



Privatizing Pensions

By Leon Aron

Perhaps more than any other structural market reform unfolding today in Russia, pension privatization epitomizes both the enormous progress achieved over the past decade and the equally huge obstacles still ahead on the road to “civilized” liberal capitalism. The reform highlights and tests the quality of key institutions and instruments central to such a system: transparency and liquidity of banks and mutual funds, probity and competence of state regulatory agencies, and stability of equity and bond markets.

The caution in planning and executing the reform notwithstanding, its long-term impact on Russia’s economy, society, and politics is hard to overestimate. Privatization of even a relatively small portion of the pension payroll tax will eventually make billions of rubles available for investment and modernization—resources that today are concealed in the cash-only shadow economy, kept as dollars stashed under mattresses or reduced by inflation in the vaults of the Russian treasury or state-owned Sberbank.

Still, the reform’s most significant consequence might be strengthening the Russian people’s trust in the market’s ability to replace and outperform the state in controlling vital assets and delivering benefits. Next to the availability of food, pension privatization may become the most direct demonstration of the benefits of capitalism to tens of millions of ordinary Russians.

Conversely, after four generations of total state ownership, a failure of the reform would bolster the ever-present suspicion of nongovernmental institutions and instruments, making

much harder the dismantling of other remnants of the Soviet state’s monopolies in housing, utilities, education, and health care.

A Long March to Reform

The necessity of overhauling the pension system has been apparent ever since the glasnost revelations of the late 1980s. By various estimates, between 1989 and 1991, 60 percent to 70 percent (or 35 to 40 million) of the Soviet Union’s 58 million pensioners lived in poverty.¹ The first soup kitchen in the Soviet Union since the famine of the early 1920s was opened in Leningrad in April 1989 for pensioners who received less than seventy rubles a month—at the time, this meant every third urban pensioner and eight in ten pensioners in the villages.² In the summer of the same year, along with more food and soap, higher pensions were among the Soviet miners’ key demands in their first nationwide strike.

Together with the privatization of housing and utilities, the concept of replacing the “distributive” pension system with one of private savings and investments was first outlined in President Boris Yeltsin’s spring 1997 state-of-Russia address to the Federal Assembly. At the time, this and other structural market reforms were blocked by the fierce opposition of the leftist plurality in the Duma and later abandoned in the aftermath of the 1998 financial crisis.

Along with the 13-percent flat income tax and the privatization of agricultural and urban land, making a portion of the mandatory pension deduction the personal property of the worker and investing it for profit was a key item on the list of

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structural market reforms that President Vladimir Putin set out to accomplish in his first term in office from 2000 to 2004. The government had outlined the reform by the second half of 2000, and in February 2001, in nationally televised comments, Putin declared that “the current pension system has outlived itself.”³ Four months later the Duma approved the first three reform bills amidst a walk-out by the Communist deputies and a protest demonstration by leftists outside the parliament building.

Because of the extremely sensitive politics of the reform, it was not until the summer of 2002 that the Duma passed the long and detailed federal law on a new pension system,⁴ and not until the fall of 2003 that implementation mechanisms and instruments were finally approved. (For contributions outside the mandatory payroll deduction, private pension plans have existed in Russia since 1992, with virtually every major company instituting one for its workers. In July 2003 the top twenty private pension funds together held 48.6 billion rubles, or \$1.6 billion.⁵)

The Urgency of Change. The urgency of change has never been in question. In the pay-as-you-go system inherited from the Soviet Union, all of the 28-percent mandatory payroll tax, which the employer of every Russian worker is obligated to pay, went into the pensions of the 38 million current retirees.⁶ The size of an individual’s pension did not depend on his or her lifetime earnings but, instead, was calculated on the basis of the wages earned in the two years before retirement. The average replacement value—that is, the proportion of pre-retirement salary covered by a pension—was very low: by some calculations no more than 28 to 35 percent. Although in 2001 the minimal guaranteed monthly pension of 1,015 rubles (\$35) was nominally above penuriousness, pensioners constituted a majority among the estimated 25 percent of Russians who at the time were listed as being “below the poverty line.” (The average monthly pension is set to rise to 1,931 rubles in 2004 and to 2,533 rubles in 2006.⁷)

With an estimated half of Russian wages gone unrecorded⁸ in the so-called “cash-in-the-envelope” payroll, which allows the employer to reduce the size of the pension deduction and the employee to pay less income tax, even these meager benefits were increasingly in doubt. At the end of 2001, the head of the Pension Fund of Russia (PFR) reported an estimated shortfall of 35 to 37 billion rubles (\$1.2 to \$1.3 billion at the time) and projected a 50-billion ruble (\$1.7 billion) deficit in 2004.⁹

The structural deficiencies inherited from the Soviet state were compounded by demographic trends brought about by Soviet urbanization and post-Soviet modernization. With vast but demanding career choices opened to them by market economies and with multiple abortions no longer the principal means of birth control, as it was in the Soviet days, Russian women have avidly joined their sisters in Western Europe and the leading post-Communist nations of Eastern Europe in marrying later and having fewer children. Well within the general trend, the Russian population is rapidly aging. The ratio between wage earners and pensioners fell from 2.28 in 1990 to 1.74 in 2002.¹⁰ By 2040 there could be no more than one worker per pensioner, with pensions’ replacement value falling to as low as 14 percent.¹¹

Unleashing “a Virtuous Cycle.” Saving Russian pensioners from poverty and the PFR from bankruptcy are the most urgent objectives of the pension reform, but they are not the only aims. Touching as it is on virtually every major institutional and technological aspect of corporate governance, the authors of the reform expect it to fill many a pothole on the road to what the Russians call “civilized,” that is, liberal and transparent, capitalism.

José Piñera, the former labor and social affairs minister of Chile, who in 1980 pioneered a pension privatization with spectacular results, has been advising the Russian government on the reform. After President Putin’s long meeting with the world’s leading market reformers last April, Piñera wrote, “Done properly and accompanied by advances in related areas—such as capital markets regulations, creation of a mortgage market allowing more labor mobility, and protection of minority shareholders’ rights—pension reform can stimulate a virtuous cycle of investment and growth.”¹²

As workers seek to increase their private retirement accumulations, which are no longer dissolved without a trace in the bottomless national pool of the pay-as-you-go system, the pension reform is intended to lure vast funds into the “white” (or legal) economy of recorded and taxed salaries. Responsibly invested in reliable long-term instruments, this money is supposed to become a powerful resource for the modernization of the Russian economy and the capitalization of new businesses.

By tying retirement benefits for the first time to individual earnings, pension privatization creates millions of new institutional investors and changes the age-old

psychology of total reliance on the state. Giving tens of millions of Russians stakes in Russian capitalism contributes greatly to political stability and helps to increase people's interest in and, eventually, control over national politics and policies. In Piñera's words, "The most important impact of pension reform is the paradigm shift it produces by creating a country of property-owning workers who favor free markets and free minds. Put simply, the rise of 'worker capitalism' would turn Marx on his head."¹³

The Design

The 2002 legislation (which was followed by a plethora of laws, government acts, and decrees spelling out the details of implementation) divides the mandatory 28-percent pension withholding into three segments. The 14-percent "basic" (*bazovaya*) part will be used as before to pay the current retirees and, when the time comes, provide the uniform minimal entitlement, which will not depend on the amount of an individual's salary.

Depending on the worker's age, the "insured" (*strakhovaya*) portion claims between 8 percent and 14 percent of wages. Unlike the "basic" part, the "insured" segment is tracked in the newly opened individual accounts and used to calculate additions to the "basic" pension. For the first time, an annual statement allows the worker to monitor his or her employer's contributions. (Up to now, employers of an estimated 10 percent of Russian workers have not contributed to any pension plan.)

Privatizing and Investing. Finally, the "accumulating" (*nakopitel'naya*) segment of the pension withholding is taken out of the pay-as-you-go pool to become the property of an employee who decides how to invest it. To minimize the risks of short-term investments, this option is available only to those who in 2002 were at least ten years from retirement: women born after 1957 and men born after 1952. (Women in Russia may retire at the age of 55 and men at 60.) Older workers are to stay within the current pay-as-you-go system.

Among the 37 million¹⁴ workers eligible for "accumulation" in 2002, the younger the employee, the greater the share of "accumulation." Those who were between ten to twenty-five years from retirement—women who this year will turn 37 to 47 years old (born between 1957 and 1967) and men now turning 37 to 52 years old (born between 1952 and 1967)—can invest only 2 percent of their salaries. For those born after 1967, the

"accumulating" portion of the "individual" (nonbasic) part of the pension withholding will expand from 2 percent in 2002 to 6 percent in 2006.

Those entitled to "accumulation" may choose to remain in the state system, in which case the PFR will transfer their money for investment by the state-owned Vnesheconombank (VEB), which was designated the sole "state managing company." Alternatively, they can opt out for private asset management. For those who failed to designate a private money manager by December 31, 2003, VEB was assigned by default. The workers may leave VEB for a private money manager (or change their private manager) once a year.

During the final phase of the reform in August and September of 2003, the Ministry of Finance held a tender in which fifty-five companies were chosen to be "non-state managing companies." According to former first deputy minister of finance Alexey Ulyukayev, the four basic requirements were "reliability, liquidity, profitability, and diversification of the portfolio."¹⁵ To participate in the tender, asset management firms had to have been in business for at least five years, show no net loss in the past two years, have no less than 100 million rubles (\$3 million) under management and no less than 25 million rubles (\$800,000) of their own funds, and carry an insurance policy equal to at least 5 percent of the total funds under management.¹⁶

To help to choose between the winning companies, they were independently rated (from AAA to CC) and the results of the survey were published in a leading national newspaper, *Izvestia*, a month before the December 31, 2003, deadline for choosing a private investor.¹⁷

For both state and non-state managing companies, investment options are restricted and closely monitored. VEB is allowed to invest only in state securities, state-guaranteed mortgages, and rubles, dollars, and euros. Pension funds under private management may, in addition to these instruments, be invested in Russian stocks, corporate bonds, and Russian and foreign index funds. While the share of government bonds in the portfolios is not restricted, no single security issue may exceed 35 percent. Foreign securities and equities of any kind may not take up more than 20 percent of the portfolio.¹⁸

In the expectation of declining volatility and lower risks in the domestic market over time, the share of stocks, which this year is not allowed to exceed 40 percent, may be increased to 45 percent in 2005 to reach the maximum of 65 percent in 2007. In the same

year, corporate bonds, which are now limited to 50 percent, may reach 80 percent of the investments.

Propitious Timing. Although the ten-year old institutions and instruments of Russian capitalism are very far from perfect, the timing for the pension reform, nevertheless, might today be the best since the economic revolution began in January 1992. With the 1999 and 2003 Duma elections resulting in solid pro-reform majorities, the government is no longer stalemated by the unreformed hard-line Left in the parliament.

The economic growth of at least 5 to 7 percent a year in the past five years has produced surpluses in the budget and even the PFR, which allow the state to make up for the withdrawal of the “accumulating” portion from the pay-as-you-go pool without either raising taxes or lowering the basic benefits to the current retirees. (In Kazakhstan, which initiated a very similar reform in 1998, the cost amounted to an equivalent of 1.7 percent of GDP in the first year.¹⁹ Even adjusting for a smaller share of pension deduction allowed for “accumulation” in Russia, the proportionate cost may still reach \$600 to \$700 million in 2004 alone.) In addition, the 35.6-percent Unified Social Tax, which includes the pension payroll deduction, is set to be cut this year by almost one-third, to 26 percent.

In the past few years, corporations and businesses have grown more accustomed to letting third-party professionals manage their money, leading to a rapid growth of capital under such management.²⁰ Spurred by economic expansion, this trend helped more than double the size of the Russian asset management industry between January 2003 and April 2004, from \$5.4 billion to \$11.6 billion.²¹

Private citizens have gradually begun to follow suit, especially among Russia’s burgeoning middle class. In what seems to reflect a broader phenomenon, a leading Russian asset management company reported earlier this year that about 20 percent of its half-a-billion dollar capital comes from individuals investing, on the average, \$8,000.²²

For many Russians, the difficult decision to invest rather than keep their money in dollars at home may be made easier by the ruble’s appreciation against the dollar (roughly 10 percent last year); stashing savings in greenbacks under the mattresses, in jars, or even in dollar accounts in Russian banks is not as attractive as before.

Signing Up Cautiously. Andrei Illarionov, Putin’s personal economic adviser and an ardent advocate of pension reform, recently pointed out that 95 percent of Chileans opted for private pension funds, which, on average, gave them returns of more than 10 percent over the past twenty years.²³

Russia is very far from such an outcome. By the end of January 2004, only 700,000 out of 37 million eligible workers, or slightly less than 2 percent, signed up with private management companies.²⁴ Nevertheless, the father of the Russian pension reform, former first deputy minister of economic development and trade Mikhail Dmitriev, told an interviewer that “in time, the majority of [eligible workers] would make a choice in favor of non-state managing companies,” since the “entire international experience shows unambiguously that non-state companies overall are more profitable than state-owned companies.”²⁵ Over the short term, however, some experts are more cautious. Finance Minister Alexei Kudrin, for example, has said that he expects no more than 25 percent of workers to opt for private investment funds by 2011.²⁶

Professional asset managers are more hopeful, betting that a sizable segment of Russia’s 37 million eligible wage-earners will follow the example of the Poles, 90 percent of whom have entrusted a portion of their pensions to private managers since a similar reform was introduced there six years ago. Bernard Sucher, the chairman of Alfa Capital, one of the best rated asset management companies among the fifty-five selected by the Russian government (and a subsidiary of Russia’s largest retail bank, Alfa), estimated that by 2010, the total capitalization of the “accumulating” funds would reach \$29.5 billion, of which \$9 billion would be privately managed.²⁷

Hurdles and Challenges

Yet there are many hurdles to overcome before such visions become reality. To begin, liberal critics find the reform excessively cautious. The 6-percent maximum accumulation fixed by the Russian government is dangerously close to the minimum below which the funded system becomes “cost-ineffective.”²⁸ While still higher than in most of Western Europe (let alone the United States, where no part of the Social Security tax may be privately managed), 6 percent is considerably lower than in Kazakhstan (10 percent of wages)²⁹ and Poland (9 percent),³⁰ countries on whose 1998 and 1999 reforms the Russian privatization is closely modeled.

(In terms of the total pension tax, at 28 percent of the payroll, Russia is much closer to Kazakhstan with 25.5 percent than to Poland with 45 percent.)

Too Many Managing Companies and No Foreign Banks. The number and reliability of managing companies is another potential structural weakness of the reform. Critics contend that the Ministry of Finance has shirked its fiduciary responsibility by licensing fifty-five pension management funds—too many for the first-time buyers of services to make an informed choice. (By comparison, to serve an admittedly much smaller work force, nineteen private companies were initially licensed in Poland and six in Kazakhstan).³¹ Some top Russian asset managers grumble that slicing the pie so many ways makes pension fund management a “social project” rather than a profit-making business.

Despite greater acceptance of professional money managers by Russian entrepreneurs and, increasingly, the middle class, the fifty-five firms remain an utterly untested novelty for the vast majority of Russians. After the crash of 1998, in which banks defaulted on people’s savings, ordinary Russians are doubly reluctant to hand over their money.

Their trust would certainly be boosted by the presence of top Western financial institutions either among the Russian managing companies or, at the very least, in partnership with them. Yet largely because of opposition among the nationalists in this and the previous two Dumas, the government is skittish about expanding areas of activity open to foreign banks operating in Russia. By contrast, the confidence of Polish wage earners at the outset of the reform was greatly increased by the presence among the pension plan providers of such top banks as Aetna, Citibank, and Credit Lyonnais.³²

Inexperience and Incompetence. The reform implementation has placed a great burden on the Russian technological and institutional infrastructures, both of which thus far have proved less than adequate. Originally, the first-ever annual individual pension account statements, as well as the explanation of the new benefits and the list of private management companies, were to be mailed out to 62 million wage earners by July 1, 2003, with October 1 as the deadline for the 37 million eligible for “accumulation” to choose VEB or a non-state managing company.

However, the fifty-five private companies were not chosen until the beginning of September, forcing the

postponement of the mailing. Worse, the country’s dilapidated postal system proved incapable of handling the single largest mailing in Russian history, causing the deadline to be pushed back until December 31. The letters themselves, however, did not reflect this change and still listed the October 1 deadline. As a result, many workers, assuming that the deadline had already passed, did nothing—thus choosing VEB by default. Additionally, many complained that the letters were extremely confusing, likening them to “crossword puzzles.”³³

Insufficient Transparency and Potential Conflict of Interests. Thus far, VEB has refused to disclose its returns and is even less likely to do so as the sole state managing company. Almost certain to invest most of the pension funds under its management in state bonds, the bank’s returns will be well below inflation. Furthermore, as the principal agent for the sale of government debt, VEB must keep the borrowing costs (and thus yields) as low as possible.³⁴

Conflicts of interest may plague at least some private managers as well. Many of the chosen private investment funds are affiliated with large financial and industrial groups and may try to circumvent regulations by investing heavily in parent companies. Moscow is already full of rumors of some unaffiliated managers approaching big corporations with offers to channel funds into their stocks in exchange for the companies’ “advising” workers to choose a particular managing company.

Limited Investment Instruments. The regulatory restrictions are compounded by the structural deficiencies of an immature market. Of about three hundred companies in the Russian stock market, no more than fifty are liquid enough to be traded, yet the application of regulatory liquidity criteria is likely further to limit the asset managers to no more than ten top companies, virtually all of which are gas and oil producers.³⁵

A typical result of such over-concentration of assets is abnormally sharp price fluctuation, particularly in the commodity segment, where most of Russia’s capital is today. By the same token, an across-the-board, steady, and significant increase in capitalization of Russian companies, which was one of the key objectives of the reform, will have to wait until a far greater number of companies satisfy the requirements of transparency and liquidity to be invested with pension funds.

Deficient Advertisement. Finally, the national advertising campaign intended to explain the reform and its potential benefits left a great deal to be desired. Although the World Bank underwrote part of the campaign by providing \$1.5 million, the PFR received poor grades for its billboards and television commercials, which were far from ubiquitous, motivating, or even easy to understand.

The PFR's ineptitude is still harder to understand or excuse because of the example of Poland, whose experience the reform organizers reportedly studied very closely. Unlike Russians, according to a witness, the Poles could see "ads everywhere: on billboards, on television and radio," with commercials that were "quite ingenious, referring to the need for financial security, but also familiar characters from popular movies or books.³⁶ (Some Russian commentators accused the PFR of deliberately bungling the campaign so as to keep most workers within the state system.)

Coupled with the novelty and complexity of the reform, these deficiencies account for public attitudes that must be redressed for the reform to take root and spread. Most Russians polled in October 2003 were aware of the reform (76 percent) and approved of it either wholeheartedly (19 percent) or "with reservations" (51 percent).³⁷ Yet even among those who knew about the reform, less than half (44 percent) were aware, completely or partially, of the actual changes.³⁸ Six months later, only 11 percent said that they knew the concept of the reform "well," while 43 percent knew it "generally," and 46 percent knew nothing.³⁹ Furthermore, as of April 2004, 40 percent of the respondents in a national poll did not know whether they were entitled to the "accumulating" portion of the pension tax.⁴⁰

Patience and Trust

Glaring as they are, these gaps in design and implementation should not detract from the significance of the reform, which is to break with Russian socialism's total dependency on the state, make investors of millions of ordinary Russians and thus contribute very significantly to political stability, sharply increase the transparency of private and state-owned financial institutions, and provide billions for the Russian economy.

In 2001, the head of the PFR, Mikhail Zurabov, estimated that it would take ten to fifteen years for the pension reform to be fully implemented.⁴¹ Meanwhile, the architects of pension reform hope that the Russians will

be patient, and that the government and private money managers prove worthy of their trust.

Until then, the jury is out.

Notes

1. William Moskoff, *Hard Times: Impoverishment and Protest in the Perestroika Years* (Armonk, N.Y.: M. E. Sharp, 1993), 75 and 112.

2. Leon Aron, *Yeltsin: A Revolutionary Life* (New York: St. Martin's Press, 2000), 281.

3. Johnson's Russia List, #5080, February 8, 2001. Accessed at www.cdi.org/russia/johnson/5080.html on July 1, 2004.

4. "Ob investirovaniy sredstv dlya finansirovaniya nakopitel'noy chasti trudovoy pensii v Rossiyskoy Federatsii" (On the Investment of Funds for the Financing of the Accumulating Part of the Labor Pension in the Russian Federation), Federal Law No.111-F3, adopted by the State Duma on June 26, 2002, and by the Federation Council on July 10, 2002. Accessed at www.veb.ru/upload/guk/111/htm on May 24, 2004.

5. Christopher Kenneth, "Searching for a Worthy Pension," *Russia Journal*, July 2003.

6. There were an estimated 38 million retirees in Russia as of 2002.

7. Kenneth, "Searching for a Worthy Pension."

8. Igor Polishchuk, "Krizis srednego vozrasta" (The Middle Age Crisis), *Vremya Novostei*, May 26, 2004. Accessed at www.vremya.ru on July 2, 2004.

9. "The Opportunity of a Lifetime," *Moscow Times*, November 5, 2001.

10. Boris Grozovskiy, "Eta neponyatnaya reforma" (This Incomprehensible Reform), *Vedomosti*, November 28, 2003. Accessed at pensiononline.ru on June 10, 2004.

11. Ibid.

12. José Piñera, "Putin the Great?" *Moscow Times*, May 28, 2004.

13. Ibid.

14. Julia Polonskaya, *Pension Reform in Russia* (Moscow: Alfa Capital, 2004), 23.

15. Federal News Service, "Press Conference with First Deputy Minister of Finance Alexei Ulyukayev," September 9, 2003. Accessed at www.nexis.com on October 21, 2003.

16. "Ob investirovaniy sredstv dlya finansirovaniya nakopitel'noy chasti trudovoy pensii v Rossiyskoy Federatsii" (On the Investment of Funds for the Financing of the Accumulating Part of the Labor Pension in the Russian Federation), Federal Law No.111-F3 (see note 4 for full citation); and "Press Conference with First Deputy Minister of Finance Alexei Ulyukayev," September 9, 2003 (see note 15 for full citation).

17. Elena Gosteva, "Sostavlenn pervyi reyting kompaniy, upravlyayushchikh pensionnymi den'gami" (The First Rating of the Companies Managing Pension Money Has Been Constructed), *Izvestia*, November 26, 2003.

18. "Investing Pensions: The Search for Reasonable Restrictions," Interfax News Agency Investment Report, October 3, 2003. Accessed at www.nexis.com on October 21, 2003; and "Ob investirovaniy sredstv dlya finansirovaniya nakopitel'noy chasti trudovoy pensii v Rossiyskoy Federatsii" (On the Investment of Funds for the Financing of the Accumulating Part of the Labor Pension in the Russian Federation), Federal Law No.111-F3, (see note 4 for full citation).

19. Emily S. Andrews, "Kazakhstan: An Ambitious Approach to Pension Reform," paper prepared for the World Bank Pension Primer on Country Experiences in Europe and Central Asia, March 17, 1999. Accessed at www.worldbank.org.ru on June 1, 2004.

20. Arkady Ostrovsky, "Cash-under-the-Mattresses Days Are Gone," *Financial Times*, February 23, 2004. In the case of a leading asset management company, Troika Dialog, its capitalization quadrupled in slightly over two years, between December 2001 and February 2004, from \$125 million to \$500 million.

21. Bernard Sucher, "A Penny Earned: Russia's New Savings Industry," presentation at the U.S.-Russia Chamber of Commerce of New England, (Boston, Massachusetts), May 5, 2004.

22. Ostrovsky, "Cash-under-the-Mattresses Days are Gone."

23. Catherine Belton, "World's Reformers Pay Putin a Visit," *Moscow Times*, April 12, 2004.

24. "Private Companies Obtained Minor Part of Russians' Pensions Accruals," *Economic Press Review*, February 3, 2004. Because workers are allowed to switch from VEB to a non-state "managing company" once a year, more up-to-date figures for 2004 are not yet available.

25. Dmitry Dokuchaev, "Nepolnoe vzaimoponimanie" (Less than Complete Mutual Understanding), *Moskovskie Novosti*, December 23-29, 2003.

26. Boris Derevyagin, "Pravitel'stvu predyotsya propagirovat' starost" (The Government Will Have to Advertise Old Age), *Gazeta.ru*, May 11, 2004. Accessed at www.gazeta.ru on May 12, 2004.

27. Sucher, "A Penny Earned: Russia's New Savings Industry."

28. According to "Pension Reform in Russia: Design and Implementation," a report by the World Bank, "In general, funded systems in which workers have a choice of asset

managers have fixed costs that make going below a 4 to 6 percent contribution rate cost-ineffective." (See "Pension Reform in Russia: Design and Implementation," November 2002, 15. Accessed at [www.worldbank.org.ru/ECA/Russia.nsf/0/3abad2cce2abba25c3256e27004863ad/\\$FILE/pension_eng.pdf](http://www.worldbank.org.ru/ECA/Russia.nsf/0/3abad2cce2abba25c3256e27004863ad/$FILE/pension_eng.pdf) on June 2, 2004.) Professor Laurence J. Kotlikoff likewise calculates that at a 6-percent real return, which is "well below the market-weighted average annual return on stocks and bonds sold in the major stock and bond markets around the world," a working couple needs to save the minimum of 7 percent of their earnings to "maintain its standard of living through retirement." (See "The Right and Wrong Ways to Reform Pensions in Russia," December 1, 2000. Accessed at econ.bu.edu/kotlikoff/RussianPensionReform.pdf on June 2, 2004.)

29. Andrews, "Kazakhstan: An Ambitious Approach to Pension Reform."

30. Krzysztof Ostaszewski, "Poland's Pension Reform." Accessed at www.pensionreform.org/articles/polandpreform.htm on June 2, 2004.

31. Andrews, "Kazakhstan: An Ambitious Approach to Pension Reform;" and Ostaszewski, "Poland's Pension Reform."

32. Ostaszewski, "Poland's Pension Reform."

33. Arkady Ostrovsky, "A Young Answer to an Ageing Problem," *Financial Times*, October 9, 2003.

34. Ibid.

35. Ostrovsky, "Cash-under-the-Mattresses Days Are Gone."

36. Ostaszewski, "Poland's Pension Reform."

37. "Pensionnaya reforma: strakhi i nadezhdy" (The Pension Reform: Fears and Hopes), Rossiyskoye Obschestvennoye Mneniye i Isledovaniye Rynka (ROMIR, Russian Public Opinion and Market Research), November 2003. Accessed at www.romir.ru/socpolit/socio/11_2003/pension.htm on June 2, 2004.

38. "Novaya pensionnaya sistema" (The New Pension System), Fond Obschestvennoye Mneniye (FOM, Public Opinion Foundation), October 9, 2003. Accessed at www.fom.ru on June 2, 2004.

39. "Pensionnaya reforma" (The Pension Reform), Levada Center, April 29, 2004. Accessed at www.levada.ru/press/2004042905.html on April 30, 2004.

40. Ibid.

41. Torrey Clark, "Duma OK's Bill Aimed at Pumping Up Pensions," *Moscow Times*, July 16, 2001. Accessed at www.nexis.com on October 21, 2003.