin on as finance minister. Again, Russia faced large military expenses caused by the Persian War (1826–1828), the war with Turkey (1828–1829), and the suppression of the Polish rebellion (1830–1831). Three external loans were arranged, mostly by Hope & Co. These loans raised 200 million rubles, but this amount was not enough to cover the war expenses. In 1831, the Russian government announced the issuance of State Treasury Bills. The bills were issued in series, with a face value of 250 paper rubles, and in their appearance resembled paper money. These were short-term government bills, with a four-year maturity and an annual yield of 4.32%. Thus, a short-term debt instrument was added to the portfolio of Russian government obligations.

From 1831 until 1839, the bills were issued in the amount of 100 million rubles. At first the bills were thought of as a temporary measure to cover the budget deficit. As time passed, however, the government continued to issue them, replacing maturing bills with new bills, effectively "rolling over" the debt. This is the measure familiar today. Large companies issue short-term debt–

commercial paper-and when the maturity date arrives they issue additional debt and pay back the maturing loan. From 1840 until 1853, 78 million silver rubles worth of bills were issued (face value of each bill was 50 rubles), and by the end of 1853, 57 million rubles worth of bills were in circulation.

During the period 1839–1843, the government carried out yet another currency reform. All old paper rubles were exchanged for newly issued paper rubles, at the exchange rate of 3.5 for 1. The newly issued paper rubles were partially exchangeable for silver. This meant that the silver reserves did not cover paper rubles in circulation in full, so the government continued to finance the deficit by printing currency. This, however, was done on a smaller scale than before. The prudent monetary spirit lasted until the Crimean War began in 1853 (the war lasted until 1856). In January 1855 Tsar Nicholas I issued a decree allowing the State Treasury to print paper rubles to cover war expenses. The decree stated that three years after the end of the war, and if possible, sooner, the government would start recalling these additional paper rubles from circulation.

The year 1842 marked the first usage of state loans to finance peaceful construction instead of financing the war effort. During that year, five foreign loans were obtained by the Russian government to finance the construction of the St. Petersburg–Moscow railroad. It was an important first step toward financing large infrastructure development projects by raising capital through securities issued to the public. The loans were arranged by the St. Petersburg bank Shtiglitz & Co. Another source of financing the expenditures came from short-term loans that were issued continuously. In 1840–1853 short-term loans were issued in the total amount of 78 million silver rubles. These bonds were issued as 50 ruble certificates and were widely accepted for payments as money.

The Crimean War, lasting from 1853 to 1856, was later estimated to cost 800 million rubles, an

astonishingly large sum. To cover military expenses, in 1855–1856 the Treasury issued 378.8 million rubles worth of paper currency. Large emissions of paper rubles created a demand for exchanging them into silver coins. Because of insufficient reserves, the government abolished the exchange policy in 1858. The value of paper rubles was low. As of beginning of 1855, Russian foreign and internal interest-bearing debt totaled 842 million silver rubles, of which, 437 million rubles were borrowed from the banks and 75 million rubles were obtained through short-term internal bonds.

From the 1760s to the 1850s, Russia suffered from constant budget deficits, largely caused by high military and war expenses. During this 100-year-period, the structure of government borrowing evolved from relatively unsophisticated operations, such as merely printing paper currency and borrowing from banks on loose terms, to using foreign and internal interest-bearing bonds, both with long and short maturities. The officials also came to realize that the possibilities of money printing were not endless. The same conclusion applied to loans obtained by the State Treasury from the state banks. Interest-bearing debt was becoming more accepted. In addition to foreign loans, internal short-term bonds, as well as perpetuities, were issued. These bonds fostered the development of securities markets in Russia. Most state borrowing was conducted to finance military expenses, and only toward the end of the period were the funds used for peaceful economic activity-the construction of St. Petersburg–Moscow railroad.

# 3 Alexander II (1855–1881)

Russia lost the Crimean War. Critics blamed the economic system that was based on peasant slavery. The new Russian tsar, Alexander II, initiated political and economic reforms. The reforms were a combination of liberalization of foreign trade and foreign investment, and in 1861 the system of serfs was abolished, creating a labor market. Also, the government allowed private enterprises to be engaged in industries wich the government had prevously had a monopoly.

State banks held a monopoly over capital markets until the mid-1850s. These banks accepted demand deposits and gave loans to the government and long-term loans to nobility. Securities markets were dominated by government bonds. Only a small number of nongovernment securities were present–a small amount of shares issued by insurance companies were traded on the St. Petersburg Exchange. Economic and political reforms stimulated the development of private enterprise, fueling the growth of capital markets. One of the new public companies was The Main Society of Russian Railroads (*Glavnoe obschestvo rossiiskih zheleznyh dorog*). In 1856, six public companies with total capital of 15.5 million rubles were registered; in 1857, 14 public companies (capital, 300 million rubles); in 1858, 36 public companies (total capital, 51.3 million rubles). The first publicly held commercial bank was established in 1864.

New securities competed with state bonds and government-run banks and often offered or promised higher rates of return. Net withdrawals totaled 229 million rubles in 1858 and 355 million rubles in 1859. The assets of the state banks were mostly informal loans to the government. Because of the large withdrawals the banks faced insolvency. Additional emissions of paper currency and foreign loans did not provide funds sufficient to cover withdrawals. Banks even gave depositors interest-bearing fixed-term bonds instead of cash. All these measures, however, could not repair the banking system. In 1860 the banks were abolished. The State Bank of Russian Empire was created and assumed all assets and liabilities of the former government-run banks. The creation of the State Bank did not stop the wave of withdrawals. The demand for capital was high, and the government even lifted the ban on private borrowing from abroad. Until the mid-1850s foreign capital could enter Russia only through state foreign loans. But the prestige of the Russian government suffered serious damage after the loss of the Crimean War. The state found it difficult to obtain loans abroad. Foreign investors, however, willingly purchased stocks and bonds issued by private entities, thereby investing in the Russian economy. The "curtain" established by Tsar Nicholas I out of fear of foreign democratic ideas thus was lifted under the pressure from the expanding economy.

The capital markets were freed by the liberal economic policy, and as a consequence, the new nature of the capital market required adjustments in the system of government borrowing. There were no major releases of newly printed currency at the time. Short-term bonds (also referred to as "series," *serii*) were constantly issued. To compete for capital, the Russian government found an interesting solution–Lottery Bonds.

#### **3.1** Lottery Bonds

The Russian Imperial Government issued Lottery Bonds for the first time in November 1864. The official title of the issue was "Internal 5% Lottery Bonds." To attract small investors, the bonds were issued with relatively small face values of 100 rubles per bond. The total value of the issue was 100 million paper rubles–one million individual securities were placed. All bonds were issued as bearer securities.

The bonds did not have a fixed maturity date. Instead, the bonds were called and retired by the government in series. Securities to be recalled were determined at random. Each bond had a serial number and an individual number. Twice a year a *recall drawing* for serial numbers took place. When a bond was called, the owner received the face value of the bond (100 rubles) and a recall premium. The premium was set at 20 rubles per bond for the first series of recalled bonds and gradually increased to 50 rubles per bond for the bonds that were called in the later years. All bonds were to be recalled within 60 years from the issue date. These were 5% bonds, with semiannual coupons paid on July 2 and January 2 of every year (each coupon payment equalled 2.50 rubles). Coupons were paid for 60 years or until recall.

The new feature that distinguished these bonds was the lottery that gave the owner a chance to win cash prizes. Twice a year, on January 2 and July 2, the Board of the State Bank conducted a random drawing to determine which bonds won the prizes. The lottery drawing was followed immediately by the recall drawing.

The lottery random drawing was based on the bond's serial number and it's individual number. Small pieces of cardboard with a number and serial number of each outstanding bond were placed in large rotating drums. The members of the board blindly picked these pieces of cardboard from the drums thus determining which bond won the prize. The same procedure (but for the serial numbers only) took place for determining which bonds were to be recalled.

At each lottery drawing 300 prizes totalling 600,000 rubles were awarded. The specific prizes are shown in Table 1. The winner received the payment of the prize three months after the prize was determined. The bond was stamped to record the payment. The bond could participate in all drawings until it was recalled, so, in theory, the owner had a chance of winning on several dates. All terms of the issue, including the provisions for calling the bonds and the amounts of monetary prizes, were printed on the back of the bond certificate in two languages: Russian and German.

Russian Lottery Bonds used the following technique for conducting prize drawings. Prizes were drawn for individual bonds. In a prize drawing a serial number was drawn from one drum and an individual bond number was drawn from a different drum, both numbers together identifying individual bond. After the winner for a prize was announced the numbers were returned into the drums. However, on any given date a bond could win only one prize.

At the time of original placement, the issue of 1864 Lottery Bonds was moderately successful.

The issue was placed at the price of 98.6 rubles per 100 ruble face-value bond. Later, interest in the Lottery Bonds was fueled by the news of large winnings. The government decided to capitalize on the popularity of the Lottery Bonds, and in 1866 it issued the "Second Internal 5% Lottery Bonds." The total value of this issue was also 100 million rubles. All the features of the second issue were identical to the features of the 1864 Lottery Bond, except the drawings were held on March 1 and September 1, instead of July 2 and January 2. Coupons on the 1866 issue were paid in March and September. The issue of 1866 was more popular and was placed at 107 rubles per 100 ruble face-value bond.

According to some observers, Lottery Bonds were by far the most popular form of government debt. The bonds inspired financial innovation. Banks purchased Lottery Bonds and sold *lottery participation rights*. These were securities that gave the right to participate in one lottery drawing and to obtain a specified percentage of the prize in the event of winning. By buying these securities, those who could not afford to buy the bond could participate in one lottery drawing. Lottery bonds had clearly become a part of Russian popular culture. In the 1880s a civil servant in Russia earned between 1,200 and 2,000 rubles a year and supported a family with a middle-class lifestyle on that amount. Clearly, a Lottery Bond that offered the possibility to win 75,000 or even 200,000 rubles was an exciting security, and perhaps a source of hope.

In spite of their success, or maybe precisely because of it, Lottery Bonds attracted criticism. The critics said that the bonds attracted public attention to the getting-rich-quickly schemes, instead of building strong ethics of prudence and saving. Also, the critics said that this was an expensive way to raise capital because large amounts of money had to be paid in prizes, as well as in recall payments. The critics based their statements on the high cost of capital, estimated (by them) at

6.34%.<sup>2</sup> It was also believed that it would become difficult for the government to return to issuing regular bonds once the public had become accustomed to the Lottery Bonds. It was believed that it was not wise to create competition among different types of government debt securities. Whether this reasoning prevailed, or the government was able to return to issuing regular bonds for different reasons, the Lottery Bonds were not issued by the Russian state again until 1917. The only exception was the issue placed in 1889, known as the "Third Issue of Lottery Bonds," made by the State Nobility Land Bank. These were 5% coupon bonds and the total value of that issue was 80 million rubles.

### 3.2 Loans Abroad

In 1877 and 1878 Russia fought a war with Turkey, and although the military victory was upheld by Russian troops, political gains were insignificant. Russia acquired some territory on the Black Sea (Batum sea port), but not nearly as much as it aspired to. The war expenses were enormous-in 1877 a loan for 15 million pound sterling was raised abroad, in 1878 an internal loan for 300 million rubles followed.<sup>3</sup> Toward the end of the reign of Alexander II, Russia had 4,885.9 million paper rubles worth of outstanding interest-bearing debt, including railroad construction debt of 1,895.5 million rubles.

<sup>&</sup>lt;sup>2</sup>Tarankov (1992) reports that cost of capital was estimated back then at 6.34%. The estimate for the cost of capital computed based on the bond pricing developed by the author equals 6.5713%. If the lottery feature is turned off (no lottery prizes awarded), cost of capital falls to 5.3645%. Thus, lottery prizes contributed a significant amount to the cost of debt. Cost of capital is computed as the discount rate that sets the bond price at issue to par value of 100.00. All calculations assume a flat yield curve (all annualized interest rates are assumed to be the same). Calculations were carried out as if there was no cancellation of bonds by the Soviet government, an event not anticipated in the late 19th century.

<sup>&</sup>lt;sup>3</sup> The Investor's Monthly Manual. December 29, 1877, and December 28, 1878.

# 4 Alexander III (1881–1894)

Previously, loans were issued mostly for large military expenses and partially for railroad construction. Beginning in the early 1880s, the reasons changed. The new finance minister, N. Ch. Bunge, planned to stabilize national currency by carrying out another currency reform. The need for currency reform came from the need for capital. Inflation, and uncertainty about the future rate of inflation, made investments in fixed-income securities a risky proposition. At the same time, it was imperative to attract new investment, especially from abroad, to construct a railroad network, needed by the emerging industrial economy.

Before conducting monetary reform, the government carried out consolidation and conversion of internal and foreign loans. New loans were issued and exchanged for old loans. Often, the new loans had longer maturity and lower interest rate. In 1889–1894, 2,644 million rubles worth of outstanding bonds were converted into newly issued debt. At the same time, the government issued new types of bonds–Gold Bonds, or Gold Loans. These bonds targeted foreign capital markets, including investors in France, Great Britain, Holland, Germany, Denmark, the United States, and Canada. Previously, Russia issued bonds abroad through investment bankers. The Russian government issued bonds in large denominations to one or several investment banks. These banks, in turn, issued securities to the public, fully collateralized by the government bonds held by investment bank. This structure, adopted during the first loan of 1769, remained unchanged until the mid-19th century. The liberal reforms of Alexander III opened Russian capital markets to foreign investors, who actively traded securities issued by Russian public companies. One of the effects of such liberalization was better dissemination of information and better familiarity of foreign investors with Russian economic conditions, hence, greater interest toward Russian government bonds. The new market environment allowed government bonds to be placed directly to foreign investors in their respective countries. At first, the government issued bonds in several currencies. For example, if the bonds were to be placed in France, they were issued in French francs, and coupons were paid in francs. The drawback of this system was obvious—the issue was convenient for the investors in only one country. To invest in franc-denominated Russian bonds, British investors had to convert pounds into francs, purchase the bond, and then convert the coupons back from francs into pounds.

To make Russian bonds more accessible to investors in different countries and to lower placement costs, the Ministry of Finance decided to issue more "universal" bonds. These bonds would allow investors from different countries to access the same instrument with ease, without the foreign exchange risk. Such instrument would have a higher liquidity than Russian government bonds placed separately on the French, German, and British markets. This would imply that the Russian government would have to offer a lower liquidity premium and would be able to lower its cost of debt.

Another goal was to issue bonds that could be repaid both in foreign currency, or if they were owned by a Russian investor, in rubles. The Ministry of Finance was headed by energetic, experienced, and clever men–I. A. Vyshnegradsky (who held the post from January 1887 until August 1892) and later by S. Yu. Witte. They designed Gold Bonds as a solution.<sup>4</sup>

<sup>4</sup>In 1889 I. A. Vyshnegradskii was appointed Minister of Finance by Alexander III, who had been impressed by a pamphlet written by I. A. Vyshnegradskii on the Public Debt of Russia. The Emperor sent for the author and had two long conversations with him, after which the appointment was made. Vyshnegradskii focused the efforts of the Finance Ministry on stabilization of national currency and on improvement of relations with French investors.

#### 4.1 Gold Bonds (Gold Loans)

Gold Bonds were structured to satisfy the following requirements: the bonds could freely circulate inside and outside of Russia, and the bonds could be traded simultaneously in several countries (and thus, in several currencies). The face value of each bond was stated in several currencies: Gold rubles, French francs, Deutschemarks, British pounds, U.S. dollars, and Dutch guldens.<sup>5</sup> The exchange rate between the currencies was determined based on their respective gold content. The government entered into agency agreements with banks in different countries. These banks carried out coupon payments, and at maturity, principal payments. There were several banks in France (including Credite Lyonese), Germany, London (Bearing & Co.), Holland (Hope & Co.), and New York (Kidder Peabody & Co.). If coupons were paid in St. Petersburg, the payment was made either in gold coins or in paper rubles, at the current exchange rate between paper and gold rubles. For the holders of the bonds this system provided a hedge against inflation and was a welcomed measure. Gold Loans were traded in several countries. These securities could freely cross Russian borders-foreign investors could buy them both outside and inside Russia; the same applied to

<sup>5</sup>What were "gold rubles"? After all, at this time the official monetary unit in Russia was silver ruble. Nevertheless, the money in circulation consisted of gold, silver, and copper coins and paper banknotes. There were two gold coins: 10 ruble coin (*imperial*) and 5 ruble coin (*poluimperial*). There was exchange rate between coins and paper rubles. At times the exchange rate was officially fixed; at times it was floating. In the second half of the 19th century, the price of silver relative to the price of gold fell, and throughout Europe gold emerged as a major measure of value. Until 1895 contracts could not be written in gold rubles, and the only legal operations in gold rubles were those that involved Gold Loans. For these transactions, the golden ruble standard was set as 1/10 of the 10-ruble gold coin. The standard also specified the weight and content of pure gold in the gold ruble. After the monetary reform of 1895–1897, paper rubles became freely exchangeable into gold, and the Russian ruble became freely convertible currency. Because now paper rubles were freely convertible into precious coins, the system of "two currencies"–paper and silver rubles–was no longer in existence. domestic (Russian) investors. Thus, the distinction between foreign and domestic loans was no longer rigid. Gold Bonds were a truly global instrument.

At that time, Russian government debt was mostly held in England, Holland, and to some extent Germany. France was not a major market for Russian debt. Witte (1991) attributes that to certain political tensions that existed between Russia and France. The tensions were due to several factors: Russia's "friendly neutrality" with Germany during the French-Prussian War and France's far-from-friendly attitude toward Russia during the Sevastopol War. Since Emperor Alexander III stepped on the throne, things began to change. Diplomatic relations with France improved. This gave a chance to tap into French capital market. At the same time, Witte (1991, p. 181) points out that Russia could no longer successfully place bonds in England, and that even existing bonds in England were traded relatively low.<sup>6</sup>

The first significant loan in France was issued in November - December 1888. This was the "4% Gold Loan of 1889", issued for the conversion of the "5% Foreign (External) Loan of 1877." Now French investors welcomed Russian debt.<sup>7</sup> In 1900, French investment in Russia equaled 7.0 billion francs; this number grew to 11.3 billion frances by 1914.

In 1889–1896, the Russian government issued 4% Gold Bonds (Gold Loan) in the total amount of 332 million gold rubles. The bonds were issued in series: 1st series in 1889; 2nd, 3rd, and 4th series in 1890; 5th series in 1893; and 6th series in 1894. Also, 3.5% Gold Bonds were issued in

<sup>&</sup>lt;sup>6</sup>Feis (1930) writes: "from the middle seventies on, British investors were selling their 'Russians' Paris and Berlin became the borrowing centers for sovereigns of eastern and southeastern Europe." This trend reversed before World War I, after the 1907 Anglo-Russian agreement.

<sup>&</sup>lt;sup>7</sup>When Finance Minister Vyshnegradskii carried out loan conversion on the French market, Rothschild even agreed to head the underwriter syndicate for the issue. For a long time Rothschild had refused to have any dealings with Russia because of the Jewish question.

1894, and 3% Gold Bonds were issued in 1891–1896. The bonds had unusual face values, set at 125, 625, 3125, and 187.50 rubles. This was done mostly for the convenience of French market, because France was major creditor to Russia and 125 rubles corresponded to 500 francs, 625 rubles - to 2.500 francs, and 3,125 rubles to 12,500 francs.

Not all loan issues were an immediate success. In October 1891 a Russian loan for 20 million pound sterling face value was issued, but in November the Russian finance minister had to buy back part of the new loan "to relieve Paris holders and stay the heavy fall."<sup>8</sup> Toward 1894, however, the matters improved:

Russian credit has undergone a rather remarkable improvement in the European markets, which rests rather on the support accorded in France and the relaxation of restrictions on transactions in Russian stock in Germany than on anything to be gathered from the complicated mass of figures which constitutes the Russian Budget. Whether well-founded or not, however, the assurances of M. de Witte, the Russian Finance Minister, as to the flourishing state of the Muscovite exchequer have evidently obtained credence, since the recent Three and a-Half per cent. loan of over fifteen millions was so well taken up that allotments in Paris were said to be on the scale of only 1 3/4 per cent., and in London 5 to 10 per cent., of the amounts applied for.<sup>9</sup>

Gold Loans provided the funds to recall, and thereby convert and consolidate, several outstanding bonds, including 263 million marks of the 5% foreign loan of 1877, two 5% British-Dutch loans of 1862 and 1864, the 5% loan of the 7th issue of 1862 (15 million pounds); and the 5% Bond of

<sup>&</sup>lt;sup>8</sup> The Investor's Monthly Manual. December 31, 1891, p. 625. Feis (1930, pp. 216–217) also writes about this incident.

<sup>&</sup>lt;sup>9</sup> The Investor's Monthly Manual. December 31, 1894, p. 621.

Kharkov-Kremenchug portion of the Kharkov-Nikolaev Railroad. A portion of the proceeds from the  $3\frac{1}{2}\%$  Gold Loan of 1894 was used to convert the bonds of the railroads that were purchased by the government: Poti-Tiflis Railroad, Tambov-Kozlov Railroad, Donetzk Railroad, and several other railroads.

After the monetary reform of 1895–1897 paper rubles became freely exchangeable into gold coins, and therefore the system of two currencies no longer existed. One paper ruble equaled one gold ruble in purchasing power. Thus, it was no longer necessary to designate the future bonds as "Gold Bonds". New issues of government debt were denominated simply in rubles and sometimes also in foreign currencies.

#### 4.2 Perpetuities

The first issue in the new wave of perpetuities took place on November 11, 1883. The issue equalled 50 million gold rubles. The perpetuity had a 6% coupon. The coupons were paid in St. Petersburg, Berlin, Paris, Amsterdam, and London. In 1893 this issue was recalled and converted into 4% Gold Bonds of the 5th series.

On June 8, 1884, government decree announced the issue of 20 million (paper) rubles worth of 5% perpetuity. The amounts of perpetuities issued in the days of Finance Minister Bunge can hardly be compared with the much larger issues in the days of C. Yu. Witte, before the currency reform of 1895–1897, during the reform, and immediately afterward. Finance Minister Witte is credited with making perpetuities the largest form of Russian government debt.

One can speculate that perpetuities were a popular tool for the government because they did not require large outlays of funds on maturity dates. In the case of regular bonds it was possible for the maturity date to fall in the period when the government already had a large budget deficit. Then, a new issue of bonds would have to be placed before the loans that came due could be repaid. Or, the printing press would have to be called to the rescue. Perpetuities did not have a maturity date. If the owner of perpetuity wanted to receive the principal back, the perpetuity could be sold on the securities exchange. If the government wished to retire some of its debt, it could always buy perpetuities on the open market, thereby canceling them.

In 1894 it was decided to recall internal bonds denominated in paper rubles and issued during the Turkish War of 1877–1878. To recall these bonds, the government issued a 4% perpetuity. The total value of the issue was astronomical–1,120 million paper rubles.

Overall, from 1889 to 1894, 2,644 million paper rubles worth of government bonds of previous issues were recalled and converted either into perpetuities or into Gold Loans. The total amount of government debt grew from 4,984 million paper rubles at the beginning of the reign of Tsar Alexander III to 6,593 million in 1894, the end of His term. In addition to Gold Loans and perpetuities, regular bonds were issued during this time. In 1891, 4% internal bonds denominated in paper rubles were issued, but placed with great difficulty. In 1893 the bonds of "Internal  $4\frac{1}{2}$ % Loan" in the amount of 100 million paper rubles were issued.

#### 4.3 The Treaty Between China and Russia of 1896

Toward the end of the reign of Emperor Alexander III the war broke out between China and Japan. The war was of concern to Russia. Russian forces, in Vladivostok, were limited, and after the war broke out these forces were sent to Kirin, in case the fighting spread north to an area where Russia had interests.

The Sino-Japanese War ended in complete Japanese victory. According to the peace treaty signed between China and Japan in April 1895, China granted full and unconditional autonomy to

Korea, and Liaotung Peninsula and Taiwan to Japan. Moreover, China was to pay a tribute of 200 million Taels (400 million rubles) to Japan. Russia needed to respond to this geopolitical change. Previously, Russia's Far East had been separated from Japan by the sea. Now Japan was on the mainland.

Russian politics were based on the notion that it is better to have a strong, but passive, China as neighbor, than Japan. Thus, the Russian objective was to prevent the implementation of the Sino-Japanese Treaty. Russia wanted to make it clear that it would not permit impairment of the integrity of the Chinese Empire. It was decided to present a proposal (almost an ultimatum in spirit) to Japan, giving Japan a choice between giving up the claim to the Liaotung Peninsula in return for a sizable indemnity that would compensate Japan as the victor, or being subject to military action on Russia's part. To this end, Russian Foreign Minister Prince Lobanov-Rostovskii first approached Germany and France and reached an agreement with them supporting Russian demands. Then, the foreign minister presented the ultimatum to Japan. Japan accepted. Thus, the Treaty of Shimonoseki was revised.

By this time the construction of the Siberian Railroad reached to Trans-Baikalia. The construction of the railroad could continue on Russian territory, in a long arc north of the Amur River, or it could go in a more direct route through Chinese territory, that is, northern Manchuria. Russia and China reached an agreement, whereby the Chinese Empire would permit construction of a railroad through its territory to connect Chita and Vladivistok. The railroad had to be constructed and owned by a private Russian company. The Chinese Eastern Railroad obtained full authority within the area for the right of way. Finally, according to the treaty, Russia assumed the obligation of defending Chinese territory from any aggressive action on the part of Japan. Russia was on the edge of the use of financial reparations as leverage to obtain territorial concessions.

#### 4.4 The Russo-Chinese Bank

As Russian Foreign Office was busy constructing the revision of the Treaty of Shimonoseki, Russian Finance Minister Witte entered into talks with China proposing aid in concluding a loan with which to pay the indemnity. At the time, China did not have the credit standing for obtaining such a loan without additional guarantees. The repayment of the Chinese loan was guaranteed first from Chinese customs receipts, then by other Chinese resources, and if China still proved unable to repay, the Russian government would be the last resort as the guarantee.

It was the Russian Finance Ministry that effectively negotiated and arranged the Chinese loan. The investment banking syndicate that placed and took part in the loan consisted of a group of French bankers: Banque de France et Pays Bas, Credit Lyonnais, and the Hottinguer banking house. According to Witte, two French bankers, Noetzlin and Hottinguer, came to St. Petersburg in connection with the Chinese loan and asked Witte that in return for their help in arranging the loan, Witte would help them in the expansion of French banking activities in China. In response Witte suggested that the French should participate in the new Russo-Chinese Bank.

The Russo-Chinese Bank was established in 1895. One goal of the bank was to lend money to China to pay the indemnity to Japan. Another goal was to promote Russian economic influence in China. The initial capital of the bank equaled 6 million rubles. French banks provided five-eighths of the capital and St. Petersburg International Bank (Russia) provided the remaining three-eighths. The composition of the board of directors of the Russo-Chinese Bank, however, was different from the ownership composition: the French investors appointed three directors and Russian finance minister appointed five directors. The headquarters of the bank were located in St. Petersburg. The bank established several branches throughout China, including Peking and Shanghai. After Russia lost the war with Japan in 1905, Russian prestige in China declined, and the Russo-Chinese Bank went downhill. In 1910 it was merged with the Northern Bank, forming the Russo-Asiatic Bank–the largest commercial bank in Russia.

### 5 Nicholas II (1894–1917)

Prudent monetary policies of the finance ministers of Alexander III-Bunge, Vyshnegradky, and Witte-resulted in increased gold reserves and smaller budget deficits. The ground was set for Finance Minister Witte to begin and carry out the desired monetary reform. The objective was to establish a gold currency standard. In August 1897, a new law was adopted that regulated the issuance of paper rubles and stated the principles of exchange of paper money into gold rubles. According to this law, the State Bank was allowed to keep up to 600 million rubles in circulation, with 50% of the amount being collateralized by gold reserves and 50% by commercial obligations held by the government. If the amount of paper rubles in circulation was to exceed 600 million, every paper ruble had to be fully backed by gold reserves. Finally, the law of November 14, 1897, introduced unlimited exchange of paper rubles into gold. The monetary reform created a stable currency unit and was welcomed by foreign and domestic investors. Another important financial undertaking was the effective nationalization of railroads. During 1895–1902 the government completed the buyout of private railroads by paying the shareholders either with 4% perpetuities or with the proceeds from issuing perpetual bonds.

Tsar Nicholas, son of Alexander III, largely followed the policies of his father. In 1895 the Ministry of Finance began recalling 4% internal bonds, exchanging them for 4% perpetuities. The owners of the 4% internal bonds were given the right to exchange their securities into annuities. The exchange was carried out at the face value of the bonds-for the bonds with face value of 100 rubles the owner received perpetuity with the face value of 100 rubles. Later, the majority of outstanding government bonds, including government railroad bonds, was converted into 4% perpetuities. This was the process of organization and unification of government debt. Thus, in the 1890s perpetuities were the main form of the debt of Russian government. Beginning October 25, 1895, the coupons of 4% perpetuities that came due for payment in less than six months, could circulate as money and could be used as payment instruments.

The monetary reform of 1895–1897 introduced free exchange of paper rubles into gold coins, with a fixed exchange rate of 15 paper rubles per one *imperial* (*imperial* was the old Russian gold coin with stated face value of 10 rubles). There was no need any longer to issue Gold Loans. The need to finance the budget deficit, however, remained. Minister of Finance Witte continued to consolidate government debt by issuing 4% perpetuities. Before 1899 many outstanding loans, including government railroad bonds and the majority of the short-term bonds, were recalled or converted into perpetuities.

In 1901 another issue of 4% perpetuity was authorized and voluntarily exchanged for  $4\frac{1}{2}\%$ consolidated railroad bonds of the 1st and 2nd series and for  $4\frac{1}{2}\%$  government bond of 1893. During 1895–1902 the government completed the buyout (effectively, nationalization) of railroads by paying the shareholders of railroads either with the perpetuities themselves or with the proceeds from issuing 4% perpetuities.

Beginning in the second half of 1898, the world capital markets dived into a period of crisis [??? Look at news from London]. The Spanish-American War, the Boer war in South Africa, and the events in the Far East all contributed to the crisis. In 1899 and 1900, when the crisis deepened, the prices of Russian government securities fell. Russian economy also experienced a period of decline from 1900 to 1903. Only in 1904, did the Russian economy began to recover. At this time the deficit was high, but the government was not successful in placing perpetuities during the Russian-Japanese War (1904–1905) and during the revolutionary years of 1905 and 1906, when the survival of the Russian government in its existing form was questionable. All this made issuing perpetual debt difficult and the government returned to borrowing through short-term loans. Starting in 1904 such loans were issued annually. The Imperial decree of December 15, 1904 announced the issue of a  $4\frac{1}{2}\%$  government bond (the certificates bear the date of 1905 when the issue was released). These bonds targeted both domestic and foreign investors. The total amount borrowed equaled 231.5 million rubles. Face value of the bonds was stated in rubles, German marks, Dutch florins, and British pounds. the coupons were paid in Russia, Germany, Holland, and Great Britain. The bonds were to be recalled by random drawings, in series, until 1985.

Under the decrees of March 12 and July 29, 1905, the government issued the First and the Second series of 1905 5% internal loan. Each series raised 200 million rubles. The bonds were to be recalled (and the principal returned to the investors) by drawings taking place during 48 and 49 years, respectively.

Russia lost the war with Japan. Political uncertainty stemming from the loss was magnified by the domestic revolutionary movement of 1905. [??? Will - Not really! Look at the stock prices! Stocks did fine, suggesting that no one thought that assets would be nationalized] The existence of the Russian monarchy was at risk. State finances were in disarray. The fact that the government owed large amount of money to foreign investors became a *positive* factor! Foreign capitalists must have realized that if the revolution succeeded in Russia they would face enormous losses both from unpaid Russian government bonds and from unpaid investments in Russian private companies. French investors, who held an especially large proportion of Russian securities, were the driving force behind the financial rescue of the monarchy. In July of 1906 Russian government successfully placed an issue of 2,250 million French frances (843.8 million rubles) worth of 5% bonds. Originally, most of the bonds were placed in France, but the certificates carried denominations in rubles, French france, German marks, British pounds, Dutch florins, and Austrian-Hungarian kroners. Coupons were payable in Russia, Paris, Brussels, Geneva, London, Vienna, Amsterdam, and Berlin. The coupon rate was high at 5% and the amount borrowed was large, but the loan allowed the government to avoid printing paper currency to cover the deficit, thereby destroying the currency that was based on the gold standard.

The economy showed signs of recovery in 1906 and 1907, but a new depression began in 1908. Russia was still experiencing the effect of the loss in expensive military campaigns. By the decree of June 19, 1908, the government issued bonds of the "5% Internal Loan of 1908" in the total amount of 200 million rubles. The bonds were to be repaid in series over 45 years. Less than one year later, in 1909, international  $4\frac{1}{2}$ % bonds in the amount of 525 million rubles were issued. Again, the bonds were denominated in rubles, French francs, German marks, British pounds, and Dutch florins.

In 1910 Russian economy began its recovery. There were several years of excellent harvests that increased export revenues. Industrial growth was also high. From 1908 until 1913 industrial production increased by 50.8%. Government revenues also increased, and for the first time in many years, some of the government debt was repaid and the total amount of outstanding debt actually decreased.

Reviewing the period from the mid-19th century until the early 1910s, one can note that Russian government made a transition from financing the deficit by issuing paper money and causing inflation, to the explicit form of borrowing using domestic and international bond issues. At the end of the 19th century monetary reform created a stable national currency, which helped in gaining investor confidence. On the other hand, the reform caused the government to issue many loans. Another reason for large amount of debt was construction of railroads. As of January 1, 1913, the loans that were connected with railroad construction accounted for 35% of the total government debt (the total debt stood at 8,858 million rubles).

Russia entered World War I in July 1914. Military spending was enormous and created a budget deficit. On February 6, 1915, an Imperial decree ordered the issue of the "Internal 5% Loan of 1915" in the total amount of 500 million rubles. The bonds were to be repaid in series over 49 years. The certificates of these bonds were similar to the 1914 War Loan. Prior to 1914 War Loan, the certificates of government bonds had a traditional look-an ornate border, the State Coat of Arms (two-headed eagle), text describing the terms of the loan, and official signatures. In 1914, for the first time, bond certificates were decorated with art reflecting the reasons and the goals of the loan. The certificates of the 1914 and 1915 bond have a picture of a woman-a symbol for Russia-dressed in a military overcoat. The woman holds a sword in her right hand and an ancient Russian shield in her left hand. The shield is decorated with the Imperial Coat of Arms. The terms of the loan are printed in the middle of the certificate. The same terms are printed in French on the reverse side. The bonds of the 1915 War Loan were issued with face values of 50, 100, 200, 500, 1,000, and 5,000 rubles. All certificates had the same design and differed only in background color.

The "Second Internal State Loan of 1915" was authorized by the Imperial decree of April 24, 1915. The total value of the issue was 1,000 million rubles. The bonds paid a  $5\frac{1}{2}$ % coupon and were to be recalled annually in series. All bonds were to be recalled before 1996. Again, the war theme was reflected in the design of the bond, which incorporated the drawings of artillery, swords, and military flags. The bonds of the Second State Loan of 1915 were issued with face values of 100, 500,

1,000, 5,000, and 10,000 rubles. All certificates had the same design, but differed in background color.

Throughout history, the issues of Russian government bonds were closely connected with military expenses. The word "military," however, appeared for the first time in official title of the bonds only during the next issue, also placed in 1915. The loan was officially called the "State  $5\frac{1}{2}$ % Military Short-Term Loan of 1915". Officially, the bond was designated as short term. The actual repayment time was 10 years, which by today standards qualifies as a long-term bond. Either the Russian government took some liberties with terminology, or in 1915 a ten-year bond was indeed short term, compared with other issues that had repayment terms of 45 years and longer. It was increasingly more difficult to place debt, and the terms of some bonds were adjusted to make them more attractive to investors. For example, the 1915 military bond was convertible by the owner into any other bond issued by the Imperial government in 1916. This provision appeared for the first time in the history of Russian debt. The certificates of the 1915 military short-term loan were issued with face values of 50, 100, 500, 1,000, 5,000, 10,000, and 25,000 rubles. Unlike the 1915 long-term bonds, the certificates of short-term bonds had a modest appearance.

In 1916 the bonds of the "State  $5\frac{1}{2}\%$  Military Loan of 1916" were issued. The total face value of the issue equaled 2,000 million rubles, but the bonds were placed below par and the proceeds from the issue were well below the face value. These were 10-year bonds. The owner had the right to exchange the bond of this issue for any bond with the same or longer maturity issued by the government in 1916. Again, the certificates were issued with face values of 50, 100, 500, 1,000, 5,000, 10,000, and 25,000 rubles.

The Imperial government experienced difficulties in placing bonds with long maturities, the 49-year bonds and 10-year bonds. Therefore, short-term bonds were issued often. From 1914 to 1916, short-term bonds of the State Treasury were issued every year. These bonds were issued with face values of 25, 50, 100, and 500 rubles. These securities paid a 4% annual coupon and had a maturity of four years.

Finally, the bonds with the shortest maturity, 9 and 12 months, were the 5% short-term State Treasury bonds. These were issued from 1914 to 1916 in denominations of 1,000, 5,000, 10,000, 25,000, 100,000, 500,000, and 1 million rubles. The bonds with large denominations were sold by the State Treasury to the State Bank. According to the law of 1897 on money emissions, however, the State Bank was allowed to issue banknotes only when they were backed up by gold or by commercial debt notes. This is why, to sell Treasury bonds to the State Bank the law on money emissions had to be changed. The new law was passed on July 27, 1914, and citing the "conditions" of the war time," made several changes to the Russian financial system. The free exchange of paper money into gold coins was abolished. The State Bank was allowed to issue up to 1,500 million paper rubles not backed up by gold reserves (previously this amount was only 300 million rubles). It was important to assure that the State Bank would not use the issued currency to provide credit to private enterprises, and this is why the law gave the right to the State Treasury to sell 5% shortterm Treasury bonds to the State Bank "in the amounts caused by the needs of the war time." To buy these bonds, the State Bank had to issue paper currency. This mechanism, in fact, was the mechanism for issuing more paper money not exchangeable into gold. Emission of paper money was actively used by the government to finance war expenses. From the beginning of the war until the 1917 February Revolution, total war expenses stood at 28,035 million rubles. Of this amount, 8,317 million was financed by printing paper money.

On February 17, 1917 Tsar Nicholas II was forced to sign His resignation. This was the end of the Russian Imperial Government and of the Romanov dynasty. The Provisional government was created.

#### 6 Provisional Government

On September 1, 1917, the Provisional government announced the new name for Russia-the Russian Republic. The new government decided to continue the war, which meant more military spending. To increase budget revenues, a state monopoly was introduced on the sales of sugar, tea, matches, tobacco, and other consumer products. Still, the printing press remained the main source of revenues. This was a period of hyperinflation. By the time of October Revolution of 1917, the price of bread was 16 times higher; potatoes, 20 times higher; sugar, 27 times higher; and meat, 5 times higher, as compared with 1914. During the 8 months that the Provisional government ruled Russia, it issued more paper rubles than the Imperial government of Nicholas II during the 32 months of the war.

To finance budget deficit and to somewhat decrease the amount of paper money in circulation (an attempt to fight inflation), on March 30, 1917, the new government published an announcement of the issue of internal government bonds. This time the issue was called the "Freedom Loan of 1917" (*Zaem svobody*). For the first time in the history of government bonds, the face side of the certificate had a political statement printed on it instead of a description of the terms of the loan. The terms were printed on the reverse side. The statement included the words, describing the need for billions of rubles to save the country and to complete the creation of free Russia, a country based on the principles of equality and truth. Purchasing these bonds was called by the statement an act that would "save our freedom." Another unusual feature of these certificates was the placement of the signatures of all twelve members of the government (of the Cabinet of Ministers) on the front side of the certificate. This was the only time so many signatures appeared on the Russian government bond. This was a 5% coupon bond. The principal was to be repaid by recalling the bonds in series, no later than 49 years after the issue. The recalls were to occur annually, in December, beginning in 1922. The certificates were issued with face values of 50, 100, 500, 1,000, 5,000, 10,000, and 25,000 rubles.

The bonds of the Freedom Loan were placed by a syndicate of banks. The State Bank was part of this syndicate and had the responsibility for placing 50% of the bonds. The placement was arranged at 85 rubles per 100 ruble face-value bond. The purchaser of these bonds could buy them on margin, paying only 10% of the purchase price and obtaining the bond. The rest was recorded as a loan, given by the bank (which was placing the bonds) to the purchaser. The Freedom Loan was placed in a time of political turmoil, sharp political debates, and opposition in Russia. The supporters of the Provisional government described this loan as the way to recall some paper money from circulation, thereby positively affecting the state of the monetary system in the country. The opposition, including the Bolshevik Party (later, the Communist Party) criticized the government for the desire to continue the war at the expense of the "working people." The loan was described as a way of extracting additional money from the poor. The claim was, if money is needed for the war, let the government increase the taxes on the rich. An April 1917 statement, distributed by the Bolshevik Party said: "By issuing bonds capitalists turn their money into interest bearing capital, when this money could simply be confiscated from them in the form of taxes." The same statement claimed that by recalling paper money from circulation, the Provisional government "is making space" for another issue of paper currency.

By placing the Freedom Loan in 1917, the Provisional government raised approximately 4 billion rubles. This amount was not sufficient to cover the deficit. The Provisional government printed enormous amounts of paper currency. By September 1917 the demand for paper money as a payment instrument was so high that the government allowed coupons of government bonds and bonds certificates of the War Loan and of the Freedom Loan to be used as paper money. This was a period of hyperinflation and it was extremely difficult for the Provisional government to place a new issue of internal bonds. It was necessary to make the bonds attractive to investors and the concept of lottery bonds emerged again. On August 11, 1917, the Provisional government announced the issue of the "4.5% Lottery Bonds of 1917." The bonds were issued in series, each series in the total amount of 400 million rubles. The face value of individual bonds was 200 rubles. For 50 years, for every series, two lottery drawings were to be conducted annually. The prizes awarded at each drawing are listed in Table 2.

Therefore, 141 prizes in the total amount of 2,488,000 rubles were awarded. In addition to the prizes listed in Table 2, from 14,759 to 24,659 small prizes were awarded at each drawing. In the first 33 drawings the value of the small prize was 500 rubles. In the next 34s drawing this value was set at 600 rubles. Unlike the 1864 and 1866 Lottery Bonds, the bonds issued in 1917 did not have separate prize drawings and cancellation (recall) drawing. The bonds of 1917 were canceled and recalled when they won a prize.

The certificates of the 1917 4.5% Lottery Bonds were printed in the United States by the American Banknote Company. The American Banknote Company also participated in the creation of the design of the certificates. The Lottery Bonds issued in 1917 by the Provisional government were the last government bonds issued before the socialist government took power.

The Provisional government was overthrown on October 24–25, 1917, and the Soviet government was created. In February 1918 the Soviet government canceled all the government debts. The amounts in default were staggering. Russian debt to Great Britain alone at the end of World War I was estimated at between 538 and 568 million pounds.<sup>10</sup> The amount of debt to France was estimated at 3,573 million frances, or 1,340 million gold rubles.<sup>11</sup> Japan was also a creditor to Russia during World War I. According to the Russian-Japanese Financial Convention of September 4, 1916, a consortium of Japanese banks issued a 6% loan to Russia in the amount of 70 million yen. The loan was repaid by Russia one year later, and immediately a new loan for 105 million yen was arranged. Sidorov (1960) estimates that by October 1917 Russian debt to Japan equaled 147 million dollars.

#### 7 Dependence on Foreign Capital Markets

Russia's dependence on imported investment capital becomes clear through the study of the country's borrowing in the late 19th and early 20th century. Table 3 lists holdings of Russian securities by domestic and foreign investors for four years. In 1893 the fraction of *all* Russian securities held in Russia equaled 65.2%. This included government bonds, railroad securities, and privately issued securities. For the same year this fraction was lower for government bonds–56.5% of Russian government debt was held in Russia. In 1913 domestic investors held 66.5% of all Russian securities (this number equaled 50.3% for government bonds)–one-half of Russian government debt was held abroad!<sup>12</sup> The overall number of 33.5% of all securities held by foreigners probably underestimates the true importance of foreign investment capital for the Russian industry. The figures in the table include only securities issued in Russia. A stock of a Belgian firm traded in Brussels is not included in the statistics, even if the Belgian firm operated exclusively in Russia.

<sup>&</sup>lt;sup>10</sup>Sidorov (1960) gives the figure of 538 million, whereas Pavlovskii (1920) reports 568 million.

 $<sup>^{11}</sup>$ Sidorov (1960).

 $<sup>^{12}</sup>$ Similar numbers are reported by Feis (1930), who quotes Pasvolsky and Moulton (1924) and reports that in 1895 foreign investors held 30% of Russian government debt and in 1914 this number grew to 48%.

Table 4 shows issues of new Russian securities at home and abroad. For every year in the five-year period 1908–1912 the amount of railroad securities issued abroad exceeded that at home. The same was true for municipal bonds (with exception of 1910).

Feis (1930) describes the details of Russia's relationship with each of its major creditors: France, Germany, and England. Political consideration affected the borrowing arrangements. In the 1870s and early 1880s German capital had contributed greatly to both the government needs and to the construction of Russian railways. As the political relationship changed from friendly to hostile during 1886–1887, Bismarck ordered the Reichsbank to refuse to accept Russian bonds as collateral. German holdings of Russian securities were sold outside of Germany. The decree was in effect until 1894. Thereafter, Russia could borrow in Berlin intermittently until 1906. In 1902 Russia issued a loan in Berlin collateralized by the payments that China was required to make to Russia for the suppression of the Boxer Rebellion. In 1906 the German government once again caused the banks to renounce Russian government loans; no further Russian government borrowing took place in Berlin.<sup>13</sup>

Beginning with the reign of Alexander III, France became the major lender to Russia. In the private sector, French investors financed the creation of iron and steel works and mining operations. These companies were under French financial, as well as technical, control. The Russian government, too, relied on French investors. Of the direct Russian government debt owned abroad in 1914, 80% was held in France and 14% in Great Britain.<sup>14</sup>

The Russian elite faced a dilemma: capital at home was scarce and foreign capital was needed to develop industry. With foreign capital, however, foreign influence would come. Prominent Finance

<sup>&</sup>lt;sup>13</sup>Feis (1930), p. 172.

<sup>&</sup>lt;sup>14</sup>Feis (1930), p. 211.

Ministers Vyshnegradskii and Witte did not see any other way but to allow foreign capital into the country. Tsar Nicholas II was more cautious, and rightfully so.

Deferring to the popular opposition which manifested itself from time to time, or worried over some phase of Russian policy, the French Government often evaded, postponed or made conditional the financial requests of the Russian Government, and tried to turn them to political or economic advantage. In the earlier years the chief grounds for objection were financial, in the later years, political.<sup>15</sup>

The dependence ran both ways. On one hand, the Russian government depended upon French financing, thus enabling the French government to have influence over Russian policy. On the other hand, because the amounts loaned to Russia were great, French foreign policy had to be in line with Russian interests.

So far I have established that Russia was a net importer of investment capital. Was this capital employed in an economically productive way? Some of it clearly was not. The state did not allocate the funds based on economic considerations alone. Witte writes about the losses generated by stateoperated railroads.<sup>16</sup> He attributes the losses to the construction of politically and strategically important, but economically unsound railway lines. Among these railroads are the ones that were bound to Russia's western state line and the Trans-Siberian Railroad.

Another distortion in capital allocation was a relatively high proportion of military expenses in the Russian budget. Ferguson (2001) studies military spending of European countries. He concludes that between 1870 and 1913, average defense spending as a percentage of net national

<sup>&</sup>lt;sup>15</sup>Feis (1930), p. 219.

<sup>&</sup>lt;sup>16</sup>In 1889 the railroads were running losses at 48 million rubles per year. Later, the losses were eliminated. In 1905, however, the annual losses reached 100 million rubles (Witte (1991), p. 167).

product amounted to 3.1% for Britain and Austria, 3.2% for Germany, 3.3% for Italy, and 4% for France. For Russia this number was higher–5%. Arin (1999), in his book on Imperial Russia of late 19th and early 20th century, argues that military expenses were too high for the Russian economy. It must be added, of course, that Russia had the largest border in the world to defend.

In sum, foreign capital fostered the industrial development in Russia through investments in infrastructure and industry. The funds obtained by the government, on the other hand, were not always put to the most productive economic use.

#### 8 Concluding Remarks

Throughout the 19th and the early 20th century Russia borrowed on European capital markets to cover its budget deficits, to finance wars, and to develop infrastructure and industry. Russian political, economic, and military interests in the 19th century were largely focused on the European theater of operation, including the Balkans and the Black Sea straits. Toward the end of the century, however, Central Asian and Far Eastern affairs attracted more attention. The Far East appeared as an attractive region for Russia's expansion because of the erroneous belief that Russia would not meet serious opponents in the area. The British sphere of interests was much farther to the south and very few Russian statesmen believed that Japan must be regarded as a strong rival. A net borrower, Russia relied on the European great powers for debt financing, and at the same time was a lender to China and Persia, hoping to acquire economic influence through investments in these countries.

Economically, Russia occupied the last place among the great powers. By 1913 it was in fifth place based on national output, ranking behind the United States, Germany, the United Kingdom,

and France. An important question is to what extent have the political aspirations of the Russian Court led to a disproportionately large fraction of national output being allocated to the military needs. To cover military expenses, Russian finance ministers balanced between using the money printing press and issuing of interest-bearing debt. Over time, Russia became the largest single borrower in the world. Not all of this capital, however, was put to productive use. It appears that political ambition, and as a consequence, military requirements, were not in line with the capacity of the Russian economy. In 1917 the burden of the war finally caused a complete collapse of the economy, a change in the political system, and a catastrophic default on all government debt. When on February 3, 1918, Bolsheviks canceled all debts of the old Russian government and nationalized all the banks, land, and industry, they destroyed one of the most intricate and well-established financial systems in the world.

The capital raised by the government, however, was not exclusively used for military needs. An important area for future research is the link between Russian government debt policies and private enterprise. Frequently the Russian government was willing to guarantee securities issued by strategically important industries. This policy helped to attract capital for long-term projects. In some cases the projects were of gigantic proportions, such as the country wide railroad construction. In many cases these ventures evolved into economically viable enterprises. It is important to understand in which cases initial support by the government has led to the development of a profitable private enterprise, which otherwise would not be possible because of capital constraints. The history of Russian industrial development presents an excellent opportunity for such work because it presents a rich universe of projects and industries.

## A Appendix

The following text, reprinted from Count Paul Vassili's memoirs, describes two prominent finance ministers–Wyshnegradsky and Witte.

One of the first cares of Alexander III when he began to reign was the financial condition of Russia. It was far from cheerful at that particular moment. The expenses of the Turkish War had not been paid; taxes were coming in most irregularly; the value of the paper rouble had gone down considerably; and foreign credit was not easy to obtain. It was impossible to do without the latter, for the national deficit could not be met from the resources of the country alone. At length, after endless trouble, a loan was arranged, but under terrible conditions, imposed by the Jewish banking world of Paris and Berlin. With this loan the Rothschilds absolutely refused to have anything to do, on account of the massacres of Jews that had taken place in the south of Russia, especially in Kischinev.

The situation was serious, and needed an energetic and clever man to face it. In the year 1889 the official world of St. Petersburg was surprised to read that the Director of the Technological Institute of that capital, M. Wischnegradsky, had been appointed Minister of Finances.

If ever an "outsider" gained a foremost position, it was M. Wischnegradsky. He was unknown to the fashionable world, and hitherto Ministers had been looked for in that charmed circle. No one knew him, no one had heard anything definite about him, except that he had been Chairman of the South-Western Railway, and succeeded in re-establishing order and prosperity to that enterprise, which had far from a good reputation when he was called upon to save it from bankruptcy. He was also credited with great tact, great learning, and an excellent knowledge of financial matters and problems. He was no longer young, but full of energy and determination. Beyond these superficial facts, no one could tell anything concerning him, or even make speculations as to whether or not he was fitted for the important post to which his Sovereign had called him.

There were people in St. Petersburg who said that it was M. Pobedonostseff who was responsible for the appointment. This assertion was absolutely untrue. It was the personal act of the Emperor, who had been greatly struck by a pamphlet written by M. Wischnegradsky on the Public Debt of Russia, which had quite accidentally fallen into his hands. He sent for the author of the pamphlet, and had two long conversations with him, after which the world was stunned by the news that Ivan Alexieievitch Wischnegradsky had been appointed to the task of repairing the shattered finances of the Russian Empire.

Difficult though that task was, it was crowned with success. At least, M. Wischnegradsky put matters so far right that his successors only had to reap the benefit of his almost superhuman work. In his ideas as to the best way of restoring the credit of the country he showed himself a great statesman as well as a great financier. He overcame difficulties almost insurmountable at first sight; he induced the Rothschilds once more to smile upon a land in which their "co-religionists" were persecuted and trodden upon. He persuaded them, as well as other financial powers in Europe, that Russia had unknown resources within its limits, which only needed developing for the good of the whole of the industrial world. He above all things obeyed his Imperial master's orders, which consisted in trying to convince public opinion that so long as he reigned peace would never be endangered, and that Russia would follow a policy of industrial progress and peaceful development of her resources towards one goal, that of becoming a rich nation rather than a conquering one.

For years M. Wischnegradsky worked at this task, and he lost his health and ultimately his life in bringing it to an issue. His first care was to consolidate the value of the paper money by gathering enough gold to guarantee the redemption of any issue that the Government thought it necessary to make. When he took in hand the direction of the Treasury, the amount of gold in the cellars of the Imperial Bank was scarcely sufficient to serve as security for the foreign loans with which the country was saddled, and all payments were made in paper. When he was compelled to retire from the public service, gold was beginning to be the common currency, and now one finds more of it in Russia even than in France, and the scarcity is in paper money.

Wischnegradsky well knew that it was only a future generation that would reap the benefit of his policy, but this did not deter him from carrying out the programme which he had in his mind, in spite of his numerous enemies who howled at him because they did not perceive any immediate amelioration in the conditions which he had undertaken to transform from bad to good.

Ivan Alexieievitch was a charming man from the social point of view, full of fun and amusing anecdotes, which he freely distributed in the course of conversation. In spite of the enormous burden of work which he had taken upon his shoulders, he found the necessary time to keep himself cognisant of everything that was going on in the world, and I do not think that any remarkable work of science or of literature was published without his finding time to glance at it, so as to be conversant with its most important points. He realised that it is essential for a statesman to keep himself posted as to the state of public opinion, not only at home but abroad, so as to be able to see to the needs of his own country through the criticisms addressed to it by the foreign press. Light was the thing he most valued, and of light he never found enough around him nor around the Emperor; the latter, he used to say, ought to be spared petty criticisms and details, but should be kept informed as to the essential points of weakness in his dominions, no matter even if they became a source of painful disillusionment or of sorrow.

He loved Alexander III sincerely, and with a devotion such as is rarely met with in a Minister. He appreciated his honesty and the straightforwardness of his intentions, and above all he respected the love for Russia which animated his Sovereign; he would have induced the Tsar to make the greatest sacrifices if only they were conducive to the prosperity of the Russian people.

When the famine of 1892 brought the population of twelve of the most fertile Governments in the Empire to the verge of starvation, it was Wischnegradsky who spoke to Alexander III of the misery that this famine was causing and would cause to Russia. This in spite of the recommendations of the then Minister of the Interior, M. Dournovo, who had succeeded Count Tolstoy in that responsible post, and who, being above everything a flatterer, did not like to tell the Emperor the true state of things. Wischnegradsky even went so far as to have sent to the Tsar a piece of the terrible bread, made of grass and straw, that the peasants in certain localities were eating, in order to convince his Majesty of the distress; and he, who was supposed to be so very economical, insisted upon enormous credits being opened in order to relieve the stricken provinces. The burden of this arduous responsibility, and the strain of this gigantic work, told at last on the constitution of Ivan Alexieievitch, and one day in spring, whilst at Gatschina, where he had gone to submit his weekly report to the Emperor, he was stricken with an attack of what at first sight appeared to be apoplexy, and was with difficulty taken home.

It was at that particular moment there appeared upon the political scene a person who ever since has occupied a considerable position in the history of Russia, Sergius Ioulievitch Witte, now Count Witte, whose signature stands at the foot of the Portsmouth Treaty of Peace with Japan.

Count Witte, about whom so much has been written, comes of a good family of German origin, which settled in Odessa many years ago. He studied well, but through lack of means had not been able to obtain any appointment, except of an inferior kind. For a number of years he was station-master at Popielna, a small station on the South-Western Railway, not very far from Kieff. It was there that M. Wischnegradsky, at that time chairman of the railway, saw him, and was struck with his abilities, and appointed M. Witte manager of the rolling stock of the company. Once in a position from which there was a chance of promotion and distinction, Witte showed to their best his unquestionable ability and knowledge of financial matters. When M. Wischnegradsky was called to the Ministry of Finance he at once brought Witte to St. Petersburg and made him chief of one of the most important departments of the Treasury. The rest became easy, and doubtless many of the reforms carried out by Wischnegradsky were due in part to his alter ego, Sergius Ioulievitch Witte. Wischnegradsky continually praised his subordinate to the Emperor, saying that without him he would never have been able to accomplish what he had, and when the Ministry of Communications became vacant, he proposed to the Sovereign to appoint M. Witte to the post. On the morning of the day of that fateful journey to Gatschina, Ivan Alexievitch had felt unwell, and seeing Sergius Ioulievitch, asked him to accompany him. It was Witte who brought back to town his former chief, and during the sad days that followed he was continually in the house helping the bereaved family and taking all the trouble he possibly could from their shoulders, so as to leave them free to attend upon the sick man.

About a week after the attack that had prostrated the Minister of Finance a letter was sent to the Emperor; it opened in a most humble tone, and with the assurance that the writer was prompted only by a sense of duty, but the interests of Russia were dearer to him even than the ties of a grateful friendship. And then it went on to state that the health of M. Wischnegradsky was such that there was no hope of his ever again fulfilling the duties of his responsible post, and that this contingency ought to be provided against, or the interests of the country would suffer. Even whilst this letter was being written the Minister was slowly mending and looking forward to the day when he would be able to take up his work again.

The Emperor showed this letter to General Tcherevine, who urged him not to take any immediate action, and offered himself to go and see how matters stood. He did so, and was able to assure the Tsar that there was nothing to warrant the assumption that Wischnegradsky would not get better, and that in any case it would be better to wait before making a decision that would certainly break the heart of the old man, who was conscientious enough to resign his duties if he saw himself unfit to perform them. After a long illness, followed by a longer leave spent in the Crimea, Ivan Alexieivitch returned to St. Petersburg, and once more took up his duties; but the old activity was gone, and gone with it, too, was the energy, as well as the power to work, for which he had been so famed. After a few months he asked to be relieved of his duties, tired perhaps also of the many intrigues against him, prompted by the desire to see his successor installed. Before leaving his post, at a last interview with the Emperor, he recommended the appointment of M. Witte in his place. He retired into private life, and died two years later deeply regretted by all who knew him, and leaving behind him the reputation of one of the most disinterested servants the Crown had ever had.

Even before death had claimed M. Wischnegradsky, M. Witte had become one of the foremost men in official Russia. Clever to an uncommon degree, of great intellectual ability and statesmanlike views, he knew what he wanted, and in Russia that is the quality which is seldom met with. He was ambitious; he desired power, and was one of the few men who knew how to use it. Above all, he had a keen knowledge of humanity, of its defects, and of its meannesses. Free from prejudices, he was not a man to be hampered by convention, and during the course of his career he had given striking examples of this disdain for public opinion. If not a Napoleon or a Bismarck, he was unquestionably a strong man, with the capacities, perhaps, of a Richelieu, who rose to his high position because a king helped him, and not because he helped a king.

### References

- Arin, Oleg, 1999, Tsarskaya Rossiya: Mify I Realnost (konetz XIX nachalo XX veka), Linor, Moscow.
- Bovykin, V. I., 1984, Formirovanie finansovogo kapitala v Rossii: Konetz XIX v. 1908 g., Moscow.
- [3] Feis, Herbert, 1930, Europe, The World's Banker: 1870-1914, Yale Press, New Haven, CT.
- [4] Ferguson, Niall, 2001, The Cash Nexus: Money and Power in the Modern World, 1700-2000, Basic Books, New York.
- [5] Gindin I. F., 1957, "O velichine I haraktere russkogo gosudarstvennogo dolga v kontse 1917 g.," Istoriya SSSR, No. 5.
- [6] Malozemoff, Andrew, 1954, Russian Far Eastern Policy, 1881 1904, Berkeley, CA.
- [7] The Investor's Monthly Manual. London. Various Issues.
- [8] Pasvolsky, L. and H. G. Moulton, 1924, Russian Debts and Reconstruction, New York.
- [9] Pavlovskii, Yu. A., 1920, "Russkii gosudarstvennyi dolg," Russian Economist. Vol. I
- [10] Romanov, Boris A., 1952, Russia in Manchuria (1892 1906), Ann Arbor, MI.
- [11] Sidorov, A. L., 1960, "Finansovoe polozhenie Rossii v gody Pervoi mirovoi voiny," Moscow.
- [12] Tarankov, 1992. Tzennye Bumagi Gosudarstva Rossiskogo.
- [13] Vagner, A., 1871, Russkie bumazhnye den'gi, Kiev.

- [14] Vassili, Paul, 1914, Behind the Veil at the Russian Court, New York.
- [15] Witte, S. Yu., 1991, Izbrannye Vospominaniia, 1849 1911, Mysl, Moscow.
- [16] Zaitseva, L. I., 1993, Birzha v Rossii, ili padenie Sviatoi Rusi, In-t Ekonomiki Rossiiskoi akademii nauk, Moskva.

Table 1					
Prizes Awarded at Each Lottery Drawing					
Prize Value, $Z_k$	Number of Prizes				
200,000 rubles	1 prize				
75,000  rubles	1 prize				
40,000 rubles	1 prize				
25,000 rubles	1 prize				
10,000 rubles	3 prizes				
8,000 rubles	5 prizes				
5,000  rubles	8 prizes				
1,000 rubles	20 prizes				
500 rubles	260 prizes				

=

# Table 2

# 4.5% Lottery Bonds of 1917

# Prizes Awarded at Each Lottery Drawing

Prize Value	Number of Prizes
600,000 rubles	1 prize
300,000 rubles	2 prizes
200,000 rubles	2 prizes
150,000 rubles	2 prizes
80,000 rubles	2 prizes
50,000 rubles	2 prizes
20,000 rubles	2 prizes
10,000  rubles	10 prizes
6,000 rubles	10 prizes
2,000 rubles	20 prizes
1,000 rubles	88 prizes

#### Table 3 Russian Securities Held by Domestic and Foreign Investors (Millions of rubles, as of January 1 of each year)

Year	Government Bonds, Mortgage- Backed Bonds by Nobility Land Bank and Peasant Land Bank			Government Guaranteed Railroad	Bonds Issued by Russian Cities	Mortgage-Backed Bonds by Private Land Banks	Stocks and Bonds of Russian Public Companies			TOTAL
	Government	Mortgage	Total	Stocks and	(Municipal		Stocks	Bonds	Total	
	Bonds	Backed		Bonds	Debt)					
Panel 2	4: Russian Secur	ities Held in I	Russia							
1893	2,712	209	2,921	424	17	1,225	739	43	782	5,369
1900	2,917	459	3,376	495	83	1,784	1,640	67	1,707	7,445
1908	4,072	1,069	5,141	721	177	2,224	1,637	158	1,795	10,058
1913	4,463	1,839	6,302	793	261	2,953	3,433	219	3,652	13,961
		rities Held Ou	iside of Ru	5514						
				-			114		1.40	
1893	2,090		2,090	623			114	35	149	2,862
1893 1900	2,090 3,325	102	2,090 3,427	623 568	4		397	149	546	4,545
1893 1900 1908	2,090 3,325 4,642	102 96	2,090 3,427 4,738	623 568 528	26		397 590	149 198	546 788	4,545 6,080
1893 1900 1908 1913	2,090 3,325	102	2,090 3,427	623 568			397	149	546	4,545
1893 1900 1908 1913	2,090 3,325 4,642	102 96	2,090 3,427 4,738	623 568 528	26		397 590	149 198	546 788	4,545 6,080
1893 1900 1908 1913	2,090 3,325 4,642 4,410	102 96	2,090 3,427 4,738	623 568 528	26	1,225	397 590	149 198	546 788	4,545 6,080
1893 1900 1908 1913 Panel ( 1893	2,090 3,325 4,642 4,410 <i>C: Totals</i>	102 96 186	2,090 3,427 4,738 4,596	623 568 528 865	26 164	1,225	397     590     1,148     853     2,037	149 198 259	546 788 1,407	4,545 6,080 7,032
1893 1900 1908 1913 Panel (	2,090 3,325 4,642 4,410 <i>C: Totals</i> 4,802	102 96 186 209	2,090 3,427 4,738 4,596 5,011	623 568 528 865 1,047	26 164		397 590 1,148 853	149 198 259 78	546 788 1,407 931	4,545 6,080 7,032 8,231

Source: Bovykin (1984), who uses several sources, including official publications of the Russian Finance Ministry, "Russkii Denezhnyi Rynok. 1908--1912", and "Ministry of Finance. 1904--1913."

				7	Table 4					
		Is	sues of Ne	w Russian S		Russia and	Abroad			
				(Millio	ns of ruble	s)				
	1	908	1909		1910		1911		1912	
	In Russia	Abroad	In Russia	Abroad	In Russia	Abroad	In Russia	Abroad	In Russia	Abroad
Government Bonds	200.0			175.0						
Railroad Stocks and Bonds (Guaranteed and Not Guaranteed)	18.0	138.0	70.3	99.0	40.8	78.7	15.0	63.0	26.3	197.7
Municipal Bonds	3.2	69.1	7.0	26.6	41.8	31.5	10.9	16.6	2.7	38.1
Mortgage- Backed Securities (a)	143.5		75.0		150.0		195.0		255.0	100.0
Bank Stocks	9.5	1.3	17.9	4.8	61.7	32.5	83.1	21.0	126.3	2.1
Industrial Bonds			3.6	14.1	13.5	12.4	6.3	9.4	3.0	10.4
Industrial Stocks	137.0	46.0	79.0	26.0	93.0	50.0	220.0	146.0	154.7	101.0
TOTAL	511.2	254.4	252.8	345.5	400.8	205.1	530.3	256.0	568.0	449.3

(a) Isssued by State Nobility Land Bank and by Peasant Land Bank.

Source: Russkii deneznyi rynok: 1908-- 1912. Russian Finance Ministry. As quoted in Zaitzeva (1993).



**Government Bond Certificate. 1894** 4% Gold Loan. 6-th issue. Certificate for 5 bonds(125 Gold Rubles each bond) - certificate is for 625 Gold Rubles. Coupon payments were made in St. Petersburg (Russia), Paris, London, Berlin, Amsterdam, and New York.



**Government Bond Certificate.** 1898. 750 Rubles. 3 8/10% Conversion Bonds issued by the State (March 1898) in exchange for the 1887 4.5% Mortgage Bonds of the ex-Association for Mutual Credit on Land Property. Value is stated in rubles, German Reichsmarks, Francs, Pounds Sterling, Dutch Florins. The certificate shown is for **750 Rubles** (1620 German marks = 2000 Francs). Coupons were paid in St. Petersburg, Berlin, Frankfurt, Paris (by Rothschild), Brussels, London, and Amsterdam.



**Government Bond Certificate**. 1902. Russian 4% State Loan of 1902, issued for the realization of the remuneration payable by China to Russia. Certificate shown: Certificate for 5,000 German Marks. Coupons were paid twice a year. These bonds were collateralized by the payments that Russia was to receive from China in compensation for the losses incurred in consequence of the Chinese disorders (Boxer rebellion in 1901). The annual payments on these bonds were in strict correspondence with the annual payments of interest and principal that were to be made by China to Russia.



**Government Bond Certificate**. 1914. Internal 5% Loan, 1914. **100 Ruble** Certificate. The issue of these bonds was authorised by the decree of October 3, 1914. Coupons were payable on March 1 and on September 1 of each year; last coupon payable on September 1, 1926.