The National Fund of the Republic of Kazakhstan, EMBI and financial market beyond 2008 crisis

Yelena Kalyuzhnova and Ali Kutan
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- The National Fund of the Republic of Kazakhstan after the stress-test: strategy, investment portfolio – new wave
- EMBI and Kazakhstan Republic Government Bond Spread
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- Conclusion
Why sovereign wealth management?

- Revenues from extractive industries
  - Fiscal smoothing of expenditures
  - Permanent wealth/inter-generational equity

- Funding of future pension obligations

- Reserves accumulation from balance of payments surpluses
Non-commodity funds

• Cumulative fiscal or balance of payments surpluses fund US$2.1 trillion in long term investment funds for investment income and to meet future pension liabilities

Source: Sovereign Wealth Fund institute 2011
1/ Central Banking Publications
Commodity funds (oil and gas)

- Revenues from extractive industries fund US$2.7 trillion

Source: Sovereign Wealth Fund Institute 2011
Commodity Funds

- Objectives
  - Fiscal stabilization
  - Protect tradeable sector from currency appreciation
  - Support current spending while investing long term for intergenerational equity

- Two types of funds
  - Integrated fund that both supports current fiscal spending and invests long term for capital preservation and intergenerational equity
  - Earmarked funds
    - Stabilization fund for to smooth fiscal spending
    - National pension fund to cover future pension liabilities
    - Future funds (unpopular)
Commodity Fund-Integrated

- Funds structural budget deficit
- Guidelines on withdrawals to preserve capital over time

All commodity revenues → Fund → Budget

Norway
Abu Dhabi
Saudi Arabia
Kazakhstan
Azerbaijan
Alberta
Timor-Leste
Botswana
Government establishes a threshold price level based on the expected long term average. When the current prices exceed the long term threshold price, “excess” revenues are paid into the Fund and can be drawn down during periods of below normal prices.
Pension fund-earmarked

- National pension funds funded by contributions (plan) or by fiscal surpluses to meet future government pension obligations and invested in overseas assets
  - New Zealand Superannuation Fund
  - Australia Future Fund
  - Chile Pension Reserve Fund
  - Russia National Welfare Fund
SWF Governance

- Fiduciary-beneficiary relationship
  - Government as “sponsor”
- Enabling legislation
- Investment policy
- Investment process
- Transparency and reporting
- Oversight
- Statutory regulations and standards of care
SWF Institutional Arrangements

Regulation & delegation of authority

Risk and performance reporting

Legislative Body

Ministry
  Govt Auditor

Executive Board
  Supervisory council/external auditor
  Asset Manager
    Risk, Control &Compliance
NFRK, 2001-2010, US$ mln
Did the NFRK fulfil its purpose during the 2007-2009 crisis?

*Household survey by the Centre for Euro-Asian Studies (2010)*

- 70% of respondents supported the fact that money from the NFRK was used during the recent crisis
- 4% of respondents thought that it was a bad idea
- 25% were undecided
- 70-75% of respondents with a low level of education were generally more in favour of the Kazakhstani government spending money from the NFRK during the 2007-09 crisis
Policy alternatives to NFRK after 2008

- Domestic investment in state owned enterprises, development banks and jobs creation (not a good record but back in vogue)

- Public investment in infrastructure

- Direct dividend to citizens (or reduction in taxes) to foster private savings and investment

- National asset/liability management—foreign direct investment in “deficit” sectors; eg Chinese acquisition of commodity producers and agricultural land
NFRK Investment Strategies

**Official Reserves/ Central Bank**
- External assets for directly financing international payment imbalances
- Highly liquid, often OECD government bonds

**Stabilization Funds**
- Funds to insulate budget & economy from excess volatility, inflation, Dutch disease, & other macro economic threats
- Low-risk, liquid assets: cash, government bonds

**Pension Funds**
- Investment vehicles to meet government’s future pension obligations
- Funded and denominated in local currency

**Sovereign Wealth Funds**
- Investment vehicles by foreign exchange assets
- Managed separately from official reserves
- Typically have a higher tolerance for risk

**State Owned Enterprises**
- Companies in which the state has significant control
- May make investments in foreign assets

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**Increasing investment horizon and investment risk**

*Source: Based on Monitor 2010 SWF Report*
Diversification and modern capital markets theory

But divide your investments among many places, for you do not know what risks might lie ahead.

_Bible, Ecclesiastes, 935 BC_

A portfolio of uncorrelated investments has a lower risk than any single investment.

_Harry Markowitz, Modern Portfolio Theory, 1957_
Modern paradigm of the prudent person rule

“Prudence is to be found principally in the process by which investment strategies are developed, adopted, implemented, and monitored in light of the purposes for which funds are held, invested, and deployed. Prudence is demonstrated by the process through which risk is managed, rather than by the definition of specific risks that are imprudent. Under a modern paradigm, no investment is imprudent per se. The products and techniques of investment are essentially neutral. It is the way in which they are used, and how decisions as to their use are made, that should be examined to determine whether the prudence standard has been met. Even the most aggressive and unconventional investment should meet that standard if arrived at through a sound process, while the most conservative and traditional one may not measure up if a sound process is lacking.”

Longstreth, B. “Modern Investment Management Theory and the Prudent Person Rule”, 1986
Portfolio diversification is required to meet long term risk-adjusted return targets

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<td>Lowest return</td>
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<td>World Bank Treasury estimates</td>
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<td>Cash</td>
<td>Developed Equities</td>
<td>Cash</td>
<td>EM Equities</td>
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</table>

Source: World Bank Treasury calculations based on data from Bloomberg
Empirical Analysis and Data

Our model $\Delta \text{SPREAD}_t = c + \beta_1 \text{EXCRATE}_{t-1} + \beta_2 \text{INFRATE}_{t-1} + \beta_3 \Delta \text{OIL}_{t-1} + \beta_4 \text{EV}_t + u_t$

$\Delta \text{SPREAD}_t$ - Dependent variable is the simple change in spread (spread this month minus last one’s spread),

The control independent variables $\text{EXCRATE, INFRATE, OIL}$ are, respectively, real exchange rate changes (composite), inflation rate, oil returns; $\text{EV}$ represents events dummies. We use lagged values of the independent variables to control for potential endogeneity bias.

We estimate the determinants of sovereign risk in two ways. one is in absolute terms and the second is in term of percentage changes.

We use Newey West estimates which corrects for heterocasdicity and autocorrelation


We linked the developments in energy sector to the sovereign default risk measured by the spread.

We run a regression to see whether the spread is affected by certain news regarding oil fund and NPL, as well as Tenge’s devaluation in real terms, which measures competitivness of the nation, inflation developments and movements in oil prices.
Events, 2008-2014

Nov. 2013  Kazakhstan began tapping its oil fields, using SW for the rail

Sep, 2013  China buys $5 Bln. share in Kashagan

Jul. 2013  Ablyazov’s conflict escalated

Sep. 2012  Human Rights Watch Report regarding Zhanaozen

Dec 2011  Zhanaozen events

Dec 2010  NBRK to consider float for Tenge in 2011

Nov 2010  Announcement of revision of PSAs with the foreign oil majors

Oct 2008  Samruk Kazyna was established
Inflation rate changes in Kazakhstan, 2007-2014
Kazakhstan: Changes in SPREAD, %, 2007-2014
Results with change in SPREAD-DSPREAD- with US dollar RER

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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R-squared 0.526218 Mean dependent var 1.514160
Adjusted R-squared 0.424173 S.D. dependent var 95.06921
S.E. of regression 72.14162 Akaike info criterion 11.56250
Sum squared resid 338286.9 Schwarz criterion 12.00913
Log likelihood -447.5000 Hannan-Quinn criter. 11.74157
F-statistic 5.156714 Durbin-Watson stat 1.615800
Prob(F-statistic) 0.000002
Kazakhstan: Changes in SPREAD, %, 2007-2014
### Results with change in SPREAD-DSpread\(_1\)- with US dollar RER

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<tr>
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<td>Prob(F-statistic)</td>
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Conclusions

Oil fund and news are important driver of the sovereign risk of the country

Movements in oil prices have not affected the default risk during our sample period but more policy driven variables such as inflation and competitiveness, in particular, RER COMPOSITE

Investors watch macroeconomic developments and oil fund and the news to evaluate the default risk of the country
Extensions

In the next version of the paper, we would add some dynamic adjustment estimation results by adding several lags of the control variables. The current model assumes that the adjustment of the spread to changes in control variables is complete in one month as we use only 1/month lagged variables. It is well known that macroeconomic variables especially real exchange rate may affect financial markets with some significant lags.