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Republic of Kazakhstan—Financial Sector Assessment Program Update—Technical Note—Investment Opportunities for Pension Funds

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REPUBLIC OF KAZAKHSTAN

TECHNICAL NOTE

INVESTMENT OPPORTUNITIES FOR PENSION FUNDS

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Contents Page

I. Pension Reform in Kazakhstan....3

II. Important Policy Issues for Private Pension Funds....5
A. Importance of Private Schemes in a Pension System....5
B. The Actuary's Role in Pension Investment Strategies....5

III. Pension Fund Investment Strategies....7
A. Impact of Limited Domestic Investment Options....8

IV. Improving Supply of Investment Assets for Pension Funds....8
A. Ability of Domestic Capital Market to Satisfy Demand by Pension Funds....8
B. Government Securities....9
C. Mortgage-Backed Securities....10
D. Telecoms, Utilities and Infrastructure....11
E. Corporate Securities: Bonds and Equities....11
F. Foreign Company Listings and Kazakhstani Depository Receipts....12
G. Other Asset-Backed Securities....12
H. Foreign Investment Assets....12
I. Principal-Protected Notes....13

V. Summary of Key Findings and Recommendations....13

Tables

1. Placing of Pension Assets by Type of Security, January 1, 2004....4

Boxes

1. Role of an Actuary in Different Types of Pension Schemes....6

Appendices

I. Key OECD Recommendations for Three-Pillar Pension System....15
II. Principles for the Regulation of Investments by Pension Funds....17

INVESTMENT OPPORTUNITIES FOR PENSION FUNDS

1. The objective of this note is to put forward policy alternatives that could lead to improved management of pension fund assets in Kazakhstan. This note emphasizes prudence in the management of pension assets, given the social and fiscal importance of the pension sector. It also discusses different investment alternatives and development options for the domestic Kazakhstani capital market. The note aims to be realistic and pragmatic, based on the best professional judgment of the author.[1] It is concluded that neither the regulators nor industry participants appear to fully appreciate the risks attached to the practice of focusing on short-term and high yield investments, which exposes pensioners to higher reinvestment and issuer risk. The recommendations are summarized in the last section of this note.

I. PENSION REFORM IN KAZAKHSTAN

2. An ambitious pension reform law was enacted in June 1997 and implemented in 1998. For the working-age population, the reform transformed the pension system from a pay-as-you-go (PAYG) defined-benefit scheme, to one based on fully funded, defined-contribution principles. Accrued entitlements to old pensions were maintained so that upon reaching pension age, workers would receive pensions for service prior to January 1, 1998 from the old system and benefits for service, and after that date from their individual accounts. The new system covered all workers of all ages reflecting political will for radical transformation of the pension system, along the lines implemented in Chile. Unlike Chile, however, Kazakhstan did not replace previous PAYG entitlements through issuance of "recognition bonds" or similar instruments.

3. The actual coverage of the new system, although it has expanded significantly, remains low in view of the capability of the system to generate pensions for the whole working population of Kazakhstan. The majority of the rural population—some 42 percent of the total population—does not participate in the fully-funded pension system. Most of the self-employed, whose numbers are not clearly known, have no tax incentives to participate in the system. The total number of accounts is presently 6.4 million. Statistics on the number of contributors are not available, but estimates range from 2.0–2.5 million and continuous contributors are estimated at around 1.1 million. Under the new system, pensions are based on contributions of 10 percent of earnings allocated to individual accounts and invested in financial instruments through a number of competing pension accumulation funds. Sixteen pension funds are in operation, including the state pension fund (SAF).

4. Pension funds had accumulated some US$2.5 billion (almost 8½ percent of GDP) as of January 1, 2004.[2] The relatively modest size of the domestic capital market poses a significant challenge for the investment strategies of Kazakhstani pension funds.

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[1] Prepared by Paula Perttunen (World Bank), who participated in the joint IMF-World Bank Financial Sector Assessment Program (FSAP) Update mission that visited Kazakhstan during the period February 11–25, 2004..

[2] At end-2003, household deposits with Kazakhstani commercial banks amounted to 6½ percent of GDP. At end-2002, assets of private pension fund of the 8 EU accession countries averaged 3.15 percent of GDP, while the average for the 15 EU countries was 29.06. Specifically, it was 3.12 percent in the Czech Republic,

(continued...)

5. At end-2003, the pension funds had 53 percent of their assets invested in government and debt instruments issued by the National Bank of Kazakhstan (NBK), 30 percent in the domestic stock and corporate bonds, 7 percent in foreign corporate securities, including securities issued by international financial institutions (IFIs), and 7 percent in bank deposits (Table 1). The share of investments in government securities has been steadily decreasing from some 95 percent in January 2000 and has been replaced by investments in corporate securities (starting from 2 percent), foreign corporate securities and IFIs (1 percent) and bank deposits (2 percent).

Table 1. Placing of Pension Assets by Type of Security, January 1, 2004

Securities	Percent
State securities of Kazakhstan (RK) of which	53.6
-- RK Eurobonds	12.3
-- domestic securities of Ministry of Finance	17.9
-- National Bank of Kazakhstan (NBK) notes	23.3
-- local government securities	0.2
Deposits in commercial banks	6.9
Securities of International Financial Organizations	2.9
State securities of foreign issuers	2.4
Kazakhstani non-state securities, of which	29.9
-- shares	4.0
-- bonds, of which	25.9
-- denominated in US$	10.6
-- denominated in tenge	15.3
Foreign non-state securities, of which	4.2
-- shares	3.0
-- bonds	1.2
Total	100.0

Source: Agency of the Republic of Kazakhstan for Regulation and Surveillance of the Financial Market and Financial Institutions.

6. The structure and the maturity of securities in each investment suggest that some 35 to 40 percent of the aggregate pension portfolios are either denominated or otherwise linked to the dollar; and likely some 40 to 45 percent are held in short-term maturities.[3]

0.08 percent in Estonia, 2.79 percent in Hungary, 0.29 percent in Latvia, none in Lithuania, 4.39 percent in Poland, 0.70 percent in Slovakia, and 0.19 percent in Slovenia. (Source: Table 4 in *Development of Non-Bank Financial Institutions and Capital Markets in European Union Accession Countries* by Marie-Renée Bakker and Alexandra Gross, World Bank Working Paper No. 28, 2004, World Bank, Washington D.C.) At end-2001, assets of private pension funds amounted to 7.41 percent of GDP in Argentina, 13.16 percent in Brazil, 4.74 percent in Mexico, 6.54 percent in Spain, 2.30 percent in Turkey, and 75.0 percent in the United States. (Source: Table 12 in *Non-Bank Financial Institutions and Capital Markets in Turkey*, World Bank Country Study, April 2003, World Bank, Washington D.C.

[3] Assuming that, in addition to directly US dollar–denominated instruments, 75 percent of domestic bonds denominated in tenge are linked to the dollar; and that 30 percent of state and non-state Kazakhstani Eurobonds

(continued...)

7. The portfolios appear to be subject to substantial currency and reinvestment risks. Paradoxically, given the transition process to the new pension system, the Kazakhstani pension funds are currently challenged with excessive accumulation relative to amount of payouts, and the availability of domestic tenge-denominated securities. Actuarial methods are not applied in making the investment decisions, and a common view seems to be that there is no need for concern, as the larger payouts are not expected to start for some ten years. Thus, the investment strategies of the pension fund portfolios currently are focused on high-yield and short-term investments. Neither the regulators nor industry participants appear to fully appreciate the risks attached to this practice, which exposes social safety net assets to higher reinvestment and issuer risk.

II. Important Policy Issues for Private Pension Funds

A. Importance of Private Schemes in a Pension System

8. Modern pension systems are based on a three pillar structure comprised of: (i) the state-run public pension that is part of the social security system; (ii) the usually funded supplementary pension aiming to provide a deferred income; and (iii) the savings put aside by an individual for his/her old age.[4]

9. Social security can provide only limited pension benefits. The second pillar, such as the Kazakhstani private pension fund system, supplements the first pillar, which is collective, interdependent, and usually tends to represent a significant fiscal liability. Managed with prudence, the deferred income flows of a second pillar scheme represent an improved degree of old-age security above the traditional social security without adding to fiscal contingent liabilities. The third pillar, personal old-age savings, is made up of purely individual savings or provident plans, and tends to be financially risky due to economic and social developments as well as the lack of foresight on the part of individuals.

10. Government policies can improve the soundness of the second-pillar pension schemes through good pension asset management. To that extent, regulation and supervision of pension fund management, correct incentives for appropriate management of funds, and domestic capital market development policies are important tools for minimizing potential adverse fiscal consequences in long term.

B. The Actuary's Role in Pension Investment Strategies

11. Actuarial methods play an important role in the development of investment strategies, when there is a significant mismatch in funds accumulation and liability patterns.[5] This is particularly true for pension fund investments. In pension asset management, actuarial

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and non-state domestic bonds; and that 50 percent of foreign bonds are held in short-term maturities, in addition to NBK notes and deposits.

[4] Appendix I summarizes the OECD principles for three-pillar pension systems.

[5] The actuary uses mathematical and statistical techniques to solve problems relating to the evaluation and management of risk, especially in relation to financial instruments and the management of financial institutions such as insurance companies, pension, and benefit plans, provident funds or social insurance programs.

methods are used to compute the actual ratio of contribution to benefits. Depending on whether the calculation is for the defined benefits or the defined contribution system, the equation uses either contributions or benefits as the key unknown variable.

12. Using actuarial projection models, financial inflows and outflows can be estimated over fairly long periods—an essential element for the management of pension assets. This management method, cited as the preferred method in the EU's third pension directive, is particularly well suited for pension funds given the long term nature of their liabilities. It enables the pension funds to ascertain prudence in optimizing the balance between investments in capital maintenance versus long-term and yield-focused securities.

Box 1. Role of an Actuary in Different Types of Pension Schemes

In **PAYG Defined Benefit (DB) Schemes,** the main role of the actuary is to estimate the future cost of providing the benefits in accordance with the scheme's rules and regulations, and to advise on the different ways in which these liabilities might be financed. At the same time, the yield of contribution income from collecting the current contribution rates, or the already legislated future contribution rates from the projected working and contributing population must be estimated. This involves making further assumptions about the future demographic developments, activity rates of the working age population, unemployment rates, salary distribution, etc.

In **Defined Contribution (DC) Schemes,** the structure is more straight-forward. There are important aspects, which require careful monitoring and control, from the perspectives of the affiliate, the management company, and the regulator. Besides supporting the yield and cash-flow projections (as in DB schemes), actuarial methods are essential for informed pay-out choices. Programmed withdrawals expose the individual to potential risks similar to those of annuity purchase. Determining the choices should thus be supported by regular monitoring and actuarial projections to determine the suitability for each individual concerned. Annuity business, which is normally associated with defined contribution schemes as at least one of the mechanisms for withdrawing payments during retirement, should be subject to full actuarial management and control. Actuarial involvement is also essential in determining any guarantees involved (including minimum guaranteed pension) and predicting their fiscal implications.

13. Sophisticated actuarial and financial practices can considerably reduce uncertainty margins in the contributions/benefits equation or, at minimum, highlight those parameters whose variations are critical, including potential repercussions of such variations. Modern computing technology makes it possible to achieve considerable progress in these areas. Advanced investment management strategies require high-quality mathematical skills. To that end, in developed markets, actuaries assume active fund management roles contributing to particular investment choices and portfolio-optimizing decisions.[6]

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[6] Currently, the Society of Kazakhstani Actuaries, which was established in 2001–02, has 50 members of whom 30 have an actuary license.

III. Pension Fund Investment Strategies

14. Present investment strategies of the Kazakhstani pension funds appear to be short-term, high-yield driven with no consideration to the long-term actuarial nature of pension liabilities. This strategy suggests inadequate understanding of the underlying risks involved, although also impeded by lack of long-term investment opportunities. The short-term investment focus exacerbates the asset management challenges—over and above the contribution accumulation—because of its considerable and on-going need for reinvestment to replace maturing assets. This higher reinvestment need excessively exposes pension assets to market volatility.

15. Ideally, pension assets should be invested primarily in long-term securities that provide for a prudent risk-return profile, that is, the preservation of capital with the highest achievable returns.[7] Second, third-pillar schemes should be managed in a way that is consistent with the stakeholders' risk tolerance profile. Asset managers should also adhere to prudent liquidity management requirements, both with regard to ascertaining sufficient cash flows for pension benefit payments, but also with respect to optimizing the amount of liquidity in order to avoid excess reinvestment risk.

16. Reaching these asset management objectives requires proper incentives, such as an appropriate method for asset valuation based on a "going-concern" assumption, transparent and informed reporting requirements, and on matching assets with future expected cash outflows.[8] Marking pension assets to market could actually represent a disincentive for prudence in asset management, encouraging short-term high-yield seeking—and thus more risky—investment strategies. A more usual approach is to use, for equities as well as bonds, either the Anglo-Saxon actuarial method, i.e. calculating the present value of the future financial flows generated by investments to estimate financial equilibrium, or a cost basis (adjusted for other relevant factors).

17. Introducing alternative, competing professional channels for management of private pension assets may also need to be considered. Typically, life insurance companies would be experienced in managing the type of investment portfolios appropriate for second- and third-pillar pension assets. In many Central and East European countries, insurance companies are part of the second pillar fund management through a legally separate affiliate. Therefore, well-grounded insurance companies should be encouraged to enter a country's second- and third-pillar market.

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[7] Appendix II includes "Principles for the Regulation of Investments by Pension Funds."

[8] Regarding accounting standards, please note that the International Accounting Standards Board is currently working on developing two standards for the insurance industry, including life insurance. The standards have two parts. The first part will deal with the uncontroversial issues of disclosure, while the second part will deal with those issues that are contentious, including the issue of valuation of insurance and pension company assets and actuarial methods for calculating liabilities.

A. Impact of Limited Domestic Investment Options

18. Underdeveloped domestic bond and stock markets impede public and private pension funds managers. It is not uncommon for pension funds to be the single largest investor in an emerging or small market economy. With nascent domestic capital markets, most pension funds in such countries tend to invest heavily in government bonds and bank deposits, translating to a combination of consistently low yields and excess liquid assets.

19. In the absence of domestic investment opportunities, the most significant risk factor for the pension funds in Kazakhstan is currently currency risk.[9] In the beginning of January 2004, about 30 percent of the pension assets were invested in instruments denominated in U.S. dollar. In addition, substantial portion of the domestic corporate bonds—reportedly some 85 percent of bonds outstanding—are linked to the U.S. dollar through various types of covenants in the terms of issuance. These may include indexing and different types of triggers linked to exchange rate, such as put and call options, capping and flooring. Currently, corporate bonds constitute 24 percent of the private pension funds portfolio with maturities ranging from three to seven years. The near to medium-term expectation of continued appreciation of tenge, particularly against the dollar, reinforces incentives for short-term speculative investments abroad.

20. In small markets with limited investment alternatives, there is also a flip side to introducing quantitative restrictions on investment in foreign assets. The case for quantitative restrictions on foreign investment is largely based on macroeconomic arguments, such as the consequences of capital flow volatility to macro economic stability. Some developing countries also justify such restrictions with the need to encourage the development of the domestic market. Diversification through investment in foreign assets may be the only effective way to avoid correlations between various domestic assets. It may also be an important source for higher long-term rates of return. Thus when limiting the scope of foreign investment, serious consideration should be given to the possibly damaging effect on diversification opportunities.

IV. Improving Supply of Investment Assets for Pension Funds

A. Ability of Domestic Capital Market to Satisfy Demand by Pension Funds

21. The government has taken some important policy initiatives to support the development of capital markets, starting with early privatization of state-owned enterprises. The pension reform created the stage for reforming the capital markets. The introduction of mortgage-backed securities was a further, visionary step. The more recent, ambitious legal and regulatory reforms for the entire financial sector and joint stock companies put in place a solid foundation for market development. Further legislative efforts are planned.[10] Continuing on this path, the government has stated its goal for capital account liberalization and regulatory compatibility with EU pertinent directives in 2007.

[9] For further discussion on currency risk, see section on "Foreign Investments."

[10] Planned Investment Fund and Securitization Legislation.

22. Still, capital markets in Kazakhstan are at a nascent stage of development with a mismatch between supply and demand. With rather low market capitalization, the Kazakhstani capital market lags behind comparators, such as Chile and Poland. The investor base is highly concentrated by institutional investors and dominated by pension funds. For the time being, the markets still lack both breadth and depth, thus suffering from illiquidity and consequent price volatility. As illiquid, shallow markets are highly vulnerable to price manipulation, broadening the investor base will be a challenge in Kazakhstan.

23. Pension assets are growing from a base of T 370 billion at a monthly pace of T 7 billion to T 8 billion. With Kazakhstan's good economic performance, this growth is likely to accelerate. In 2004, the pension funds will need to place T 99 billion (US$642 million) of pension contributions in the market. Due to short-term investment strategies, there will be an additional need for T 70 billion of reinvestment. As the next phase of pension reform gets under way, and as the PAYG system is phased out, the demand by pension funds may increase by seven- to eight-fold over the next several years.

24. There is a serious shortage of good domestic long-term investment assets in Kazakhstan. The zero to negative real return of government bonds and the signs of over-heating real estate markets in large population centers are indicative for this challenge. Without substantial new issuance of securities in the market, this shortage will only get worse. Expansion, however, needs to come from the private sector entering the market; the government's role should be limited to its own issuance of securities, possible further privatizations and providing a conducive environment for development of a competitive and healthy private sector.

B. Government Securities

25. The government does not need to borrow at present due to high oil revenues and a cautious fiscal stance. However, there are other reasons for the government to maintain a presence in domestic debt markets. In the absence of other benchmark securities, domestic markets need government issuance that is structured to enhance development of tenge-denominated debt markets. Internationally, the authorities may want to maintain and nurture Kazakhstan's credit rating. The government may wish to consider developing a debt management strategy with these two objectives in mind. A clearly articulated and consistently implemented strategy could provide predictability for the both investors and other issuers.

26. There is excess liquidity in the system from robust economic growth, substantial capital inflows through syndicated loans from international banks and issuance of Euro-bonds. Government bond yields hover around or barely cover the rate of inflation. It is unlikely that the domestic debt market will develop rapidly without government taking the leadership in improving the structure of the issuance in this market. While focusing on debt management plans may seem counter-intuitive in times of excess liquidity, continued stagnation of domestic capital markets may risk larger fiscal contingencies in longer term. For example, the shortage of tenge-denominated assets available for pension funds will continue to expose the funds to significant currency risk and substantial investment risks in

unfamiliar markets. Even though the private pension plan is defined contribution, the government cannot ignore entirely the social safety net aspect of the program.

27. Clearly, it is not the government's role to provide the supply of assets for the increasing demand of pension funds. However, structuring the government issuance to be more conducive to debt market development—without necessarily adding to the volume of outstanding paper—can improve the operations of secondary market and provide a more effective base for the pricing of debt issues, both mortgage-backed (and potentially other asset-backed) and corporate debt.

28. Development of a deeper domestic debt market requires a more solid, domestically-derived yield curve up to 7 to 10 years. To that end, the government should consider an issuance schedule that comprises less frequent but larger auctions of more standard, 'plain-vanilla' type of long-term bonds. A substantial proportion of fixed-income securities should also be considered. The issuance schedule should be set for reasonable period of time in advance, and be made transparent to the market.

29. The government may also wish to examine if its debt management strategy offers the optimal balance between the domestic and international markets. This should be done with the objectives of domestic debt market development as well as the need for sterilization of capital inflows.

C. Mortgage-Backed Securities

30. A positive market development has been the introduction of mortgage-backed securities. It is unclear, however, to what extent the investment decisions are driven by the implied government backing through the complete NBK ownership of Kazakhstan Mortgage Company (KMC). To the extent that the defaults are not widespread, the KMC appears to be protected by the recourse (buy-back) feature in the structure. However, there is reportedly some uncertainty among the market participants on the true quality of the protection provided by the pool of collateral.

31. The perception that KMC securities are backed by the full faith of the NBK may lead to overconfidence in the market. The KMC divestiture that reportedly is planned, would serve to alter that perception. The legal foundations for the enforceability of the mortgage pledge and the quality of the protection provided by the mortgage pledge pool to back the securities, will be important to clarify before the NBK divests its holdings in KMC. The planned divestiture will also serve to address competition and issues related to market pricing.

32. The development of mortgage-backed securities provides for an additional source of assets for pension fund managers and other investors, but even with rapid growth it will be insufficient to fully cover the investment needs of pension funds. In addition, it could trigger a real estate bubble. The real estate markets in the large population centers are already beginning to show signs of over-heating. Outside the major cities, there is only a limited network for mortgage origination, as large banks with wide branch networks are not members of KMC program. This may actually initially be helpful, as the quality of housing

stock and the supporting communal service infrastructure in these areas is still largely in need of upgrading. Funding mortgages through mortgage-backed securities is unlikely to address these more fundamental real sector issues. Implemented alone, its sole contribution could be to housing price inflation. Funding infrastructure upgrades and utilities are important elements in supporting housing market development.

D. Telecoms, Utilities and Infrastructure

33. The absence of long-term bond issues, which are commonly found in more developed markets, is a striking feature in the Kazakhstani capital markets. Examples of long-term bond issuers usually include telecommunications companies and utilities with capital markets' financing infrastructure investments. A robust capital market could play a role in supporting economic growth through financing investments in utilities and infrastructure, which are key areas for further economic development in Kazakhstan. Various types of infrastructure investments could potentially qualify for capital market funding.

34. The telecommunications sector in Kazakhstan reportedly faces both high tariffs and high profitability. Capital market funding would need to be coupled with parallel tariff reforms ensuring that the cost of the investment is carried by users. Competition policies, however, are outside the scope of the FSAP. It is also unclear to what extent the long-term funding needs of telecoms are satisfied from retained earnings or borrowing from banks.

E. Corporate Securities: Bonds and Equities

35. The low level of competition in some key economic sectors and the existence of the influential financial-industrial groupings limit the number of potential private sector issuers in the Kazakhstani market. The mixed legacy of the first wave of privatizations, concerns over unwanted consequences from increased transparency, and the perceived high cost of listing may also discourage issuance of corporate securities.

36. Kazakhstan faces a similar structural dilemma to that faced in many other small, bank-driven economies. The dominance of banks and banking products in the financial sector and the substantial related or cross-ownership between the financial and real sectors hamper capital market development. Large commercial banks engage in a wide range of financial activities. A large proportion of market share in the Kazakhstani capital markets is concentrated in these conglomerate structures. At the same time, investors are facing a scenario, where corporate bonds yield less than bank deposits.

37. Nevertheless, the corporate bond market has started to develop over the past couple of years. The government, as previously noted, can take concrete measures to enhance the development of this market segment through restructuring its own debt issuance. The broader issue of perceived adverse consequences, such as possibility of becoming target for rent-seeking or hostile takeovers, reportedly associated by many companies with increased transparency, will be more difficult to address. It could restrain the number of new entries to the corporate bond market, thus potentially translating to slow growth of this segment. Such reluctance for disclosure would also mean that private sector companies are unlikely to enter the stock market in large quantities in the near term.

38. Market participants would like to see a magic bullet in the form of a government-backed blue chip listing—perhaps through a privatization—that would invigorate the market. Whether or not this expectation is warranted, privatization of key strategic holdings is a political consideration and outside the scope of this note. The same applies to local content policies related to extracting industries. However, the key to a positive market developments are a level playing field, structure the issuance to widen and diversify the investor base, and to ascertain broad distribution of the securities in a transparent manner. Any such issuance would need to be accompanied by a broad campaign educating the general public to the benefits of securities market investment, both directly and through investment funds (assuming successful introduction of the planned legislation).

F. Foreign Company Listings and Kazakhstani Depository Receipts

39. The regulatory framework for Kazakhstani depository receipts (KDRs) has been enacted in Kazakhstan, and the authorities have taken measures to establish connections abroad. There is ongoing work with the Federal Securities Commission of the Russian Federation to resolve certain issues in the Russian regulatory framework. In addition, the Central Securities Depository (CSD) has established links with Clearstream.

40. Foreign company listings, both directly and/or through depository receipts, will need to make economic sense for the listing entity. Even when regulatory issues have been resolved, substantial issuance is unlikely—assuming of course that the government has no plans to provide any regulatory or tax benefits to such listing companies. Therefore, this would represent only a limited additional source of investment alternatives. Naturally, there may be longer-term potential for growth in this area should the reported high-level political discussions on possible Eurasian economic area lead to the establishment of closer economic and market linkages.

G. Other Asset-Backed Securities

41. Currently, a new law on securitization is being drafted. While the securitization law could provide a framework for asset-backed securities, careful consideration should be given to the types of assets that could be securitized and to the appropriate accounting and reporting of risks. Although assets other than mortgages may be potential candidates for securitization, such assets would need to have sufficiently predictable cash-flow volume to render them viable candidates for securitization. Given the early stages and relatively small size of various securitizable segments in the economy, this market is likely to remain modest. The most potential is likely to be in accounts receivable of, for example, extracting industries. To date, these companies have tended to fund themselves outside Kazakhstan.

H. Foreign Investment Assets

42. Without domestic capital markets making substantial progress, pension funds will be investing sizable proportions of their assets abroad. With the growth of pension fund assets, and the funds' need for diversification and prudence in exit opportunities, it is likely that the

proportion of foreign currency denominated assets may grow.[11] In managing the portfolio, there is a need to exercise prudence through taking a long-term investment horizon, maximizing the diversification benefits available in foreign markets, and minimizing the investment risks.

43. Additionally, and very importantly, currency risks will need to be hedged to the extent possible through diversification of the currency exposure. It is unlikely that the tenge and U.S. dollar currency derivatives market will be deep enough to provide for prudent hedging strategies by pension funds, given their relative size to the market.

44. Physical distance from international markets can increase investment risks for foreign assets substantially. Even in this modern day and age, when on-line information is readily available on prices and volumes, insufficient information for making informed investment decisions exists. To that extent, investing in individual securities or—even more so—engaging in active stock-picking investment strategies can be risky. Hence, investment in securities of individual issuers in distant markets should be limited to at most a very small proportion of a pension fund's assets.

45. Investment restrictions do not allow for the use of funds as investment vehicles. However, established stock market—and to a certain extent even bond—index funds in deep, developed markets could provide a suitable vehicle for diversification. Investing in the stock market of a country as a whole, as opposed to stock-picking, is a prudent way to diversify the risks inherent in stock-picking. Index funds are also long-term instruments by their nature, and thus can be helpful as core assets to minimize reinvestment risk. Clear and prudent criteria should be used for the selection of markets and types of funds authorized. Choosing a number of markets in different countries with a minimum acceptable international rating may help in diversifying the foreign exchange risk. The authorities should, however, refrain from *ad hoc* authorization of individual funds.

I. Principal-Protected Notes

46. Another instrument widely used in pension investments in developed markets is principal-protected notes (PPN). Again, same principles of prudence apply for the choice of issuers, securities, markets, and currency. To that extent, the issuers should have an investment grade rating, the security should have wide enough distribution, and no complex covenants for maturity variation options; and the market should be sufficiently deep.

V. Summary of Key Findings and Recommendations

47. There is cause for concern over the short-term due to high-yield focused investment strategies of the Kazakhstani private pension funds that give insufficient consideration to the long-term actuarial nature of pension liabilities. This strategy in part reflects lack of long-term investment opportunities, but more importantly an inadequate understanding of the underlying risks that are pertinent, even for a defined-contribution type pension plan.

[11] Refer also to the discussion in section "Impact of Limited Domestic Investment Options."

48. The short-term investment focus exacerbates the asset management challenges—over and above the contribution accumulation—through a constant high reinvestment need to replace maturing assets. This higher reinvestment need exposes pension assets excessively to market volatility risks.

49. Prudent investment strategies of pension assets would need to adhere to the following principles:

- Diversification (breakdown between categories) and dispersion (breakdown within a given category);
- Maturity matching (including liquidity principle); and
- Currency matching, to the extent possible or, at minimum, hedging through diversification over different currencies.

50. It is probable that the regulatory framework is, in fact, indirectly encouraging risky investment practices. To that end, there may be a need to review the overall regulatory framework for hidden incentives that do not promote prudent investment strategies appropriate for social safety net assets.

51. The development of the domestic markets is not a magic bullet. Without substantial new issuance of securities in the market, the shortage of good investment assets will only get worse. Such market growth needs to come from the private sector entering the market; the government's role should be limited to its own issuance of securities, possible further privatizations and providing a conducive environment for development of competitive and healthy private sector.

52. It is not the government's role to provide the supply of assets to satisfy the increasing demand from pension funds. However, structuring the government debt issuance to be more conducive for domestic debt market development—without necessarily even adding to the volume of outstanding paper—can improve the operations of secondary market and provide for more effective base for pricing of debt issues, both mortgage-backed (and potentially other asset-backed) and corporate debt.

53. In managing pension portfolios, there is a need to exercise prudence through taking a long-term investment horizon, maximizing the diversification benefits available in foreign markets, and minimizing the investment risks. Consideration should be given to enhancing diversification opportunities through investment in established reputable index funds. Additionally, and very importantly, currency risks will need to be hedged to the extent possible through diversification of the currency exposure.

KEY OECD RECOMMENDATIONS FOR THREE-PILLAR PENSION SYSTEM

The OECD model for pension systems ideally comprises three pillars:

- **The first pillar** is the state-run public pension that is part of the social security system. In principle, it aims to provide a minimum income, is based on solidarity and is normally financed on a pay-as-you basis, without constitution of large reserves.

- **The second pillar is** the supplementary pension provided collectively by firms or socio-professional groups. It aims to provide a deferred income in addition to the first, thus offering a sufficient rate of replacement of earned income. These pensions are usually funded.

- **The third pillar** consists of all the savings put aside by an individual for his old age. These personal savings need to be distinguished from precautionary saving for a nearer future.

Moving to a multi-pillar arrangement responds to economic goals by: creating a mandatory pension that is invested in capital markets; increasing a country's potential growth path owing to more efficient capital allocation; and increasing savings and investments. The introduction of a multi-pillar pension system is likely to increase the worker's sense of individual responsibility about his future retirement.

Regulations applicable to private pension funds

Tax regulations: Private pension funds**,** the second pillar, constitute a system of deferred income through tax breaks, with the tax usually constituting deferred income. The first level of controls is tax legislation, laying down the rules regarding the methods and the limitations to tax relief.

Technical regulations consist primarily of financial and actuarial methods designed to ensure that pension funds actually deliver pensions. They concern actuarial methods, the choice of technical definitions, interest rates and mortality tables. They may set minimum reserves and solvency rules.

Business regulations: These rules, which often coupled with tax and/or technical regulations, lay down minimum requirements regarding the soundness of supplementary pension schemes.

Accounting regulations: Technical and business regulations are designed to ensure that supplementary pension schemes pay out pensions to existing or future beneficiaries. For the shareholders and creditors of companies that had set up private pension funds, it is important that the pension liabilities are transparent in financial statements of companies.

Various OECD Committees have produced documents on the following principles that may provide guidance for the regulation and supervision of the pension funds, particularly in transition economies:[12]

- Adequate regulatory framework
- Appropriate regulation of financial markets
- Rights of beneficiaries
- Adequacy of the private schemes
- Regulatory system and separation
- Funding
- Calculation Techniques: Appropriate calculation methods for asset valuation and liabilities' funding, including actuarial techniques and amortization rules based on transparent and comparable standards.
- Supervisory structures
- Self-supervision
- Fair competition
- Investment
- Insurance mechanism
- Winding-up
- Disclosure and education
- Corporate governance

[12] These documents can be found on: www.oecd.org/daf/insurance-pensions. See also *Insurance and Private Pensions Compendium for Emerging Economies,* Book 1 and Book 2, OECD, January 2002, which are available on: www.oecd.org/document/28/0,2340,en_2649_37411_2742748_1_1_1_37411,00.html .

Principles for the Regulation of Investments by Pension Funds

Objectives

The regulation of investments must simultaneously pursue the twin goals of security and profitability of the funds invested, i.e., they must guarantee commitments but generate financial income as well.

Basic principles

Whatever tools are used for prudent investment policy (quantitative restrictions and/or prudent-person rules), it is important that the following principles are adhered to:

- Diversification (breakdown between categories) and dispersion (breakdown within a given category);
- Maturity matching (including liquidity principle); and
- Currency matching, in the broad sense.

Quantitative regulations

No minimum level of investment should be prescribed for any given category of investment, except on an exceptional and temporary basis and for compelling prudential reasons.

"Maximum" levels of investment by category may be justified on prudential grounds (these levels should avoid setting excessive constraints), in that case, it may be advisable to:

- Allow firms to exceed such ceilings under certain conditions and possibly subject to prior authorization by the competent authorities;
- Differentiate between maxima, depending on whether or not they are included in solvency calculations, and allow ceilings to be exceeded on the basis of that differentiation; and
- Take account of how investments are valued, and of the actual impact of that valuation on the quantitative restrictions (the actual effect of a given ceiling for listed shares will vary, depending on whether the shares are valued at their market or book value).

Investment in a given asset must be limited as a proportion of the pension fund's total portfolio. If an investment involves special risks, it can also be limited as such, in relation with its importance (not only could a firm be prohibited from acquiring a particular asset if that asset would represent more than a given percentage of its total assets, but it could also be

forbidden to acquire more than a given percentage shares of that asset). This applies in particular to cases of self-investment, in which a pension fund invests in shares in its parent company (and affiliated companies). Such investments should be strictly limited (the recommended maximum being 5–10 percent).

Certain categories of investments may need to be strictly limited (for instance, loans without appropriate guarantees, unquoted shares, company's shares that raise major risk of conflict of interest). In this case, it may also be relevant to set limits on investment by pension funds in companies (or investment vehicles) holding a large volume of such categories of assets.

Matching the maturities of assets and liabilities is essential, and requires that a framework of general principles be instituted. In this regard, it is important that the regulation of the investment portfolio takes the portfolio of commitments into account. The maturity of pension funds plays a key role in the investment strategies. The matching may, on the other hand, be heavily influenced by various issues, which affect the actual maturity of the products. The regulation of investments should integrate further the techniques related to assets/liabilities management.

Currency matching is a basic principle of investment management, but one that must be approached comprehensively. Derivatives may be used for this purpose, provided they help achieve such a match.

A wide range of methods are used to value investments. It is advisable to enhance their compatibility and comparability. Apart from methodological convergence, it is crucial to seek maximum transparency. In this regard, it is recommended that the use of any one method be accompanied by full disclosure of the results, which would have been obtained using the main alternative methods. For instance, the valuation of investments on the basis of historical cost should therefore be supplemented by a valuation based on market or net present value and vice versa. It is essential that valuation be incorporated into investment regulations in order to prevent unexpected cumulative or clashing effects.

Prudent-person principles

These principles could, when deemed adequate by the authorities, make it possible to reduce the number of quantitative regulations. There are certain prerequisites to their implementation, however, including government confidence in the investment management and control instituted by the private pension industries.

Whatever principles a firm may adopt, there must be competent and honest managers to apply them. It is therefore essential to take every possible step to ensure an adequate level of ability and integrity, using strict criteria that are comparable from one firm to another. The authorities ought to adopt criteria concerning the expertise that is required of investment managers.

Insofar as prudent-person principles are applied and quantitative rules eased, greater financial and legal responsibility should be attached to any imprudent transactions by corporate

officers, who abuse the freedom conferred by the application of these principles. The company must justify the existence of appropriate structures to control decision taken on the basis of the “prudent person principles,” for instance through the nomination of another qualified person within the board or executive staff.

While relying solely on prudent-person principles may not be applicable in less-developed markets, insofar as it is possible and given the characteristics of the relevant private pension and insurance industry, these principles should nevertheless be incorporated into an appropriate regulatory framework. Such a framework should provide a minimal body of rules, the extent of which would vary according to the aforementioned characteristics.

Application of these principles may vary substantially from one country to another.