

# The Polish Fixed-income Securities Market

## *Recent Developments and Selected Policy Challenges*

*Michel Noel  
Noritaka Akamatsu  
W. Jan Brzeski  
Carlo Segni*





# The Polish Fixed-income Securities Market

*Recent Developments and Selected Policy Challenges*

*Michel Noel*

*Noritaka Akamatsu*

*W. Jan Brzeski*

*Carlo Segni*



**THE WORLD BANK**  
Washington, D.C.

Copyright © 2007  
The International Bank for Reconstruction and Development / The World Bank  
1818 H Street, N.W.  
Washington, D.C. 20433, U.S.A.  
All rights reserved  
Manufactured in the United States of America  
First Printing: November 2006



printed on recycled paper

1 2 3 4 5 09 08 07 06

World Bank Working Papers are published to communicate the results of the Bank's work to the development community with the least possible delay. The manuscript of this paper therefore has not been prepared in accordance with the procedures appropriate to formally-edited texts. Some sources cited in this paper may be informal documents that are not readily available.

The findings, interpretations, and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of the International Bank for Reconstruction and Development/The World Bank and its affiliated organizations, or those of the Executive Directors of The World Bank or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank of the legal status of any territory or the endorsement or acceptance of such boundaries.

The material in this publication is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. The International Bank for Reconstruction and Development/The World Bank encourages dissemination of its work and will normally grant permission promptly to reproduce portions of the work.

For permission to photocopy or reprint any part of this work, please send a request with complete information to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, USA, Tel: 978-750-8400, Fax: 978-750-4470, [www.copyright.com](http://www.copyright.com).

All other queries on rights and licenses, including subsidiary rights, should be addressed to the Office of the Publisher, The World Bank, 1818 H Street NW, Washington, DC 20433, USA, Fax: 202-522-2422, email: [pubrights@worldbank.org](mailto:pubrights@worldbank.org)

ISBN-10: 0-8213-6892-3

ISBN-13: 978-0-8213-6892-3

eISBN: 0-8213-6893-1

ISSN: 1726-5878

DOI: 10.1596/978-0-8213-6892-3

Michel Noel is Lead Financial Specialist in the Private & Financial Sectors Development Sector Unit of the Europe and Central Asia Region of the World Bank. Noritake Akamatsu is Lead Financial Economist in the Financial and Private Sector Unit of the East Asia and Pacific Region of the World Bank. W. Jan Brzeski is Senior Urban Specialist in the Infrastructure & Energy Services Department of the Europe and Central Asia Region of the World Bank. Carlo Segni is Consultant to the Private & Financial Sectors Development Sector unit of the Europe and Central Asia Region of the World Bank.

#### **Library of Congress Cataloging-in-Publication Data**

Noel, Michel, 1954-

The Polish fixed-income securities market : recent developments and selected policy challenges/Michel Noel, Noritaka Akamatsu, and W. Jan Brzeski.

p. cm.—(World Bank working paper; no. 91)

Includes bibliographical references.

ISBN-13: 978-0-8213-6892-3

ISBN-10: 0-8213-6892-3

ISBN-10: 0-8213-6893-1 (electronic)

1. Fixed-income securities—Poland. 2. Fixed-income securities—Government policy—Poland. I. Akamatsu, Noritaka. II. Brzeski, Wladyslaw Jan. III. Title.

HG4650.N64 2006

332.63'2044—dc22

2006032774

# CONTENTS

---

<b>Acknowledgments</b>	v
<b>Acronyms and Abbreviations</b>	vii
<b>Executive Summary</b>	ix
<b>1. Background</b>	1
<b>2. Recent Market Developments</b>	3
<b>3. Selected Policy Challenges Ahead</b>	7
Money Market	7
Government Bond Market	10
Non-government Bond Market: General Issues	11
Sub-national Bond Market: Specific Issues	17
<b>Technical Appendixes</b>	27
A. Development of the Fixed-income Securities Market, 2001–04	29
B. The Repo Market: Legal and Regulatory Framework and Infrastructure for Clearing and Collateral Management	39
C. Secondary Market and Intermediaries	43
D. Custody and Settlement—Custody, Payments, and DVP	47
E. Pooling/Enhancing Municipal Corporations and/or Municipal Bonds: A SPV Structure	51
<b>Bibliography</b>	55
<b>LIST OF TABLES</b>	
2.1. Mapping of Repo Transaction in the U.S., Euro, and Polish Markets	4
2.2. Distribution of Repo Transaction Turnover (2005)	6
3.1. Comparison of Banks and Industrial Corporations by Assets Size in 2001 (in millions of US\$)	15
A.1. Debt Level, as of End of Year, by Particular Money Market Instruments (in billions of zlotys)	30
A.2. Structure of State Treasury Debt in 2001–03 (Billions of Zlotys, as of End of Period)	32
A.3. Shares of Individual Markets in the Trade in T-bond Market (in percent)	34
<b>LIST OF FIGURES</b>	
E.1. SPV Market Enhancement Structure	52



# Acknowledgments

---

This Working Paper was prepared by a World Bank Group Team composed of Michel Noel (Lead Financial Specialist, Team Leader, ECSPF), Noritaka Akamatsu (Lead Financial Economist, EASFP), Wladyslaw Jan Brzeski (Senior Urban Specialist, ECSIE), and Carlo Segni (Financial Analyst, ECSPF). The Team gratefully acknowledges the contribution of Katarzyna Baran (Consultant, OPD) who provided invaluable research assistance for the production of the report. The Team also gratefully acknowledges the support of Magdalena Wasik (Staff Assistant, World Bank Country Office in Warsaw) in organizing mission meetings. The Team is grateful to Marie-Renee Bakker (Lead Financial Sector Specialist, ECSPF), Sue Rutledge (Senior Private Sector Development Specialist, ECSPF) and Sophie Sirtaine (Program Coordinator, ECSPF) for their support and advice as Task Team Leaders for the Poland Financial Policy Notes Series. The Team is grateful to Jacek Laszek (Advisor to the President of the National Bank of Poland), Clemente Del Valle (Lead Financial Specialist, OPD), and Tadashi Endo (Senior Financial Sector Specialist, OPD) for accepting to be peer reviewers for this report and for providing the Team with invaluable comments. The Team gratefully acknowledges the contribution of Clemente Del Valle to the analysis of the government and corporate bond markets, and of Tadashi Endo to the analysis of repo market instruments.

The Team thanks Daniela Gressani, Country Director for Poland and the Baltic countries, Fernando Montes-Negret, Director of the ECA Finance and Private Sector Development Department, Edgar Saravia, Country Manager for Poland and the Baltic countries, Gerardo Corrochano and Tunc Uyanik, Sector Managers of the ECA Finance and Private Sector Development Department, and Lee Travers, Sector Manager of the ECA Infrastructure and Energy Services Department for their invaluable guidance and support in producing this report.

The Team is highly grateful to Prof. Leszek Balcerowicz, President of the National Bank of Poland for his advice and support throughout the production of the report, and for the support received from senior officials and experts from the National Bank. In particular, the Team gratefully acknowledges the contribution of Mr Pawel Sobolewski (Economist, National Bank of Poland) to the analysis of the repo market instruments. The Team is also highly grateful for the advice received from senior officials and experts of the General Inspectorate of Banking Supervision (GINB), the Ministry of Finance (MOF), the Ministry of Economy and Labor, the Warsaw Stock Exchange, MTS-CeTO S.A., the National Environmental Fund, the Malopolska Voivodship Treasurer, the Malopolska Regional Environmental Fund, the Malopolska Regional Accounting Office (RIO), the Malopolska Institute of Local Government and Administration (MISTiA), the City of Krakow Treasurer, the City of Poznan two Deputy Mayors, the Association of Polish Cities (ZMP), the Association for Local Economic Development (SRGG), the Center for Strategic Counseling, the State Bank of General Economy (BGK), BISE Bank, BRE Bank, Citibank-Handlowy, PKO-BP Bank, PKO-SA Bank, WBK Bank, the Association of Polish Banks (ZBP), Commercial Union Insurance, PZU Asset Management, Invest Consulting financial advisors, and Fitch Polska rating agency.





# Acronyms and Abbreviations

---

BGK	Bank of National Economy
BIS	Bank for International Settlement
BOS	Bank of Environmental Protection
BSB	Buy-sell-back
CBO	Collateralized bond obligation
CDO	Collateralized debt obligation
CeTO	Centralna Tabela Ofert SA
CP	Commercial paper
CPSS	Committee for Payment and Settlement Systems
DVP	Delivery vs. payment
ERSPW	CeTO electronic Treasury securities market
EU	European Union
EUGF	EU Guarantee Fund
EUR	Euro
FSAP	Financial Sector Advisory Program
FX	Foreign exchange
GINB	General Inspectorate of Banking Supervision
IDB	Inter-dealer broker
IFRS	International Financial Reporting Standards
KFM	National Housing Fund
KPW	Securities Exchange Commission
MOF	Ministry of Finance
MPC	Monetary Policy Council
NBFI	Non-bank Financial Institution
NBP	National Bank of Poland
NFOSiGW	National Environmental Fund
NSD	National Securities Depository
OTC	Over the counter
PD	Primary dealer
PPP	Public Private Partnership
RIO	Regional Audit Chamber
RPP	Monetary Policy Council
RTGS	Real-time gross settlement
SBB	Sell-buy-back
SME	Small and medium enterprise
SPV	Special Purpose Vehicle
SRO	Self regulating organization
STA	Single treasury account
US\$	U.S. dollar
VAT	Value added tax
WIBOR	Warsaw Interbank Offer Rate
WSE	Warsaw Stock Exchange
ZBP	Polish Banks Association
Zł	Polish zloty



# Executive Summary

## **Background**

In 2004, the National Bank of Poland (NBP) requested that the World Bank prepare a series of Financial Services Policy Notes focusing on the development of specific components of the domestic financial markets. A first Note on the development of the housing mortgage finance market was produced in May 2005 and discussed with Government and market participants at a workshop chaired by NBP in June 2005. A second Note on the development of the corporate finance market was produced in July 2005. This third Note reviews the recent evolution of the Polish fixed-income market and examines selected policy challenges ahead, with a special focus on the municipal bond market.

## **Recent Evolution of the Polish Fixed-income Market**

In recent years, Poland has made great strides in developing key components of the fixed-income securities market. The Government rightly concentrated its efforts on the development of the money and government bond markets, providing a strong foundation for the development of other market segments, in particular the sub-national bond market and, to a lesser extent, the corporate bond market.

Between 2001 and 2004, the money market represented about 10 percent of GDP, with the rise in short-term T-bills compensating the drop in NBP bills. Following their introduction in 2002, sell-buy-back transactions took off rapidly while classic repo transactions were slower to develop. In 2002, MOF adopted a medium-term strategy aimed at lengthening and standardizing the maturity of public debt. The average duration and liquidity of the stock have increased, and the prevailing yield spreads have narrowed significantly in the five- and ten-year segments. However, the average duration of the stock is still significantly lower than those of its European peers, and refinancing risks remain higher.

The sub-national bond market has grown rapidly, with about US\$1 billion bonds outstanding by mid-2005. However, the market remains dominated by privately-issued bonds of small size that are purchased by banks as lead underwriters who hold them to maturity. The secondary market for public issues is very narrow, and trades are sporadic. The first revenue bond by a municipal corporation was issued in December 2005.

The corporate bond market has grown rapidly following the liberalization of bond issuance procedures under the 2000 amendment of the Bond Act. However, the market is still small compared with the equity market and with the government securities market, and also by comparison with other important emerging markets. It is primarily a private placement market, with no secondary market activity and with very low transparency. Non-financial corporations and banks hold about two-thirds of corporate bonds, although the share of other institutional investors, mainly insurance companies has been growing in recent years.

Despite this progress, further measures can be taken by the authorities to develop the classic repo market, to further deepen the government bond market, to stimulate the

development of the non-government bond market, and to reduce moral hazard and improve the level playing field on the sub-national bond market.

## **Selected Policy Challenges Ahead**

### *Liquidity Management in the Banking System is Strong*

The process of stabilization of the government's cash position at the central bank and of coordination between government cash management operations and central bank monetary policy operations works well in Poland. The non-remuneration of the single treasury account (STA) at NBP above a certain limit gives the government an incentive to maximize the return on its cash balances and to reduce its funding cost by transferring excess cash to commercial banks or by managing it in the money market. The STA also allows the government to better project its cash needs. Strong liquidity management in the banking system provides a sound foundation for money market development.

### *NBP can Take a Number of Measures to Stimulate the Development of the Classic Repo Market*

*First*, reviewing the functional design of the repo clearing module built in the registry and linked to the real-time gross settlement (RTGS) system operated by NBP to ensure the security status of collateral, regardless of counterparties to repo transactions.

*Second*, supporting an initiative by market participants to develop a facility that would automatically provide liquidity against foreclosed securities, with a view to eliminating the inefficiency and the residual credit risk of Polish repo transactions by instituting liquidity, risk management and yield enhancement measures such as mark-to-market or substitution.

*Third*, considering broadening the scope of eligible participants in repo transactions.

### *MOF has Made Great Strides in Fostering the Development of a Deep and Liquid Government Securities Market. It can Build on These Achievements to Further Increase the Feliability of the Government Bond Yield Curve as Basis for the Development of the Non-Government Bond Market. This will Contribute to Enhance Poland's Competitiveness as Issuer in the Euro Market over the Medium Term*

Continuing efforts to maintain existing benchmarks and to increase the reliability of benchmarks at the longer end of the curve. This will require in particular (i) developing a calendar for long-term domestic bond issues and implementing this calendar; and (ii) gradually increasing long-term inflation indexed instruments.

To achieve this goal, building a more stable demand for longer term maturities by local institutional investors while reducing the current dominant position of foreign investors will be essential. While this may seem to be difficult to achieve during the accumulation phase of pension funds, it is not necessarily the case. In most Latin American countries with a similar type of pension regulation (second pillar), the secondary activity of the longer

maturities has not been hindered by a buy-and-hold behavior. In these cases, the regulation has encouraged trading in general as funds are competing to show short-term returns. Further support for trading activity in longer maturities may develop as pension funds make their first payouts starting in 2009. In this perspective, the next three-year strategy should take into account the need to issue indexed instruments to hedge the risks of annuity providers.

### ***NBP and MOF Can Take a Humber of Measures to Stimulate the Overall Development of the Non-Government Bond Market***

*First*, centralize bond custody and deposit in the National Securities Depository (NSD) in order to increase the transferability of the instruments.

*Second*, support the development of securitizations through closing the regulatory loopholes for SPVs, in particular: (i) tax neutrality of SPV; (ii) facilitated transfers of assets and liens; (iii) explicit mention of segregated assets in case of bank's bankruptcy; (iv) detailed rights and duties of the SPV company; (v) adjustment of status of such corporate bonds to the specifics of structured finance; and (vi) differentiated repayment rights and possible acquisition of issued securities by the selling bank.

*Third*, consider simplifying the distinction between public and private issuances of bonds, specifically by dropping the investor threshold criterion and keeping only the investor quality criterion. Private placements would be defined as issuances directed at qualified investors, that is, institutional investors and high net worth individuals. The NSD would be entrusted with the responsibility to run the book of the bonds in order to ensure, among other things, that the bonds placed do not reach financially unsophisticated investors. Requiring a large denomination for privately-placed bonds would also help to prevent them from reaching unsophisticated retail investors. If this were the case, the issuer should be required to comply fully with IFRS-compliant disclosure and other requirements of public issuance.

*Fourth*, take measures to increase OTC market transparency, in particular requiring market participants to report post-trade price and volume information for public dissemination in a centralized location (such as GovPx in the United States) in such a way that all information is given to the market. As an alternative, regulators may also require that transactions with institutional investors be conducted exclusively through electronic trading platforms.

*Fifth*, in order to ensure the interest of institutional investors in future issues, require that bonds should be rated to be considered by institutional investors.

*Sixth*, encourage diversification of the investor base for non-government bonds through various measures, including: (i) increasing the investment limit of pension funds in issues that will get rated; (ii) encouraging the development of credit derivatives such as collateralized debt or bond obligations (CDOs or CBOs) created by packaging privately placed bonds and/or loans and securitizing them into highly creditworthy instruments in which pension funds can invest (see Chapter 3); and (iii) introducing multiple pension funds for each pension fund manager with different portfolio characteristics targeting different generations. This would help mobilize pension fund resources for the financing of the vast infrastructure investment needs linked with EU accession.

***A Comprehensive Reform of the Legal and Regulatory Framework for Local Government Borrowing is Required to Remove Moral Hazard on the Sub-National Bond Market and Unlock Its Potential to Finance Local Infrastructure Investments. This Reform Would Be Structured on Five Main Pillars***

*First*, continue fiscal decentralization by increasing the degree of fiscal autonomy of sub-national governments, in particular by removing ceilings and mandatory exemptions on local government own taxes, by allowing more market calibration of property tax rates, and by promoting the development of asset-liability management capacity at the level of local governments, including pro-active management of municipal real estate assets. Increased fiscal autonomy should be linked with the implementation of action plans to strengthen the capacity of local governments financial departments.

*Second*, create the conditions for pricing of sub-national risk by investors in local government general obligation bonds, specifically by: (i) abolishing the Treasury recovery loan instrument; (ii) adopting a local government bankruptcy law (Chapter 11-type procedure) that sends a clear message to creditors that they will take a hit in case of default by a local government; (iii) introducing a variable risk-weighting ratio for local government debt for bank regulatory capital based on sub-national credit rating (Basle II—option two) and applying 100 percent risk-weighting ratio in the absence of rating; (iv) enforcing local government prudential limits in the short term, progressively relaxing them over the medium term as the reforms of the legal and regulatory framework for local government borrowing take hold and as there is evidence that creditors correctly price sub-national risk, eventually phasing them out and replacing them by requirement for credit rating by at least two reputable credit rating agencies; and (v) dropping the formal requirement for an opinion of the Regional Audit Chambers (RIOs) concerning the local government ability to service a specific debt.

*Third*, improve market transparency through introducing a distinction between current and capital expenditures in local governments' budgets, limiting local government borrowing to the financing of capital expenditures, requiring the production of accrual accounts by all local governments, and requiring an external audit as a condition for borrowing by a local government.

*Fourth*, establish a level playing field on the sub-national finance market, specifically by: (i) gradually phasing-out preferential loans by environmental funds and limiting environmental fund grants, so that targeted public funding provides true additionality to market finance (these niches should be clearly identified in the Country Development Strategy for 2007–2015), and (ii) phasing-out the BGK program of loan guarantees for the co-financing of EU funds and its program of preferential credits for EU fund pre-financing, and encouraging the bank to securitize its portfolio to provide funding through institutional investors.

*Fifth*, clearly communicate a no bail-out policy to market participants, and refrain from any intervention in case of debt default by a local government.

***Strong Interest Exists Among Market Stakeholders for the Development of a Bond Pooling and Enhancement Instrument for Bonds Issued by Small Municipal Corporations and/or Municipalities***

As the market develops and normal conditions for the pricing of local government debt are established, the conditions of market access of various local governments will vary as a function of their risk profile. At one end of the spectrum are local governments and municipal

corporations at, or close to, investment grade rating, which have achieved full market access on their own and do not need any support. Next are low to medium-risk local governments and municipal corporations, whose market access conditions could be enhanced through credit enhancement/pooling instruments without sovereign counter-guarantee. Next are medium to high risk local governments and municipal corporations whose market access conditions could be enhanced through credit enhancement/pooling instruments with sovereign counter-guarantee. Finally are local governments and municipal corporations that are denied market access due to their high risk profile, resulting from their poor economic base, unsustainable level of indebtedness, and/or lack of accounting visibility.

In the short-term, spread compression leaves little or no room for enhancement on the local government debt market. By contrast, as shown in the case of the Bydgoszcz water company, revenue bonds issued by municipal corporations are priced at risk. As part of the development of this market segment, several market participants have expressed interest in the development of a bond pooling/enhancement instrument that would initially cover municipal corporations' obligations, and could be subsequently extended to cover municipal obligations when market conditions allow.

The instrument could be structured as a special-purpose vehicle (SPV) and would cover a broad range of sectors, including water and sewerage, urban transport, district heating and co-generation, local and regional infrastructures (ports, airports), and housing development. The pooled bonds would have a minimum size of about Zł 100 million, and could be enhanced by a liquidity facility provided by a solid international lender such as an IFI, *without sovereign counter-guarantee*, thereby providing the combination of liquidity and rating required by institutional investors. The National Bank of Poland and the World Bank could jointly undertake a detailed feasibility study of such instrument, to be shared among key stakeholders in central government, local governments and the private sector.

## Policy Reform Matrix

The following table summarizes the main policy recommendations, and suggests the timing for their implementation.

Objective	Area	Measure	Timing <sup>1</sup>
To stimulate the development of the classic repo market	Ensure the security status of collateral, regardless of counterparties	Review the functional design of the repo clearing module built in the registry and linked to the real time gross settlement system.	MT, LT
		Examine the chart of accounts adopted at NBP to see if there is any room to enhance the control of assets pledged by non-bank counterparties.	ST

(Continued)

*(Continued)*

Objective	Area	Measure	Timing <sup>1</sup>
	Eliminate or reduce substantially the inefficiency and the residual credit risk of Polish repo transactions	Study the possibility for NBP to support an initiative by market participants to develop a facility that would automatically provide liquidity against foreclosed securities.	MT, LT
		Institute liquidity, risk management and yield enhancement measures such as mark-to-market and substitution in a cost effective manner.	MT, LT
	Broaden the scope of repo participants	Reconsider existing restrictions on the participation of institutional investors in the repo market without compromising legitimate prudential and systemic concerns.	ST
Increase reliability of government bond yield curve and improve market transparency	Increase reliability of benchmarks at long end of curve	Develop and implement calendar for long-term government bond issuances.	ST
		Gradually increase long-term inflation indexed instruments.	MT
Stimulate the overall development of the non-government bond market	Improve market regulatory framework	Centralize bond custody and deposit in the National Securities Depository (NSD).	ST
		Support securitizations through closing regulatory loopholes for SPVs.	ST



Objective	Area	Measure	Timing <sup>1</sup>
		Simplify distinction between public and private issuance of bonds.	ST
	Increase OTC market transparency	Require market participants to report post-trade price and volume information for public dissemination in centralized location.	MT
		As an alternative, require that transactions with institutional investors be conducted exclusively through electronic trading platforms.	MT
	Ensure interest of institutional investors in future issues	Require that bonds should be rated to be considered by institutional investors.	ST
	Encourage diversification of investor base for non-government bonds	Increase investment limit for pension funds in issues that will get rated.	ST
		Encourage the development of credit derivatives (CDO, CBOs).	MT
		Introduce multiple pension funds for each pension fund manager with different portfolio characteristics.	MT
Undertake reform of legal and regulatory framework for local government borrowing	Increase fiscal autonomy for local governments	Remove ceilings and mandatory exceptions on local government own taxes.	MT

(Continued)

(Continued)

Objective	Area	Measure	Timing <sup>1</sup>
		Allow market calibration of property tax base and rates.	MT
		Promote development of asset-liability management capacity at the level of local governments.	MT
	Create the conditions for pricing of sub-national risk by investors in general obligation bonds	Abolish Treasury recovery loan instrument.	ST
		Adopt local government bankruptcy law.	MT
		Introduce variable risk-weighting ratio for local government debt for bank regulatory capital.	ST
		Enforce existing local government prudential limits.	ST
		Relax local government prudential limits subject to evidence of risk pricing by market participants.	MT
		Abolish prudential limits and replace them by requirement of at least two credit ratings by international credit rating agencies.	LT
		Drop requirement for formal opinion by RIO concerning local government ability to service specific debt.	ST

Objective	Area	Measure	Timing <sup>1</sup>
	Improve market transparency	Introduce distinction between current and capital expenditures in local government budgets.	MT
		Limit borrowing by local governments to financing of capital expenditures.	MT
		Require production of accrual accounts by local governments.	MT
		Require external audit as condition for borrowing by local governments.	MT
	Establish level playing field on sub-national finance market	Gradually phase-out preferential loans by environmental funds.	MT
		Limit environmental fund grants so that targeted public funding provides true additionality to market finance. Identify niches in 2007–2013 Country Development Strategy.	MT
		Phase out BGK program of guarantees for co-financing of EU funds.	ST
		Phase out BGK program of preferential credits for EU funds pre-financing.	ST

(Continued)

(Continued)

Objective	Area	Measure	Timing <sup>1</sup>
	Establish no-bail-out policy	Clearly communicate no bail-out policy to market participants, and refrain from any intervention in case of debt default by local government.	ST, MT, LT
Develop access of local government and municipal corporations to domestic debt market	Develop SPV-based pooling and enhancement instrument for local government and municipal corporation debt	Carry out feasibility study of pooling and enhancement instrument.	ST

1. ST: within one year. MT: within two years. LT: within five years.

# Background

---

In 2004, the National Bank of Poland (NBP) requested that the World Bank prepare a series of Financial Services Policy Notes focusing on the development of specific components of the domestic financial markets. A first Note on the development of the housing mortgage finance market was produced in May 2005 and discussed with Government and market participants at a workshop chaired by NBP in June 2005. A second Note on the development of the corporate finance market was produced in July 2005. This third Note examines the recent evolution, key impediments to market development and policy challenges ahead for the bond market, with a special focus on the municipal bond market.

This Working Paper contains two chapters in addition to this short background. Chapter 2 reviews recent developments in the fixed-income securities market from 2001 to 2004. Chapter 3 examines key impediments and policy challenges ahead for the development of the fixed-income securities market. The paper does not analyze the corporate bond market in detail. This was done as part of the Financial Sector Assessment Program (FSAP) update of April 2006.



## Recent Market Developments

---

In recent years, Poland has made great strides in developing key components of the fixed-income securities market. The Government rightly concentrated its efforts on the development of the money and government bond market, providing a strong foundation for the development of the non-government bond market.

Between 2001 and 2004, the money market represented about 10 percent of GDP, with the rise in short-term T-bills compensated by the drop in NBP bills and the leveling-off of corporate short-term debt securities, commercial bank short-term securities and inter-bank deposits.

The Polish repo market, locally known as conditional transactions market, is comprised of two major types of repos: classic repos and sell-buy-backs (SBBs).<sup>1</sup> They were introduced in early 2002. Classic repos in the Polish market can be further divided into three types, depending on how “sold” securities (collateral) are possessed at the depository (see Table 2.1).

While SBB transactions have grown rapidly, with daily turnover reaching Zł 4.3 billion in 2004, classic repo transactions did not take off, with daily turnover of Zł 180 million in that year. In 2005, classic repo transactions modestly increased, but remained marginal, compared to SBBs. Classic repos and SBBs accounted for 8 percent and 92 percent of repo transactions, respectively, in 2005. The contrast between repos and SBBs in terms of turnover was sharper in the interbank market (see Table 2.2).

---

1. In a classic repo, one party sells securities to the other party with an agreement that it will repurchase the sold securities or their equivalent from the other parties at a predetermined price at a predetermined date or whenever it wants to do so in the future. In an SBB, one party sells securities to the other party (an outright sale contract) and simultaneously enters into a forward purchase contract of the same securities or their equivalent from the other party.

**Table 2.1. Mapping of Repo Transaction in the U.S., Euro, and Polish Markets**

	“Repo-like” Transactions		US & Euro Markets				Conditional Transaction Market in Poland			
	Collateralized loan	Stock lending	Classic repo	Tri-party repo	Hold-in-custody repo	Sell/buy-back	Classic repo		Sell/buy-back	
Also known as		Securities lending, stock borrowing and lending (SBL)	Deliver-out repo (in case of physical certificates)		“Trust Me” repo, Due-bill repo, Letter repo		Simply “repos”		Sell-buy-back/buy-sell-back (SBB/BSB)	
Title Transfer	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No until a default is declared	Yes
Collateral Substitution	Varies	No	Yes	Yes	Yes	No	Not used, due to the depositories' technical limitation		No	
Mark-to-market, and variation margin	Varies	Yes	Yes	Yes		No	Not used, due to the depositories' technical limitation, and/or due to very short maturities of transactions (mostly overnight)		No	
Coupon payments on collateral (“sold” securities)	Returned to the seller (cash borrower)	Dividends on loaned securities are returned to the stock lender, while part of interest income on collateral cash is normally returned to the stock borrower	Returned to the seller	Returned to the seller	Returned to the seller	Kept by the buyer (not returned to the seller) (securities are sold at dirty prices)	Returned to the seller (in practice, the seller is normally required to sell—put up as collateral—securities whose coupon payments fall due outside the maturities of repo transactions).		Kept by the buyer (not returned to the seller) (securities are sold at dirty prices)	
Custody	Varies	Varies	The buyer's possession	The independent custodian (The tri-party agent)	The dealer's (the seller's) possession	The buyer's possession	The buyer's possession at the depository	The buyer's possession in its blocked account	The dealer's (the seller's) possession at the depository	The buyer's possession at the depository



Close-out netting	Likely to be subject to a court order	Collateral cash and loaned stocks are usually liable to sell-out or buy-in, respectively	Enforceable	Enforceable	Enforceable in theory, but not assured	Not applicable	Enforceable	Subject to a court order	Enforceable in theory, but questionable in practice	Enforceable
Loss recovery (net of the collateral value)	Weak	Varies	Strong	Strong	Weak	Weak	Strong	Weak	Weak	Weak
Term	Fixed or open	Fixed or open	Fixed or open	Fixed	Fixed	Fixed only	Fixed or open	Fixed or open	Fixed or open	Fixed only
Remarks	Some "repo" transactions may be re-characterized as collateralized loans.			Popular in the US market, but not in Europe		Normally, no documentation	Very marginal (approx. 1.6% of the conditional transactions market)		Only in dealer-customer repos may be re-characterized as stock lending; Dealer-customer repos are subject to reserve requirement	92% of the conditional transactions market, and interbank accounted for 80% of them.
Interbank transactions use the Polish version of TBMA/ISMA Global Master Repurchase Agreement 2000										

Source: NBP; Corrigan, Daniel, et al., *NatWest Markets Handbook of International Repo*, 1995; Fabozzi, Frank J., ed., *Securities Lending and Repurchase Agreements*, 1997; Choudhry, Moorad, *The Repo Handbook*, 2002; Market sources and World Bank staff analysis.

	<b>Classic Repos</b>	<b>SBBs</b>	<b>Total</b>
Interbank	Below 20%	80%	Below 75%
Dealer-customer	Over 80%	20%	Over 25%
Total	8%	92%	100%

Sources: NBP.

The government bond market has grown significantly from Zł 176 billion (20 percent of GDP) bond outstanding in 2001 to Zł 287 (30 percent of GDP) in 2004. In 2002, MOF adopted a medium-term strategy aimed at lengthening and standardizing the maturity of public debt. As part of this strategy, twenty-year T-bonds were issued for the first time in April 2002, and MOF started to convert non-tradable debt into tradable debt. In the years 2002–2004, tradable bonds were the most rapidly expanding segment of the Treasury securities market, and the share of tradable bonds in total government debt increased from 66.7 percent to 77.7 percent over the period. Among tradable bonds, the share of fixed-rate bonds increased from 86.9 percent in 2002 to 91.6 percent in 2004, bringing the profile of Polish T-bond market at par with mature EU markets. The turnover ratio on the secondary market reached 1.67 in 2003 before dropping to 1.39 in 2004. The market is dominated by domestic investors, mainly banks.

The sub-national bond market has grown rapidly in recent years, albeit from a very low base, reaching Zł 3.1 billion (about US\$1 billion) bonds outstanding in mid-2005. The market remained small however, representing only 0.4 percent of GDP for that year. About 90 percent of the market consists of privately issued-bonds of small sizes that are purchased by banks as lead underwriters to hold them to maturity. The remaining 10 percent consists of five publicly-issued bonds that are listed on the off-exchange market (MTC-CeTO). Banks are the main investors in this market segment as well, followed by insurance companies. The secondary market for public issues is very narrow, and trades are sporadic. Sub-national bond spreads are very narrow across local government borrowers and do not appear to reflect underlying credit risks, resulting in moral hazard. This results from a combination of factors including excess liquidity on the domestic banking sector, the pricing strategy of the State-owned bank that dominates the market (see Chapter 3), and deficiencies in the market legal, regulatory, and competition framework. By contrast, the first revenue bond issued by a municipal corporation in December 2005 was priced at risk.

The corporate bond market has grown rapidly from Zł 3.9 billion in 2002 to Zł 6.9 billion (about US\$2.2 billion) bonds outstanding at the end of 2004 (about 1 percent of GDP). The market took off following the liberalization of procedures for bond issuances under the 2000 amendment to the Bond Act in compliance with EU regulations (see below). However, the market is still small compared with the equity market and with the government securities market, and also by comparison with other important emerging markets. It is primarily a private placement market, with no secondary market activity and with very low transparency. Non-financial corporations and banks hold about two thirds of all corporate bonds. The share of other institutional investors, mainly insurance companies, has been growing in recent years.

A detailed review of the evolution of the fixed income securities market from 2001 to 2004 is presented in Technical Appendix A.

# Selected Policy Challenges Ahead

---

## Money Market

### *Well-functioning Coordination Between Government Cash Management and NBP Monetary Policy Operations Enables Good Liquidity Management in the Banking System*

In general, in the context of a bank-dominated financial sector, demand and supply in the money market may be heavily influenced by the level of excess reserves in the banking system. High volatility in excess reserves could create a one-way market, causing high volatility in short-term interest rates. This would be detrimental to the development of both money and bond markets. To avoid such a situation, it is crucial to stabilize the government's cash position at the central bank and to coordinate government cash management operations with the central banks' monetary policy operations.

This process works well in Poland. The government cash is kept in a single treasury account (STA) at NBP which is remunerated at a reference rate up to a certain limit. Non-remuneration beyond the limit gives the government an incentive to maximize the return on its cash balance by transferring excess cash to commercial banks or by managing it in the money market. The STA also enables the government to better project its cash needs and consequently to manage its cash balance optimally. This arrangement should help reduce the seasonal volatility in banking system liquidity while providing the government with an opportunity to maximize the return on its cash balances and to minimize funding cost. Good liquidity management in the banking system provides a strong foundation to build a well functioning money market.

### *The Development of the Classic Repo Market Faces a Number of Impediments*

In theory, a key benefit of repos should be that it eliminates principal risk which constitutes a large part of counterparty risk. By doing so, repos enable market participants to trade with a wider range of counterparties without worrying too much about their creditworthiness. By allowing each market participant to widen its exposure limits against counterparties, the market will deepen, widen and grow. A wider and more diversified repo market in terms of type of participants will also further deepen and stabilize the money market, making it less sensitive to changes in the level of excess reserves of the banking system.

The country has made a significant progress in setting up the legal and regulatory framework of repo transactions since 2001. The Recommendation of the Execution of Repo and Buy-Sell-Back Transactions was epoch-making in an attempt to enjoy the benefits stated above. The market has almost all major types of repo transactions that are practiced in the U.S. and Euro markets.

However, technical deficiencies in the market infrastructure do not allow market participants to structure repo transactions flexibly. For example, the terms of repo transactions that are actually practiced in the Polish market are designed to circumvent technically demanding features of repo transactions such as mark-to-market valuations and substitution of collateral. The constraints of the Polish repo market are also reflected in the unpopularity of repo transactions as a whole and the concentration of repo transactions on interbank SBBs.

The limited volume of classic repo transactions as compared to sell-buy-backs (SBBs) is due to four main factors: (i) the reserve requirement for banks in repos with non-bank counterparties; (ii) the difficulty in using T-bonds for repos; (iii) the inefficient collateral management for repos; and, (iv) the regulatory restrictions imposed upon institutional investors to engage in repos.

The reserve requirement for banks in repos with non-bank counterparties originates from several concerns:

- *First*, NBP is concerned about the inadequate control that NBP can exercise over securities pledged in repos by non-bank counterparties which do not hold current accounts at the central bank nor directly participate in the registry of T-bills and NBP bills. Non-bank counterparties only indirectly participate in those registries through banks and custodians. Unlike the case of SBBs and the other types of classic repos, the underlying securities in classic repos that banks engage in with non-banks (dealer-customer repos) remain in the book of the seller. NBP directly administers banks' current accounts and the book-entry registry for T-bills and can block T-bills pledged in repos between banks. However, the existing system may not allow NBP to exercise such direct control over accounts of non-banks participating in the repo market.
- *Second*, NBP is concerned about the possible risk of default by non-bank counterparties in dealer-customer (bank-non-bank) repo transactions. Given the rapid development of the financial market, and in particular the increasing liquidity of the government securities market, banks as fixed-income dealers are likely to engage in a significant volume of back-to-back trades. In such a case, the fact that a credit is secured is insufficient to ensure sound liquidity management by banks because a default by a market participant may prevent a counterparty from paying for another back-to-back trade, creating systemic risk. If there is a high volume of

back-to-back trades vis-à-vis banks, NBP is legitimately concerned about ensuring prudent liquidity management by banks in dealing with riskier counterparties.

The difficulty in using T-bonds for repos arises from the fact that T-bonds are kept in custody by the National Securities Depository (NSD). Unlike the T-bill registry operated by NBP, the NSD provides its users with a choice between a net or gross settlement. Because net settlement remains dominant, the fact that NSD has an account in the RTGS system of NBP does not automatically provide for delivery versus payment (DVP) settlement on a gross basis in both securities and money. In addition, aside from the ease of using discount instruments for repos, the inadequacy of the links between the RTGS system and the NSD between the RTGS system and the NSD may be another reason for the unpopularity of T-bonds as underlying assets for repos.

The need for inefficient collateral management is another reason why classic repos are only slowly accepted. This is a commonly observed phenomenon in many countries. Trading call loans with known counterparties is certainly simpler and faster when a market participant needs immediate liquidity. To a certain extent, this is a matter of learning and streamlining the processing of a repo transaction with a market participant.

### *NBP Could Take a Number of Actions to Address These Impediments and Stimulate the Development of the Classic Repo Market*

Key steps are as follows:

- *First*, NBP could review the functional design of the repo clearing module built in the registry and linked to the real time gross settlement (RTGS) system operated by NBP in order to ensure the security status of collateral, without regard to counterparties to repo transactions. The chart of accounts adopted at NBP could also be examined to identify if there is any room to enhance the control of assets pledged by non-bank counterparties. There may be some legal issues related to privacy in allowing such control by NBP.
- *Second*, NBP could support the development of a facility that would automatically provide liquidity against foreclosed securities, with a view to ensure that the facility is designed to control potential moral hazard by market participants. In case NBP decides to provide such a facility, it should ensure control of its impact on monetary policy. The goal of this step will be to eliminate or reduce substantially the inefficiency and the residual credit risk of Polish repo transactions by instituting liquidity, risk management and yield enhancement measures such as mark-to-market and substitution in a cost effective manner.
- *Third*, NBP could consider broadening the scope of participants in the repo market by reviewing whether existing restrictions on the participation of institutional investors in the repo market are justified and whether there is room to relax some of these restrictions without compromising legitimate prudential and systemic concerns. NBP may wish to review the British experience in opening up the repo market in 1996.

A detailed analysis of the legal and regulatory framework and infrastructure for clearing and collateral management in the repo market is presented in Technical Appendix B.

## Government Bond Market

### *MOF has Made Great Strides in Fostering the Development of a Deep and Liquid Government Securities Market as a Basis for the Development of the Non-government Bond Market. This Will Also Contribute to Poland's Competitiveness as Issuer in the Euro Market Over the Medium Term*

Since the adoption of the medium-term strategy for the development of the government securities market in 2002, MOF has consolidated and standardized outstanding government domestic debt into a limited number of series of securities to establish benchmarks. The successful adoption of the primary dealer system in MTS CeTO since 2003 has enhanced the efficiency and liquidity of the secondary market while keeping the primary market competitive. As a result, the secondary market has achieved 2,700 percent annual turnover growth in 2004. The continuous enhancement of the settlement system facilitates trading in large values by enabling smooth running of the RTGS system which reduces systemic risk. Finally, the adoption by MOF of a comprehensive asset and liability management framework has laid the foundation for building a sustainable government securities market as a backbone for the development of the broader bond market. This will also contribute to strengthening Poland's competitiveness as an issuer in the euro market over the medium term.

### *MOF has Lengthened the Maturity Structure of Government Securities and Built Benchmarks, Although the Average Maturity of Poland's Government Debt Remains Significantly Shorter Than That of its European Peers*

MOF has lengthened the maturity profile of outstanding government domestic debt up to 20 years. This enabled MOF to reduce its immediate debt service burden and to even it out in the future in the context of a growing total outstanding debt, by successfully introducing longer-term securities to refinance existing short-term instruments as well as obtaining new financing. As a result, the share of short-term debt (maturity under one year) in total government domestic debt fell from 52.0 percent in 2001 to 37.3 percent in June 2004.

At the same time, MOF consolidated and standardized outstanding debt through switch auctions, exchange offers and re-openings with the objective to build benchmarks. A concurrent shift from non-tradable to tradable bonds also helped promote liquidity in the secondary market. As of 2005, the most liquid instruments on the market were the two-year zero-coupon and the five-year fixed-rate bonds. More recently, ten-year bonds have also gained liquidity and, together with the two and five year bonds, have started to serve as benchmarks. Despite this progress, however, the average maturity of Poland's government debt remains significantly shorter by comparison with its European peers, and refinancing risks remain higher. As of June 2004, the average maturity of Polish government debt was 2.7 years, compared to 3.9 in Austria, 4.8 in Finland, 5.3 in Germany, 6.3 in Belgium, and 11.9 in the UK.

### *The Successful Introduction of the Primary Dealer (PD) System has Improved the Liquidity and Transparency of the Market*

Since its introduction in 2002, the PD system has proved popular, with 11 PDs in operation to date. Despite complaints among some of the existing PDs about the toughness of

the conditions imposed on them, in particular with respect to market making, there seems to be strong interest among many other banks, both domestic and European, to join the system, which augurs well for continued competition among participants.

Following the introduction of the PD system, prevailing yield spreads on government bonds have narrowed significantly, down to 1-2 bps, 2-3 bps, and 5-10 bps on the two-year, five-year, and ten-year T-bond, respectively. This reflects both increasing competition among PDs and high pre and post-trade transparency among PDs and other direct participants of the MTS CeTO.

***MOF Can Build on These Commendable Achievements to Further Increase the Reliability of the Government Bond Yield Curve and Improve Market Price Transparency***

MOF needs to continue its efforts to maintain existing benchmarks and to increase the reliability of benchmarks at the longer end of the curve. This will require in particular: (i) developing a calendar for long-term domestic bond issues and implementing this calendar; and (ii) gradually increasing long-term inflation indexed instruments. To achieve this goal, building a more stable demand for longer term maturities by local institutional investors while reducing the current dominant position of foreign investors will be essential. While this may seem to be difficult to achieve during the accumulation phase of pension funds, it is not necessarily the case. In most Latin American countries with a similar type of pension regulation (second pillar), the secondary activity of the longer maturities has not been hindered by a buy-and-hold behavior. In these cases, the regulation has encouraged trading in general as funds are competing to show short-term returns. Further support for trading activity in longer maturities may develop as pension funds make their first payouts starting in 2009. In this perspective, the next three year strategy should take into account the need to issue indexed instruments to hedge the risks of annuity providers.

At the same time, high-quality financial assets alternative to government securities (sub-national bonds and corporate bonds) should be made available in order for a benchmark yield curve to be established with a limited amount of government securities. The underdevelopment of alternative financial assets may deter the development of a benchmark yield curve by making government securities for trading purposes less available in the market (the buy-and-hold problem).

**Non-government Bond Market: General Issues**

***Despite the Liberalization of the Legal and Regulatory Framework for Non-government Bond Issuances, the Corporate Bond Market Remains Underdeveloped, and There Remain Regulatory Impediments to Market Development***

Despite the liberalization of the regulatory framework for non-government bonds, the corporate bond market remains thin and illiquid. Many factors explain the current situation, such as the small size of the publicly listed corporate sector, excess liquidity in the banking

sector resulting from the positive business cycle combined with limited investment needs, lack of active investment banks promoting this vehicle (there are little incentives for liquid banks to promote instruments that compete with banks' products; see below). The lack of ratings contributes to market opaqueness and makes it unattractive to institutional investors. Market illiquidity is also due to the small size of transactions and the lack of a centralized depository limiting secondary market trading. The interest of corporations to issue bonds may increase gradually as EU integration starts to put pressure on companies for new investments.

The Bond Act issued in 1995 and amended in 2000 liberalized the procedures for bond issuance in line with EU regulations. It is no longer obligatory to appoint a representative bank in public offerings. The Act also provides for revenue bonds and the eligibility to issue such bonds. Corporate issuers are no longer required to specify/disclose the use of the funds to be raised, and the funds can be used to repay other debt. Bonds are not puttable as long as the issuer fulfills its financial obligations on time, thus enabling the issuer to secure stable long-term funds. However, a number of outstanding regulatory impediments remain.

First, Art. 15 of the Bond Act requires that a secured bond must establish a security before it is distributed. However, to register a security, the creditor must be identified. This requirement is difficult to satisfy in case of publicly offered bonds for which ownership (the creditor) could change at any time. This circularity problem originates from the fact that the law does not include the concept of bond trustee, with the responsibility to monitor the credit quality of the issuer and its compliance with covenants to protect the interest of bondholders under the circumstances of frequently changing ownership of the bonds.

Second, although Art. 7 of the Bond Act provides for securitization and addresses critical issues related to it, including: (i) amendment to the bank secrecy rules to enable the disclosure of information about the debtor in case of sale of its credit, (ii) the introduction of the possibility for investment funds to issue securities against credit assets, and (iii) the establishment of the concept of true sale. The securitization of credits secured by immovable assets remains costly in the current environment. There is an efficient centralized electronic registry for movables and foreclosure on those seems to be efficiently carried out. However, registration of immovable property and property rights are administered by local courts mostly in paper forms (although migration to computerized system is under way). In addition, the registration must be cleared by a registration judge, and foreclosed property must be auctioned publicly. The foreclosure process is protracted. In addition, several loopholes in the regulatory framework for SPVs need to be closed: (i) tax neutrality of the SPV; (ii) facilitated transfers of assets and liens; (iii) explicit mention of segregated assets in case of bank's bankruptcy; (iv) detailed rights and duties of the SPV company (capital, debt borrowing and bond issuance, enhancement support, regulations, and so forth); (v) adjustment of the status of such corporate bonds to the specifics of structured finance and differentiated repayment rights; and (vi) possible acquisition of the issued securities by the selling bank (see World Bank 2006).

Third, Art. 2 of the Law on Public Trading of Securities defines the public issuance of securities to be such that the number of investors in the securities is over 300. At the same time, Art. 63 of the same Law provides additional flexibility by enabling a mezzanine



issuance channel for offers made only to “qualified investors” However, Art. 4, Section 21 of the Law only includes institutions as qualified investors, leaving out high net worth individuals with experience in investment. In addition, this article is not in line with EC Directive 2003/7/EC on the prospectus to be published when securities are offered to the public or admitted for trading.

### *Limited Price Transparency Remains an Issue in the OTC Market*

Corporate and sub-national bonds are mainly traded on the OTC market. However, information on trades in this market is not publicly available. Better price transparency on this market would undoubtedly win stronger interest of bond investors. Generally, post-trade information is considered a public good and should be made available as widely as possible. On the other hand, real time dissemination of pre-trade price information (bid-ask quotes) can be sensitive for dealers and market makers. Investors can certainly request quotes from PDs or other dealers for particular series of bonds they are interested in trading. However, dealers are reluctant to disclose inter-dealer quotes, which can be different from those quoted to an investor upon request. On the other hand, for investors, asking quotes from each dealer individually is cumbersome and time consuming while the market moves continuously (see Technical Appendix C).

A market run by dealers and market makers typically creates different groups of market participants with different degrees of access to price information and different and potentially conflicting business interests. To some extent, some discrimination in terms of access to price information is inevitable because dealers and/or market makers play a special role in the formation of market prices, through investment in research, expertise and systems and through taking position risks. To a certain extent, price information in bond markets bears some element of proprietary information owned by dealers and market makers. At the limit, overburdening PDs with excessive information sharing requirements could result in a collapse of the PD system if many of them choose to leave the system.

On the other hand, investors would certainly welcome free availability of inter-dealer price quotes by all PDs since they could then observe the best prices available in the market at any given point of time, and execute trades against any of them. MOF should also welcome the free giveaway of inter-dealer price quotes if it increases competition on the market. However, requiring PDs to do so must be done cautiously as it could result in reduced secondary market liquidity if market making becomes more difficult. In turn, reduced liquidity in the secondary market may discourage aggressive bidding in the primary market, thus resulting in an increase, instead of a decrease, in primary market yields.

To strike the right balance, the authorities could consider establishing an obligation to disclose any trade on the OTC within a defined time period in a centralized location (such as GovPx in the United States). Initially, the reporting time lag could be flexible but progressively reduced to achieve an international standard (for example, 30 minutes) over a certain period of time (such as one year). This would reduce arbitrage on disclosure between OTC and the organized markets, improve price formation, and improve monitoring by the supervisor. As an alternative, the authorities may also require that transactions with institutional investors be conducted exclusively through electronic trading platforms.

### *The Current System for Securities Custody and Settlement is Complicated and Suffers from Duplications and Overlaps*

The current system for securities custody and settlement is complicated and duplicative (see Technical Appendix D). First, DVP settlement is achieved only in T-bills and NBP bills which are both registered in NBP's book entry registry that is directly linked with its real time gross settlement (RTGS) system. This arrangement enables DVP settlement on a gross basis in both money and securities. NBP now provides free intraday liquidity for banks to settle inter-bank large value transactions by use of the RTGS, which is critical to run a gross payment system. As a result, currently only banks seem to benefit from gross DVP settlement. On the other hand, T-bonds are registered and custodied in the national securities depository (NSD) which also houses listed non-government bonds. Both banks and non-banks participate in NSD. Although NSD participates in NBP's RTGS system, its participants seem to prefer net settlement which requires less money liquidity. NSD is operating seven batch sessions daily for netting. Non-bank participants, which do not have access to NBP's intraday liquidity facility, would need to obtain liquidity from a bank if they were to settle bond trades on a gross basis.

NBP does not require banks to pay user fees for the use of its book entry registry. On the other hand, NSD is a commercial entity and charges fees on its members.<sup>2</sup> Some market participants complain about the high fees charged by NSD even though NSD does not transfer higher participation fees charged by Clearstream onto its members. NBP's book entry registry and NSD also provide different services. For example, NSD provides securities lending and borrowing<sup>3</sup> and access to other national and international central securities depositories such as Crest, Kassenverein, and Clearstream. On the other hand, NSD does not operate a central registry and holds only omnibus accounts.

Because WSE, CeTO, and the OTC market trade different mixtures of T-bills, T-bonds and listed and non-listed non-government securities, and because different participants participate in different markets with or without access to some of the settlement systems, the current trading and settlement setup is complicated. Firstly, WSE operates a listed equity and bond market in which brokers participate while only banks participate in its T-bond market. In CeTO, MTS operates a T-bill and T-bond market in which only banks participate. Of those, the NBP RTGS system supports the settlement of T-bills only, while NSD supports that of T-bonds. Only brokers participate in the other market of CeTO trading listed non-government bonds, which is supported by NSD. Bonds can be traded in the OTC market as well, and they are supported by NBP or NSD for settlement. Unlisted non-government bonds are supported neither by NBP nor NSD but by custodians to run a book. NSD is licensed by the Polish Securities Exchange Commission (KPW) while the registry operated by NBP is outside the authority of KPW. The trading and settlement structure described above duplicates investment in systems which provide essentially the same functional services. While the parallel operation of the NBP registry and NSD may be practical for a number of reasons for the time being,<sup>4</sup> there seems to be room for consolidation

---

2. One time registration fee of 1 basis point and periodical custody fee.

3. As both a principal and a agent.

4. For example, repo transactions rely heavily on T-bills as an underlying instrument while repos are a critically important instrument for inter-bank liquidity adjustment which systemic implications.

of the two systems and for rationalization of the overall securities settlement framework. This would improve market efficiency and improve the conditions for repo and arbitrage operations.

The authorities could consider developing a transition process focusing on progressively reducing the gap between the clearing and settlement standards on various market segments, with the objective to achieve unification of these standards over time. Centralizing non-government bonds in the NSD would reduce the complexity of the current system. In the medium-term, a merger could be considered.

### *The Dominance of Banks in the Domestic Financial Sector Constitutes a Major Challenge for the Development of the Non-government Debt Market*

Generally, in countries where the banking system is large and able to raise long-term funds, the development of the domestic non-government (and non-bank) bond market is constrained by competition from banks. By contrast, in countries where institutional investors are large and growing, the bond market tends to receive a strong impetus for development. In addition, ownership links between banks and non-bank financial institutions are important. Banks owning asset management companies may discourage them to offer services or instruments that compete with parent banks traditional business areas such as deposit taking and corporate lending.

The relative size of issuers and banks is an additional factor determining the development potential of the domestic non-government bond market. Table 3.1 below shows cross-country comparisons of the average size of the five largest corporations to the three largest banks in each selected country. Poland stands out with a ratio of 3.0, compared to 1.7 in the United States, 0.3 in the Russian Federation, and 1.5 in the Republic of Korea. An environment with relatively low size of banks relative to the largest corporations is conducive to market-based financing, thus providing a fertile ground for non-government bond market development. By contrast, in Poland, the large size of banks relative to the largest corporations would tend to favor bank loans over corporate bonds issuances, especially if emerging institutional investors face constraints in investing in non-government bonds.

**Table 3.1: Comparison of Banks and Industrial Corporations by Assets Size in 2001  
(in millions of US\$)**

Country	Poland	U.S.	Russia	Korea
Top 3 banks total assets (A)	49,378	2,366,789	35,660	248,305
Top 5 industrial corporations total assets (B)*	16,266	1,431,612	138,183	168,900
(A) / (B)	3.04	1.65	0.26	1.47

\* The financial and investment services corporations such as insurance companies, investment banks, etc. are excluded.

Sources: "Top 1000 World Banks," *The Banker*, July 2002; "The Global 500," *Fortune*, July 22, 2002; FISonline Database, Mergent, Inc.; *Russia Investment Guide*, Troika Dialog, 2001.

As in the case of government securities, banks strongly dominate as investors in corporate bonds, although the participation of non banks as investors in corporate bonds is growing. This may partly reflect the fact that about half of all commercial papers (CPs) were issued for tax arbitrage purposes within corporate groups where a parent company bought CPs issued by subsidiaries. Yet, the stabilization of inflation and interest rates, the growth in the insurance sector, and greater appetite for higher yields explain the growing popularity of long-term corporate bonds. Mutual funds are relaxing their limit on listed corporate bonds and are now also entering the market.

The regulation for second pillar pensions allows pension funds to invest up to 20 percent in municipal bonds not traded publicly, 10 percent in secured corporate bonds not traded publicly, 10 percent in unsecured bonds issued by companies that are listed on the exchange (their equity, not the bonds). These limits should be raised for issues that will get rated, given the limited practice for ratings in the market.

The requirement to beat the industry average return and the lack of incentives for contributors to switch from one pension fund to another (as well as the lack of diversity of investable instruments) result in herd behavior and a homogenous portfolio across pension funds. This is a phenomenon often observed in countries which adopted the original Chilean model for second pillar pensions. The challenge lies on how to find the proper balance between the concern for ensuring a conservative framework that protects pensions from excessive risk taking by pension fund managers and the need to diversify pension fund portfolios to achieve higher real yields that could effectively cover pensioner needs in the future.

### ***NBP and MOF Can Take a Number of Measures to Stimulate the Overall Development of the Non-government Bond Market***

Priority actions would include:

- *First*, centralize bond custody and deposit in the National Securities Depository (NSD) in order to increase the transferability of the instruments.
- *Second*, support the development of securitizations through closing the regulatory loopholes for SPVs, in particular regarding tax neutrality.
- *Third*, consider simplifying the distinction between public and private issuances of bonds, specifically by dropping the investor number threshold as a criterion for distinction, and keeping only the investor quality criterion. Private placements would be defined as issuances directed at qualified investors (institutional investors and high net worth individuals). The NSD would be entrusted with the responsibility to run the book of the bonds in order to ensure, among other things, that the bonds placed do not reach financially unsophisticated investors. Requiring a large denomination for privately-placed bonds would also help to prevent them from reaching unsophisticated retail investors. If this were the case, the issuer should be required to comply fully with IFRS-compliant disclosure and other requirements of public issuance;
- *Fourth*, increase OTC market transparency through specific measures, in particular requiring market participants to report post-trade price and volume information for public dissemination in a centralized location (such as GovPx in the United

- States) in such a way that all information is given to the market. As an alternative, regulators may also require that transactions with institutional investors be conducted exclusively through electronic trading platforms.
- *Fifth*, in order to ensure the interest of institutional investors in future issues, require that bonds should be rated to be considered by institutional investors.
  - *Sixth*, encourage diversification of the investor base for non-government bonds through various measures, including (i) increasing the investment limit of pension funds in issues that will get rated; (ii) encouraging the development of credit derivatives such as collateralized debt or bond obligations (CDOs or CBOs) created by packaging privately placed bonds and/or loans and securitizing them into highly creditworthy instruments in which pension funds can invest (see the next section); and (iii) introducing multiple pension funds by each pension fund manager with different portfolio characteristics targeting different generations. This would allow mobilizing pension fund resources for the financing of the vast infrastructure investment needs linked with EU accession.

### Sub-national Bond Market: Specific Issues

As part of its EU Accession Treaty, Poland needs to undertake considerable investments in infrastructure to meet the requirements of EU directives, in particular in the environment. A large part of these investments are the responsibility of local governments and of local utility corporations. To finance these investments, local governments and municipal corporations need to mobilize the counterpart resources to EU grants on the domestic market. The development of a sustainable sub-national bond market is therefore on the critical path to achieve Poland's commitment under its Accession Treaty, and in particular to raise the quality of its local infrastructure services to European standards.

Five main impediments to the development of a sub-national bond market may be distinguished: (i) moral hazard; (ii) lack of market transparency; (iii) weaknesses in market governance; (iv) distortions in the framework for competition among market participants; and (v) limitations in the financial management capacity of sub-national entities.

The sub-national bond market suffers from moral hazard originating from ex ante deficiencies in the structure of incentives faced by market participants and from the modalities of ex post interventions by the central government in case of debt default by a sub-national entity

#### *Ex Ante Deficiencies: Fiscal Decentralization Channel*

The *first source* of moral hazard is the limited degree of fiscal autonomy of sub-national governments, both on the expenditure and on the revenue sides. On the expenditure side, Polish sub-national governments have very limited degrees of freedom in adjusting their expenditures to changes in economic circumstances. On the revenue side, only gminas (municipalities) have some degree of fiscal autonomy, with own revenues representing 15 percent of total revenues, while powiats (counties) and voivodships (regions) have practically no own revenues and depend almost entirely on tax sharing and grants from the central government.

The own-revenue raising authority of gminas is itself limited by the imposition of maximal rates on local taxes, by some compulsory tax exemptions and reductions, and by the fact that the property tax, which is the major source of local tax revenue, is based on area, not on property values and thus cannot grow with local economic development. The maximum rates imposed by the government exhibit heavy taxation of business buildings and minimal taxation of residential buildings, while even lower land rates encourage land speculation. Such a structure constitutes *de facto* local business taxation and induces profound distortions in urban land uses, both of which impede faster growth of the local economy and employment with negative implications for the fiscal strength of local governments. Additional locally granted exemptions and rebates on non-residential land and buildings are captive of local politics.

The *second source* of moral hazard is the softness of sub-national government budget constraints that arises from two main features. *First*, the lack of distinction between current and capital expenditures under Polish public finance law opens the possibility for sub-national governments to borrow for financing current deficits (see below). *Second*, the Treasury recovery loan instrument (Art 65 of Public Finance Law) makes it possible for the central government to bail out private creditors in case of impending default by a sub-national government. Until 2004, this provision was never used in practice. In 2004, MOF extended recovery loans to two cities at half the rediscount rate. At the same time, MOF indicated that, in the future, Treasury recovery loans would be offered through BGK. This new provision was introduced in the amendment to the Public Finance Law that was adopted by Parliament in mid-2005.

### *Public Debt Channel*

A *third source* of moral hazard arises from the ambiguous signals sent to market participants by statutory prudential limits on local governments' debt stock (60 percent limit) and debt service (15 percent limit) in relation to their planned budgetary revenues. Under the 2004 amendment to the Public Finance Law, debt incurred for the funding defined in agreements with bodies allocating EU structural and cohesion funds was excluded from the local government debt service and debt stock limits (Art 113 and 114). This provision was subject to two different interpretations. Under the narrow interpretation adopted at the time by MOF, the exclusion pertained only to debt incurred for pre-financing of EU grants. Under the broad definition adopted by some local governments and Regional Audit Chambers (RIOs), the exclusion also included debt incurred for financing the local government counterpart contribution to EU grants (co-financing). This broad interpretation was based on the view that local government co-financing is an integral part of the agreements with agencies allocating EU funds mentioned in Articles 113 and 114 of the Act.

The 2006 amendment to the Public Finance Law resolved this ambiguity (Article 170). It explicitly stated that both pre-financing and co-financing of EU funds are excluded from the calculation of the debt limits during the period extending from the approval of the grant to its actual disbursement (T+2). This means that co-financings are included in the debt limits following the disbursement of the grant. This also means that, if for any reason the local government fails to secure the disbursement of the EU grant at T+2 (for example following inadequate procedures during the project construction period), the refinancings of pre-financing loans are also included in the calculation of the debt limits.

Given that debt incurred by local government for the purpose of pre-financing or co-financing EU cohesion and structural grants will constitute a large share of local government indebtedness in the coming years, the exclusion of this debt from the calculation of the prudential debt limits during the three-year period between the approval of the EU grant and its actual disbursement may easily result in a breach of the debt ceilings for local governments that are already close to the ceilings *ex-ante*, ie at the time of grant approval. This is particularly the case if the local government fails to secure the disbursement of the EU grant *ex-post* and is obliged to re-finance the loans taken for the purpose of pre-financing the EU grant.

In a legal and regulatory environment where creditors correctly price sub-national risk and assume that they will take a hit in case of default by a sub-national government, market forces may be relied upon to regulate sub-national credit and prudential limits. Several OECD countries have successfully adopted such system. However, in a situation where moral hazard permeates the market and where creditors do not correctly price sub-national risk, relaxing prudential rules on sub-national government borrowing may be very risky. In particular, the exclusion of certain categories of debt from the calculation of the debt service limit may send misleading signals to market participants and provide them with a false sense of comfort regarding the ability of sub-national governments to repay debt. In this context, the opinion of RIOs regarding the ability of local governments to repay debts within prudential rules has become a formality.

Given the current situation of the sub-national debt market in Poland, it would be advisable to enforce existing prudential limits, and in particular to avoid excluding certain categories of debts for the calculation of indebtedness ratios. Over time, as the reforms of the legal and regulatory framework for local government borrowing take hold, and as there is evidence that creditors correctly price sub-national risk, the prudential limits may be progressively relaxed and eventually phased-out and replaced by a requirement to obtain a credit rating by at least two reputable credit rating agencies. Critically, this relaxation should be seen as an integral part of a comprehensive package of legal and regulatory reforms. In particular, it should be accompanied at a minimum by the abolition of the Treasury recovery loan instrument, and by the adoption of a local government bankruptcy law (Chapter-11-type procedure, see below).

### *Financial Sector Channel*

A *fourth source* of moral hazard on the market is the treatment of sub-national debt under capital adequacy regulations of the General Inspectorate of Banking Supervision (GINB). Under these regulations, the risk-weighting ratio for sub-national government debt for the purpose of regulatory capital calculation is 20 percent. This ratio does not vary in accordance with the creditworthiness of sub-national governments.

The Basle II framework that will be implemented as of January 1, 2007 allows two options for the treatment of sub-national credit risk under the external approach. Under Option 1, the risk weighting ratio for sub-national debt is defined in relation to the sovereign rating, with the exception of domestic sub-national entities belonging to a preferential list established by the regulator. Under Option 2, the risk-weighting ratio for sub-national debt varies in accordance with the credit rating of the sub-national entity, with 100 percent risk weight in the absence of credit rating. The GINB has opted for Option 1 in case of sub-national credit risk in EU member countries, and for Option 2 in case of sub-national credit risk outside the EU.

Under Option 1, sub-national credit risk is assigned a credit category one level below the sovereign and the risk-weighting ratio corresponding to this credit category is applied to all sub-national debt in the country, irrespective of the creditworthiness of individual sub-national entities. For example, for level 1 sovereigns, sub-national debt is assigned a level 2 credit category, corresponding to a 20 percent risk weight. For level 2 sovereigns, sub-national debt is assigned a level 3 credit category, with 50 percent risk weight. And for level 3 sovereigns, sub-national debt is assigned a level 4 credit category, corresponding to a 100 percent risk weight. Under this Option, debt of Polish sub-national entities would be assigned a 50 percent risk weight.

However, Option 1 allows the regulator to establish a preferential list of domestic sub-national entities for which a lower risk weight is applied. Based on this provision, GINB plans to issue a preferential list containing all gminas and powiats, but excluding voivodships. As a result, the risk weight applied to gminas and powiats debts will be 20 percent, and the risk weight applied to voivodship debts will be 50 percent.

Municipal corporation debt is considered as corporate debt and assigned a risk-weighting ratio of 100 percent, reduced to 50 percent in case the debt is secured by real estate collateral.

The adoption of Option 1 for sub-national debt of EU member countries should be reconsidered and replaced by Option 2 for several reasons. First, Option 1 does not allow for setting risk weights in function of the underlying creditworthiness of sub-national entities, resulting in distortion in credit allocation and pricing among sub-national entities. Second, the establishment of a preferential list for specific categories of domestic sub-national debt under Option 1 results in further distortions in credit allocation and pricing among sub-national entities both across EU countries and within Poland based on their inclusion in, or exclusion from, the preferential list. Both effects contribute to moral hazard on the market.

### *Ex Post Government Interventions*

As mentioned above, since 2004 the central government has intervened *ex post* to bail out creditors in the case of debt default of a number of small municipalities. Several cases are currently pending. Several creditors have interpreted these interventions as a signal that the government will act in case of a default by a local government and they therefore assume 100 percent recovery in case of default in pricing sub-national government debt.

### *The Development of the Market is Hampered by the Lack of Market Transparency*

*Limitations in sub-national accounting, budgeting, and accounting frameworks.* The main weaknesses in the sub-national accounting, budgeting and auditing frameworks is the absence of distinction between current and capital expenditures, the absence of requirement for accrual accounting and the production of asset-liability statements, and the absence of external auditing requirement. On the other hand, the recent requirement to attach a multi-year investment plan to requests for external funding of investments constitutes a positive step toward improved disclosure to market participants.

The absence of a clear distinction between operating and capital budget expenditures under Polish public finance law makes it legally infeasible to limit sub-national borrowing



to the financing of investments (“golden rule of the balanced budget”). Recommendations for separation requirements were already made in the late 1990s, since this would support the monitoring and control of local borrowing and make investment programs more transparent. At the same time, the absence of requirements for accrual accounting and the production of asset-liability statements limit the information available to market participants on the financial situation of sub-national governments.

The absence of requirements for undertaking and publishing an external audit by sub-national governments further limits the amount of information available to market participants. In particular, the opinions of the Regional Audit Chambers (RIOs) regarding the ability of a sub-national government to repay a specific debt are not published, although they are available upon request from market participants under the Freedom of Information Act.

Since 2005, local governments requesting external funding for their investments are required to produce a multi-year investment plan, including a financing plan for their planned investments. This multi-year investment plan must be approved by the local government and is subject to review and approval by an RIO.

*Limitations in the legal and regulatory framework for inter-governmental undertakings.* The local government legislation allows the establishment of inter-governmental undertakings (such as inter-jurisdictional utility companies) with the authority to borrow. All the limitations discussed above for local government units apply to inter-governmental undertakings as well.

*Limitations in the legal and regulatory framework for private participation in local companies.* Until recently, the legal and regulatory framework for private participation in local companies was fragmented. This situation has been improved by the adoption of the Act on Public-Private Partnership (PPP) of July 28, 2005, which establishes general principles and procedures of cooperation between a public entity and a private partner in structuring PPP deals. Since then, MOF has prepared a draft regulation on the analysis of PPP transactions. The Ministry of Economy is responsible for preparing draft regulations for the estimation of risk sharing and for the registration of PPPs with the statistics office. Drafts of these regulations are still pending. In parallel, MOF has prepared amendments to the PPP Law covering (i) the methodology for assessing the benefit of a PPP by comparison with a standard public sector investment; and (ii) the conditions under which debt issued under a PPP transaction may be excluded from public debt. Until the draft regulations are completed and enacted and until the amendments to the PPP Law are adopted by Parliament, local governments and their private partners will continue to face considerable uncertainties in preparing PPPs, and will postpone the structuring and financing of PPP transactions.

In addition, the current prohibition under EU law against the use of EU structural and cohesion funds for the funding of investments undertaken with private sector participation constitutes a significant disincentive for the development of PPP undertakings. For example, in recent months, a major Polish city was forced to abandon plans for a PPP undertaking for waste management because the EU did not approve a grant from the Cohesion Fund due to the presence of minority private participation in the PPP structure. In order to circumvent this legal impediment, Poland could build on the experience of previous cohesion fund recipients and develop two-stage strategies for combining EU funds and the private financing of local services. In Stage 1, the local government would establish a company that is fully-owned by itself. The company would enter into contracts with

a construction contractor and with a facilities management operator. It would apply for EU cohesion fund grant and would issue bonds on the domestic market both to pre-finance the EU grant and to finance the domestic counterpart of the EU grant. In Stage 2, upon completion of the works and following disbursement of the EU cohesion fund grant, the company would be sold to a private investor. The facilities management operator could be given an option to buy the company, for example through a Swiss challenge.

### *Market Development is Further Hampered by Weaknesses in Market Governance*

Market governance suffers from the absence of a clear framework for local government debt default and recovery. Polish legislation gives the government powers to appoint a Commissar in case of debt default by a local government. However, the role of the Commissar is to ensure that creditors are made whole. The availability of the Treasury recovery loan instrument and its actual use further reinforces the signal to creditors that they will be bailed-out in case of debt default by a local government (see above).

### *Market Development is Negatively Affected by Distortions in the Framework for Competition Among Market Participants*

Establishing a competitive environment for sub-national finance is critical to enable the market to fulfill its role in efficiently mobilizing financial resources from investors, correctly pricing sub-national credit, and efficiently allocating financial resources among competing sub-national investments through diversified sub-sovereign debt products. In many countries, the framework for competition on the sub-national finance market is distorted by the presence of preferential financing schemes managed by government, specialized government agencies, or the banking sector. Preferential financing schemes displace private financing when the grant element of the scheme exceeds the cost of externalities that cannot be internalized by the market. Calibration of these externalities is often a challenge and calls for iterative fine tuning to eliminate “market displacement” while retaining the “market additionality” created by these programs.

In Poland, the two major sources of preferential financing schemes for sub-national entities are the National and Regional Environmental Funds and the various programs of the Bank of National Economy (BGK).

*Preferential financing schemes by the National and Regional Environmental Funds.* The National Environmental Fund (NFOSiGW) offers direct loans at below market interest rates to local governments, budgetary enterprises and municipal corporations. Regional Funds (WFOSiGW) typically offer even deeper interest rate subsidies. The level of subsidization depends on the type of borrower and to some extent on the type of project. As a general rule, the poorer the borrower the lower the interest rate. In the late 1990s there was a trend towards diminishing interest rate subsidy levels, but the subsidy rate started to grow again after 2001. This coincided with the first announcement of the pre-accession instruments (LSIF and ISPA), which lowered the appetite of local governments for borrowing for infrastructure investments in the anticipation of grants from the EU funds. The demand for environmental loans declined correspondingly, and the

Environmental Funds responded by lowering interest rates in an attempt to unload their rapidly growing resources.

Environmental Funds also offer interest rate subsidies on loans extended by commercial banks to borrowers for certain environmental projects. These operations created two main distortions. *First*, interest rate subsidies created incentives for banks to keep market interest rates high. *Second*, while this distortion could have been mitigated to a certain extent by the competitive selection of banks through tender, the National Fund typically favored the Bank of Environmental Protection (BOS) in accessing interest rate subsidies. By contrast, some Regional Funds (Krakow, Wroclaw) tendered interest subsidy programs to the least cost banks, thus partially mitigating these distortions.

Environmental Funds were originally intended to partially compensate for the market failures originating from underdeveloped financial markets and a weak fiscal decentralization framework during the early years of the transition. As these conditions have changed dramatically over the past 15 years, questions have been raised about the funds' value added and efficiency, in particular the extent to which the funds' resources are used to displace private finance rather than covering the cost of environmental externalities that cannot be internalized by the market. In light of this evolution, the funds have begun to rethink their role and have requested the World Bank—through a separate project—to help design their gradual transformation to the new market and policy environment.

*Preferential financing schemes by the Bank of National Economy (BGK).* The BGK manages a number of preferential financing schemes for sub-national entities.

- (i) Infrastructure Loans by the National Housing Fund (KFM). Over the past 10 years, BGK has made 80 loans to local governments to finance infrastructure investments related to social housing projects undertaken by social building societies. These loans were extended with a rate of one-half the rediscount rate (maximum 3.5 percent) and a maturity of 7 to 8 years. Each loan had a value of less than Zł 1 million. Demand for these loans has dwindled in recent years and they constitute only a marginal activity for the bank.
- (ii) *EU Guarantee Fund.* In 2004, the GINB introduced a change in regulations requiring banks to pay interest on their obligatory reserves with NBP. The NBP agreed to allocate a share of its interest income on banks regulatory reserves to an EU Guarantee Fund (EUGF) managed by BGK. The EUGF issues guarantees and sureties for loans taken by sub-national governments and corporations for pre-financing and co-financing of EU funds.

Guarantees cover 80 percent of the loan/bond value in case of pre-financing and 60 percent of the loan/bond value in case of co-financing. The amount of individual guarantees is limited to EUR 5 million in the case of project guarantees (normal and extended mode), and EUR 100 thousand in the case of portfolio guarantees. The price of sureties ranges from 0.50 percent (less than 1 year) to 1.50 percent (longer than 5 years) (one-time fee). The price of guarantees ranges from 1.00 percent (less than 1 year) to 2.00 percent (longer than 5 years) (one-time fee). Given the extremely low spreads on local government bonds (see Chapter 2 above), EUGF guarantees are not attractive to local governments, and have been used only for SME projects to date.

(iii) *Pre-financing Credit for EU Funds.* Expected EU funds to numerous projects—mostly environmental and road infrastructure projects—have been allocated and contracted. The actual works will begin around April 2006 with financial commitments to pay contractors as they advance with construction stages. These activities are bound to strain the contracting sectors capacity and the ability of sub-national governments to deal with investment budgeting, land-use planning and permit-approvals. The “N+2” principle for project completion imposed by the EU constitutes a challenge and creates risks of delays and uncertainty on expected EU reimbursements.

BGK has been contracted by the government to provide an initial cushion in this area by providing pre-financing credits funded through state budget and advances from the EU. These credits are preferential with below-market rates (0.5-0.7 of 52-week T-bills). Presently some 600 loans have been made and a pipeline of 500 is being processed. These loans amount to over Zl 3 billion. BGK believes the budget will not be able to handle increasing subsidy volumes and is considering ways for ending direct budget funding through the creation of a separate fund that would be capitalized by EU advances and bond issuances to institutional investors. At the same time, commercial banks are preparing pre-financing products on their own in expectation that BGK’s interest rate subsidy will be phased-out. BGK is considering a product for enhancing lending by commercial banks for pre-financing and co-financing. The bank is also playing the role of “operator” in linking pre- and co-financing and construction lending.

### *Market Development Suffers from Deficiencies in the Asset-liability Management Capacity of Many Local Governments*

The creditworthiness of many municipalities suffers from their lack of a coherent asset-liability management (ALM) approach. On the asset side, municipalities’ budgets suffer from the lack of pro-active management of municipal real estate assets, which are not viewed as part of their asset-liability management system. There are incomplete asset inventories in terms of asset-specific economic and financial data to support a performance evaluation against explicit targets and market benchmarks. Consequently, contribution of net asset income is often suboptimal and asset values are below their potential. Asset management strategies are inexistent and have been typically reduced to sale and lease auction procedures to generate funds for financing operating budget deficits. On the liabilities side, municipalities suffer from a lack of adequate risk management systems and capabilities.

Capacity building efforts aimed at introducing modern asset-liability management techniques by local governments should be a priority as part of the authorities’ efforts to increase the absorptive capacity of EU funds by local governments.

### *MOF and NBP Can Take Specific Measures to Address These Impediments*

A package of mutually-reinforcing policy reforms is required to unlock the potential of the general obligation bond market for local governments. Without such reforms, the market will not take off and it will fail to realize its potential to spread sub-national risk across the

financial system and to mobilize institutional investor resources to finance local infrastructure investments.

There is a broad support among market stakeholders for a policy reform package that would be structured around the five following pillars:

- *First*, pursue fiscal decentralization by increasing the degree of fiscal autonomy of sub-national governments, in particular by removing ceilings and mandatory exemptions on local government own taxes, allowing more market calibration of property tax rates, and promoting the development of asset-liability management capacities, including pro-active management of municipal real estate assets. Increased fiscal autonomy should be linked with the implementation of action plans to strengthen the capacity of local governments' financial departments.
- *Second*, create the conditions for investors to adequately price sub-national risks in local government general revenue bonds, specifically by: (i) abolishing the Treasury recovery loan instrument; (ii) adopting a local government bankruptcy law (Chapter 11-type procedure) that sends a clear message to creditors that they will take a hit in case of default by a local government; (iii) introducing a variable risk-weighting ratio for local government debt in the calculation of banks' regulatory capital based on sub-national credit rating (Basle II—option two) and applying a 100 percent risk-weighting ratio in the absence of rating; (iv) enforcing prudential limits on local government borrowing in the short term, progressively relaxing them over the medium term as the reforms of the legal framework for local government borrowing take hold and as there is evidence that creditors correctly price sub-national risks, eventually phasing them out and replacing them by the requirement to obtain a credit rating by at least two reputable credit rating agencies; and (v) dropping the formal requirement of having an opinion of an RIO concerning the local government ability to service a specific debt.
- *Third*, improve market transparency through introducing a distinction between current and capital expenditures in local governments' budgets, limiting local government borrowing to the financing of capital expenditures, requiring the production of accrual accounts by all local governments, and requiring an external audit as a condition for local government borrowing.
- *Fourth*, establish a level playing field on the sub-national finance market, by (i) gradually phasing out preferential loans offered by Environmental Funds and limiting environmental fund grants, so that targeted public funding provides true additionality to market finance; these niches should be clearly identified in the Country Development Strategy for 2007–2015; (ii) phasing out the BGK program of loan guarantees for the co-financing of EU funds and its program of preferential credits for EU fund pre-financing, and encouraging BGK to securitize its portfolio to provide funding through institutional investors.
- *Fifth*, refrain from any intervention in case of debt default by a local government, letting the local government bankruptcy process unfold and creditors being hit, and letting the experience of low recovery after default on local government debt being seared in market memory.

### ***Strong Interest Exists Among Market Stakeholders for the Development of a Bond Pooling and Enhancement Instrument for Bonds Issued by Small Municipal Corporations and/or Municipalities***

As the market develops and normal conditions for the pricing of local government debt are established, the conditions of market access by various local governments will vary in function of their risk profile. At one end of the spectrum are local governments and municipal corporations at, or close to, investment grade rating, which have achieved full market access on their own and do not need any support. Next are low to medium-risk local governments and municipal corporations, whose market access conditions could be enhanced through credit enhancement/pooling instruments without the need to obtain a sovereign counter-guarantee. Next are medium to high-risk local governments and municipal corporations whose market access conditions could be enhanced through credit enhancement/pooling instruments preferably with sovereign counter-guarantee. Finally are local governments and municipal corporations that are denied market access due to their high risk profile, resulting from their poor economic base, unsustainable level of indebtedness, and/or lack of accounting visibility.

In the short term, spread compression leaves little or no room for enhancement on the local government debt market. By contrast, as shown in the case of the Bydgoszcz water company, revenue bonds issued by municipal corporations are priced at risk. As part of the development of this market segment, several market participants have expressed interest in the development of a bond pooling/enhancement instrument that would initially cover municipal corporation obligations, and could be subsequently extended to cover municipal obligations when market conditions allow.

This instrument could be structured as a special-purpose vehicle (SPV) and would cover a broad range of sectors, including water and sewerage, urban transport, district heating and co-generation, local and regional infrastructures (ports, airports), and housing development. The pooled bonds would have a minimum size of for instance Zł 100 million, and could be enhanced by a liquidity facility provided by a highly-rated international lender such as an IFI, *without sovereign counter-guarantee*. Through such structure, the facility would provide the combination of liquidity and rating required by institutional investors. The absence of sovereign counter-guarantee would minimize the potential fiscal impact for the government, while still allowing the bonds to achieve a sufficient credit enhancement resulting from the facility's sound financial structure and strong shareholders. The NBP and the World Bank could jointly undertake a detailed feasibility study of such an instrument, to be shared among key stakeholders in central government, local governments and the private sector. Technical Appendix E describes the key features of such SPV.

# Technical Appendixes

---





# Development of the Fixed-income Securities Market, 2001–04

---

## Money Market

### *Monetary Policy Framework*

In September 1998, the NBP adopted a *Medium-Term Strategy for Monetary Policy*, which introduced the explicit target of reducing inflation to below 4 percent by the year 2003. In response to the monetary policy tightening, inflation fell in recent years to the levels observed in developed economies. At the end of 2003, the NBP adopted a new *Monetary Policy Strategy beyond 2003* to serve as policy framework in a low-inflation environment. After a period of reduction in the inflation rate, the Monetary Policy Council (MPC) adopted a policy stance oriented toward the stabilization of inflation at a low level (NBP 2003). This would set the country on a path toward eventual entry into the euro zone.

In the second half of 2003, an increase in interest rate risk was observed in the Polish bond market which, in turn, led to an increase in the demand for short-term debt instruments. NBP's reluctance to implement deep interest rates cuts triggered market speculation about future significant cuts, leading investors to focus on FX swaps (NBP 2004). Main investors in FX swaps were major domestic banks and foreign banks based in Frankfurt and London. As a result, FX swaps became one of the main money market instruments in Poland, together with Treasury bills (T-bills)<sup>5</sup>, NBP bills, commercial bank and corporate short-term paper, repos and sell-buy-back transactions.

---

5. T-bills in Poland have maturity up to two years with no coupons, *i.e.*, discount instruments.

**Table A.1. Debt Level, as of End of Year, by Particular Money Market Instruments  
(in billions of zlotys)**

	2001	2002	2003	2004
Treasury bills	35.2	42.0	48.1	46.9
NBP bills	14.3	7.3	6.0	5.7
Corporate short-term debt securities (CPs)	n.a	8.0	7.3	6.5
Commercial bank short-term debt securities	1.8	2.8	3.5	2.7
Non-secured deposits (inter-bank deposits) <sup>1</sup>	25.0	23.5	22.3	25.1
Collateral deposits (swaps and conditional transactions) <sup>2</sup>	n.a	n.a	n.a.	n.a

<sup>1</sup> Due to changes in reporting procedures and efforts to preserve the comparability of data, the value of received deposits do not include O/N deposits so they are lowered by about Zł 5–7 billion. For 2003, the numbers are as of end of June.

<sup>2</sup> Data received from banks reporting make it impossible to determine the value of banks positions from foreign exchange swaps, repo, and SBB transactions.

*Source:* NBP data.

In 2004, the MPC raised main interest rates three times by a total of 125 basis points in response to the increase in inflation that followed Poland's entry into the EU. Yearly consumer price inflation reached 5.0 percent in July 2004, its highest level since 2001. However, inflation fell sharply in the first half of 2005, reaching 1.4 percent in June 2005, well below the central bank's 2.5 percent target. As a result, NBP cut rates in March, April and June of 2005 by a total of 150 basis points. In June 2005, the minimum yield on seven-day open-market operations fell to a record low of 5.0 percent, the Lombard rate was 5 percent, while the rarely used rediscount rate was 5.5 percent, and the base deposit rate 3.5 percent (EIU 2005).

### *Repo Market*

Repo and sell-buy-back (SBB) transactions were introduced in February 2002, contributing to securing payments liquidity. Because Treasury bills are the dominant form of collateral for those secured transactions, the high turnover on the secondary market of T-bills in 2002–2003 can be explained by strong investors' interest in repos and SBBs. In 2003, they amounted to 93 percent of the gross turnover of T-bills and to 88.1 percent in 2004 (NBP 2005).

Due to legal impediments imposed on repo transactions such as mandatory reserve requirements on repo transactions with non bank financial institutions (exceptions specified by the NBP Law), and limitations on conducting repo transactions by institutional investors, the repo market segment remains much smaller compared to the SBB segment. By the end of 2004, the average daily turnover on the SBB market reached Zł 4.3 billion (a 10 percent increase over 2003), compared to Zł 180 million on the repo market (NBP 2005).

Repo transactions are conducted only between banks and account for 43 percent of the inter-bank secured transactions market (NBP 2004).

The repo market is dominated by short-term transactions secured by T-bills with maturities of several days. For example, in 2003 overnight transactions accounted for 57 percent of market turnover while operations with maturities of less than seven days accounted for 32 percent. Transactions executed for periods longer than 1 month accounted for only 2.5 percent of the market, reflecting the low activity level of customer repos (NBP 2004).

In order to limit the risks associated with repo transactions, an Interbank agreement on repo transactions executed on the Polish interbank market with MOF Treasury bills and NBP money market bills was prepared in 2000. The purpose of this document was to implement uniform rules of the security delivery, confirmation of transaction, payment, margin requirements for price differential, and rules for sanctions against a default by a counterparty in a repo transaction. Due to the lack of acceptance from some of the banks, the document did not become effective. As a result, an alternative document was prepared—a recommendation on the execution of repo and sell-buy-back (SBB) transactions—which covered both T-bonds and money market bills as well as T-bills. The list of instruments included in practice may be further extended by introduction of new annexes. This document was adopted by the Management Board of the Polish Bankers' Association (ZBP) in November 2001 (NBP 2002).

The development of the repo market was positively affected by the adoption of the recommendation. The document provides for a uniform legal basis for repo transactions as it lays down basic rules governing the trading agreement and settlement of transactions, use of security and consequences of default by one of the counterparties. The provisions of this recommendation are now standard practice among market participants.<sup>6</sup>

## Government Bond Market

The structure of debt securities issued by the central government changed significantly between 2001 and 2003 with the share of long-term securities increasing from 48 percent in 2001 to 58 percent in 2003 (ECB 2004). The notable 47 percent increase in Treasury bond issuance outstripping that of Treasury bills is generally perceived as a sign of financial stabilization and disinflation in the Polish economy.

Central government debt has been growing in 2002–2004 due to an increase in government borrowing needs accompanied by a decline in privatization revenues. In 2004, the public sector deficit increased by Zł 4.4 billion and public debt increased by 16.1 percent compared to 2003. As a result, the T-bond market accounted for 73.6 percent of the total domestic debt market in 2004, or well over 90 percent of the market of long-term domestic debt instruments. Comparable shares are much lower in the euro area, amounting to 43 percent and 48 percent respectively (NBP 2004 and 2005).

In 2002, the Ministry of Finance (MOF) adopted a medium term strategy aimed at lengthening and standardizing the maturity of public debt. As part of this strategy, 20-year T-bonds were issued for the first time in April 2002, and MOF converted non-tradable debt into tradable debt. In the years 2002–04, tradable bonds were the most rapidly expanding

---

6. Management Board of the Polish Banks Association, *Recommendation on the execution of repo and sell-buy-back transactions*, Warsaw, November 9, 2001, p. 2.

segment of the Treasury securities market, and the share of tradable bonds in the total government debt increased from 66.7 percent in 2002 to 77.7 percent in 2004 (NBP 2005). Among tradable bonds, fixed rate bonds were the most rapidly growing instruments, and the share of fixed rate bonds in the active bond market increased from 86.9 percent in 2002 to 91.6 percent in 2003. The increasing share of fixed rate bonds in financing budget deficit in the years 2002–03 has brought the profile of the Polish T-bond market closer to that of mature government bond markets. For comparison, in 2003, 96 percent of EU public debt was financed through fixed rate instruments (NBP 2005). During 2004, however, a greater volume of floating rate T-bonds were issued. In an environment of rising inflation accompanied by higher interest rates, MOF viewed these bonds as a less expensive way of obtaining funds. Despite this evolution, the share of floating rate bonds in the market has remained small, and amounted to 10.2 percent as of end of 2004 (NBP 2005).

In the foreseeable future, the Treasury bond market is expected to be a source of steady, albeit modest, growth, as Poland begins to comply with Maastricht convergence criteria in preparation for joining the euro area. The *Strategy for the Management of Public Debt* adopted by MOF in 2003 stresses the need to reform public finances and to adjust the domestic market of Treasury securities to European standards (MOF 2003). According to the Strategy, this adjustment should take place through limiting the number of bonds issues while increasing the value of each issue to an equivalent of at least Zł 2.5 billion (NBP 2004). The goal of the Strategy is to stabilize the costs of government debt servicing. Strengthening the benchmark yield curve while achieving public finance consolidation will require promoting the development of the non-government debt market to minimize the buy-and-hold of government securities by institutional investors.

**Table A.2. Structure of State Treasury Debt in 2001–03 (Billions of Zlotys, as of End of Period)**

	Debt Amount				Growth Rates (in percent)			
	2001	2002	2003	2004	2002	2003	2004	04/01
State Treasury debt	283.9	327.9	378.9	402.9	15.5	15.6	6.3	41.9
1. Domestic debt of State Treasury	185.0	219.3	251.2	291.7	18.5	14.5	16.1	57.6
1. Debt on account of Treasury securities	176.0	212.4	246.0	286.9	20.6	15.8	16.6	63.0
1.1 Marketable Treasury securities	158.7	195.9	232.6	273.5	23.4	18.7	17.6	72.3
—Marketable bonds	123.5	153.9	184.5	226.6	24.6	19.9	22.8	83.5
—Fixed rate bonds	97.5	133.8	169.0	200.9	37.2	26.3	18.9	106.0
—Floating rate bonds	25.9	20.1	15.5	23.0	-22.6	-22.6	48.3	-11.2
1.2 Savings Bonds	6.1	7.7	7.4	9.1	27.4	-3.5	21.5	49.4
1.3 Non-marketable Treasury securities	11.3	8.8	6.0	4.3	-22.4	—	—	-61.7

Source: Ministry of Finance data.

### *Primary Market*

T-bonds are sold through auctions organized by the NBP, the issue agent of the MOF, with the National Depository for Securities (NDS) as settlement agent. Only direct participants of the NDS are eligible to participate in auctions with the MOF reserving the right to buy back T-bonds through an auction at any time after issuance (Batten, Fetherston, and Szilagyi 2004).

Since 1999, the value of individual issues has increased from Zł 1.2 billion to more than Zł 5 billion in 2003. The most liquid issues are the 2-year zero-coupon and 5-year fixed-rate bonds. The issuance of 10- and 20-year bonds, which are crucial for consolidating the benchmark, has been so far insufficient (Batten, Fetherston, and Szilagyi 2004).

The primary market is dominated by the issues of wholesale T-bonds. These issues accounted for Zł 62.5 billion out of total value of Zł 67.8 billion of T-bonds issued in 2003 (NBP 2004). In 2004, the gross issuance of wholesale T-bonds increased by 38.4 percent compared to 2003 (NBP 2005). Since 2003 the sale of wholesale active T-bonds as well as T-bills has been conducted through auctions targeted to a selected group of Primary Dealers (PD).<sup>7</sup> Also, new forms of selling of wholesale T-bonds have been introduced, including buyback auctions and exchange offers,<sup>8</sup> and so-called private placement.<sup>9</sup> The buyback auctions and exchange offers were expected to limit the refinancing risk and to increase the value of so called benchmark issues (NBP 2004). In 2001, MOF introduced switch auctions consisting of repurchase of bonds of a given series before maturity with investors receiving bonds of benchmark issues in exchange. This, in turn, was expected to increase the liquidity of the market (Batten, Fetherston, and Szilagyi 2004). The sale of Treasury bonds at buyback auctions and exchange offers accounted for 9.1 percent of all bonds sold through the auctions in 2003 (15.9 percent in 2002; NBP 2004). In 2004, a new form of selling (private placement) has been introduced which accounted for only 0.9 percent of total sales.

The sale of retail bonds has been conducted since the beginning of September 2003 through the customer service stations of Bank PKO BP. Retail investors can purchase T-bonds with fixed and floating rate. Tradable retail bonds are directed to both domestic and foreign physical and legal persons (with the exception of financial institutions) and, in contrast to savings bonds, are not callable (NBP 2004).

### *Secondary Market*

Central government issues dominated in the secondary domestic market for debt securities in 2001–03. The turnover in this segment amounted to 95.8 percent of all secondary market activity in debt securities in 2003 (ECB 2004). Among the main factors behind the high turnover in T-bond secondary market were:

- declining interest rates, which became the source of additional profits for the holders of fixed rate T-bonds,
- expanding secured transactions (repo and SBB), in which T-bonds were used,

---

7. A selected group of banks. The system of PD functions based on the agreements made between the MoF and the selected group of banks.

8. The repurchase of Treasury bonds before the date of their maturity with offering at the same to the investors the purchase of new Treasury securities.

9. Direct selling of T-bonds to a selected investor or a group of investors with the omission of the market.

- increasing volume of issuance, which allowed large investors to enter the market,
- the introduction of the electronic trading platform for treasury securities, and
- the consolidation and standardization of instruments by reopening, buybacks, switch auctions, and exchange offers.

The high turnover observed in the years 2002–2003 has declined in 2004 due to a decrease in T-bond prices in the first half of the year. This stabilization of turnover accompanied by growing central government indebtedness resulted in the declining liquidity of the T-bond market. Turnover ratio was 1.39 in 2004 compared to 1.67 in 2003 (NBP 2005).

Currently, T-bonds are traded on three secondary markets: non-regulated, stock exchange, and recently created regulated market operated by the MTS CeTO S.A. MTS CeTO S.A. operates two electronic markets: MTS Poland, a wholesale secondary market for treasury securities, and RPW CeTO, a regulated retail secondary market for fixed-income (and few shares of SMEs). MTS Poland uses a hybrid system which provides anonymous matching (order-driven) for cash market and non-anonymous quoting with trade confirmation and RFQ (request for quote facility) for Repo and buy and sell back transactions. RPW CeTO uses an order-driven system.

The new electronic regulated market constitutes only a small fraction of non-regulated T-bond market turnover to date. The concentration of turnover in the non-regulated market can be explained with the following factors:

- reluctance of banks to reveal information on purchasing and selling prices of T-bonds,
- organizational structure of the primary market, in which banks are the main buyers of T-bonds,
- lower costs of trading (lack of obligatory intermediation by brokers, stock exchange fees),

**Table A.3. Shares of Individual Markets in the Trade in T-bond Market (in percent)**

Year	Unregulated Market <sup>1</sup> Operations	WSE	CeTO <sup>2</sup>	NBP Open Market Transactions
1998	92.5	6.4	1.1	—
1999	95.6	4.2	0.2	—
2000	97.6	1.8	0.1	0.5
2001	98.0	0.6	0.0	1.4
2002	94.2	0.2	5.0	0.6
2003	94.1	0.4	5.4	0.1
2004	96.3	0.2	3.1	—

<sup>1</sup> Including repo and sell-buy-back transactions.

<sup>2</sup> Electronic Treasury Securities Market was established within the CeTO market in April 2002. Therefore, data for 2002 are not comparable with data from previous years.

*Source:* NBP study based on NBP and KDPW data.

- higher liquidity of the non-regulated market, which allows for placing large orders without a strong impact on prices as is the case with the ERSPW, and
- lack of access to the ERSPW for foreign banks.

The concurrent functioning of three secondary markets for T-bonds leads to their specialization. Consequently, transactions in non-regulated and electronic markets are conducted predominantly by institutional investors while individual investors concentrate on the stock exchange market.

## Sub-national Bond Market

The Polish sub-national bond market has grown strongly in recent years, reaching Zł 3.4 billion bonds outstanding as of the end of Q1 2006. With one exception (see below), all of the issues have been in the form of general obligation municipal bonds (*obligacje komunalne*), and a few general obligation powiat (county) or voivodship (regional) bonds. Despite the rapid fall in inflation (2.1 percent currently), nearly all sub-national bonds are amortizing instruments with a variable coupon rate, with the 52 weeks T-bill yield as benchmark. Maturities extend up to 15 years. The lead managers on the market are PKO BP (36.9 percent market share), followed by PKO SA (27.1 percent), and BGK (9.1 percent). In the first quarter of 2006, PKO SA took the lead in new issuances (58.6 percent), followed by PKO BP (18.3 percent) and BISE (8.5 percent). Banks are the main investor on the market, with 78.0 percent market share as of end-February 2006, followed by foreign entities (13.3 percent), mutual funds (4.1 percent) and insurance companies (1.9 percent). Pension funds do not invest in municipal bonds. The low interest of institutional investors in sub-national bonds is explained by internal policies restricting investments in less than investment grade securities, the small size of most issues, and extremely low spreads.

The market for sub-national bonds is composed of two formal segments. The first segment (about 90 percent of the market) consists of privately issued bonds of relatively small sizes that are typically purchased by lead underwriters who hold them to maturity. The second segment consists of five publicly-issued municipal bonds to date (two in Ostrow Wielkopolski, one in Rybnik, and two in Poznan). These issues are listed on the regulated off-exchange market (MTS-CeTO). These issues were purchased by lead underwriters and by institutional investors who generally hold them to maturity.

As a result, the secondary market for public issues is very narrow, and trades are sporadic. However, banks offer sub-national bonds as part of master agreements with their corporate and private banking clients. These placements are made with an implicit buy-back guarantee. The Polish Banking Association (ZBP) is currently working on a project of a clearing house for non-government bonds, which would increase trade frequency and improve liquidity for non-publicly traded bonds.

The privately-issued segment of the market consists of three types of bonds by their intended use: (i) investment financing bonds (about 75 percent of the segment); (ii) current deficit financing bonds (about 15 percent of the segment); and (iii) financial recovery “distress” bonds (the remaining 10 percent of the segment). Recovery bonds are issued by local governments that can no longer pay their suppliers and are placed by investment advisors with banks through direct negotiations. Spreads on investment financing bonds are

very narrow (from 10 to 50 bps above 52w T-bill yield, or from 10 bps below to 30 bps above WIBOR). Spread level and variation do not reflect underlying credit risk. By contrast, spreads on current deficit financing bonds and on recovery bonds range up to 200 bps.

The spread compression for investment financing bonds can be explained by a combination of factors. First, excess liquidity in the banking system. Second, State-owned PKO-BP, the largest investor on the market, considers sub-national government bonds as a riskless paper and exercises its pricing power to impose the 52w T-bill yield as the benchmark on the market and to compress yields. Several private banks indicate that sub-national paper that would be priced at 100 bps above WIBOR based on their internal risk analysis is being privately placed with PKO-BP at 10 bps above the 52 w T-Bill yield, or about 10bps below WIBOR. Third, several elements of the legal and regulatory framework for sub-national borrowing tend to reinforce the perception that sub-national governments cannot ultimately fail, resulting in moral hazard.

The water/sewerage company of the City of Bydgoszcz issued the first revenue bond on the Polish market in December 2005. The issue was priced at 130 bps over WIBOR with a maturity of 18 years. Citibank Handlowy and PeKaO SA prepared the offer that is widely seen as a benchmark issue of a fledgling revenue bond market with major potential. Several cities are envisaging revenue bonds to finance investments by existing municipal corporations or newly-created special purpose corporations (for example for road rehabilitation), and are ready to follow the lead of Bydgoszcz and proceed with bond structuring and issuance.

Bonds issuance presents a number of advantages vs. loans issuance for sub-national entities. First, the selection of lead bond manager/underwriter is not subject to the public procurement process, as opposed to the selection of bank in the case of a loan. Second, bonds are unsecured obligations, while loans require security collateral. Third, nearly all bonds are based on 52-week T-bill yields while loans are based on the six-month WIBOR, although market participants expect a shift away from the T-bill to WIBOR as benchmark for sub-national bonds due to the reduced number of tenders and the reduced liquidity of T-bills. Fourth, banks are required to monitor the use of loan proceeds, while no such obligation exists in the case of bonds. Finally, sub-national governments perceive private bond issuance as quick and cost-effective way to raise resources from the bank that holds their consolidated current account (as low as three weeks from initial request to placement with some banks).

## Corporate Bond Market

The corporate bond market has grown rapidly in recent years, albeit from a very low base (see Table A.4 below). Corporate bonds issuance increased by 40 percent between 2002 and 2003 (NBP 2005). In 2004, the non-banking corporate bond market grew further by 37 percent, reaching Zł 7.26 billion as companies restructured their debts and switched to longer-term maturities (EIU 2005). Corporate bonds may be fixed or floating rate instruments. Floating interest is calculated as a base rate (yield on either 52-week T-bills or T-bonds or six-month WIBOR) plus margin. Some issuers peg their interest payments to other indicators, such as the inflation rate. Special types of corporate bonds are convertible bonds, whose issuance is regulated by the Commercial Code of 2001, and revenue



**Table A.4. Corporate Debt Value**

	2001	2002 <sup>1</sup>	2003 <sup>2</sup>	2004
Debt value (in Zł billions)	n.a.	3.90	5.54	6.94
Number of issuers	51	53	59	69

<sup>1</sup> Data as of end of January 2003.

<sup>2</sup> Data as of end of January 2004.

n.a. Data not available.

*Source:* NBP data received from Treasury securities dealer banks and (or) money market dealer banks and applicants for the function, Fitch Poland SA.

bonds, introduced by the amendment of the Bond Act in 2000.<sup>10</sup> However, the market is still small compared with the equity market and with the government securities market, and also by comparison with other important emerging markets.

Among the factors behind the growth of this segment of debt market are amendments made in 2000 to the Act on Bonds which liberalized the procedures of bond issuance in compliance with EU regulation. As a result of these amendments, it is no longer obligatory to appoint a representative bank in public offerings, which reduces issuance costs. Also, issuers, except for municipalities or other local government bodies and public utility corporations, are no longer obliged to specify the purpose for which the bonds are to be issued (Batten, Fetherston, and Szilagyi 2004). This has made the financing through corporate bonds attractive to the issuer, compared to bank loans as the issuer may use obtained funds for the repayment of his other financial obligations (NBP 2004). An additional benefit stemming from the issuance of corporate bonds is that the bond holder cannot request an earlier buyback if the issuer fulfills their financial obligations on time (Bien 2004). This, in turn, contributes to financial stabilization of companies.

### *Primary Market*

Among the main issuers of corporate bonds in the years 2002–03 were telecommunication companies and financial institutions owned or controlled by banks. The issuance of these two groups accounted for over 50 percent of all corporate bond issued in the examined period. The value of issuing programs ranged from Zł 0.5 million to Zł 1.1 billion. Among the largest issuers were: Telefonía Dialog (Zł 1.1 billion), the Polish State Railways (Zł 1 billion) and the Agency for Industrial Development (Zł 600 million; NBP 2004).

Most corporate bonds are privately placed. Only 3 out of 19 companies issuing corporate bonds in 2002–03 were listed on the Warsaw Stock Exchange (NBP 2004). While

10. The Act on Bond (Law Journal 83/1995, 118/95, 98/97, 106/98 and 60/2000) as amended by the Act on Public Trading of Securities.

private placements of secured bonds<sup>11</sup> may be made by any issuer without any restrictions, to place unsecured bonds privately the issuer must have been in existence for at least three years and must have share capital of at least Zł 5 million (EIU 2005). Major investors in private placements are enterprises and banks, which together hold about 60 percent of total corporate bonds issued.

Although the law does not require a bank's intermediation, most of the issues are organized by banks. Among the major banks involved in corporate bond issuance are Citibank Handlowy, PKO Bank Polski, BRE bank and Bank Zachodni WBK (EIU 2005).

### *Secondary Market*

The main secondary market for corporate bonds is the non-regulated market where transactions are settled by the banks organizing their issuance. The only available data relate to the turnover on the regulated over-the-counter MTS-CeTO market. The turnover in this market has increased in 2004 by more than three times compared to 2003. As of June 2005, CeTO listed bonds issued by 13 corporate entities (EIU 2005). Turnover in the secondary market remains small, however, as investors treat their holdings as long term investment. Although some leading banks presently quote bid and ask prices for certain issue series, such quotations however are conducted only for information purposes (Batten, Fetherston, and Szilagyi 2004).

### **Investor Base**

The Treasury bond market is dominated by domestic investors, among which banks constitute the largest group. Their share in the market accounted for 78.1 percent in 2004 (NBP 2004). At the same time, one can observe a growing activity of foreign investors in the market as a result of Poland's investment grade rating (FX BBB+ positive) and as a result of convergence plays.<sup>12</sup>

Sub-national bonds are also purchased mainly by domestic banks. As of end of 2003, these institutional investors held 90.8 percent of municipal bonds in their portfolios (NBP 2004). Their large share in the market results from the banks' function of issuing agent and organizer of non public secondary turnover for municipal bonds. Due to low liquidity of municipal bonds the share of mutual investment funds in the market is small.

As far as corporate bond market is concerned, non financial corporations and banks hold the majority of issues. In 2003, they collected in their portfolios 66 percent of all corporate bonds (NBP 2004). The share of other institutional investors, mainly insurance companies, has been growing in recent years.

---

11. Either collateralized or guaranteed by the state or the major Polish bank.

12. Expectations of bond price increases to the level found in the EU countries.

# The Repo Market: Legal and Regulatory Framework and Infrastructure for Clearing and Collateral Management

---

The limited volume of classic repo transactions as compared to sell-buy-backs (SBBs) seems largely due to the reserve requirement for banks in repos with non-bank counterparties. In theory, a key benefit of repos should be that it eliminates principal risk which constitutes a large part of counterparty risk. By doing so, repos enable market participants to trade with a wider range of counterparties without worrying too much about their creditworthiness. By allowing each market participant to widen its exposure limits against counterparties, the market will deepen, widen and grow. The wider and more diversified repo market in terms of type of participants will also further deepen and stabilize the money market, as well as make the distribution of liquidity in the banking system more even, making it less sensitive to changes in the level of excess reserves of the banking system.

NBP may be concerned about the inadequate control that banks can exercise over securities pledged in repos by non-bank counterparties which do not hold current accounts at the central bank nor directly participate in the registry of T-bills and NBP bills. Non-bank counterparties only indirectly participate in those registries through banks and custodians. Unlike the case of SBBs,<sup>13</sup> the underlying securities in classic repos remain in the book of the seller although the seller (the pledger) should not have control over them to prevent multiple pledging.<sup>14</sup> NBP directly administers banks' current accounts and the book-entry registry for T-bills and can block T-bills pledged in repos between banks.

---

13. Where ownership of the underlying securities actually changes hands.

14. T-bills pledged can be blocked in an account of the book-entry registry or that of the seller (the pledger) itself in the book-entry system.

However, the existing system may not allow NBP to exercise such direct control over accounts of non-banks participating in the repo market.

It seems worth reviewing the functional design of the repo clearing module built in the registry and linked to the real time gross settlement (RTGS) system operated by NBP. The chart of accounts adopted at NBP could also be examined to identify if there is any room to enhance the control of assets pledged by non-bank counterparties. There may be some legal issues related to privacy in allowing such control by NBP. It would also be worth reviewing whether there is any room to enhance the effectiveness of the collateral control at the custodian level. Such enhancement would provide a more universal solution for allowing banks to deal with any types of counterparties in the repo market.

There may also be some difficulty in using T-bonds for repos since T-bonds are kept in custody by the National Securities Depository (NSD). Unlike the T-bills registry operated by NBP, the NSD provides its users the choice between net and gross settlement. Because net settlement remains popular, the fact that NSD has an account in NBP's RTGS system does not automatically provide for delivery versus payments (DVP) settlement on a gross basis in both securities and money. Aside from the ease of using discount instruments for repos, the inadequacy of links between the RTGS system and the NSD may be another reason for unpopularity of T-bonds as an underlying asset for repos. If so, it would be worth exploring ways to enhance the link between the two.<sup>15</sup>

The inefficiency of required collateral management may be another reason why classic repos are only slowly accepted. This is a commonly observed phenomenon in many countries. Trading call loans with known counterparties is certainly simpler and faster when a market participant needs immediate liquidity. To some extent, this is a matter of learning and streamlining the processing of a repo transaction with a market participant (between front, mid, and back offices).

There may also be a concern regarding a possible risk of default by non-bank counterparties since effective collateral or delivery-versus-payment (DVP) settlement do not rule out the possibility of default. Given the present level of financial market development, in particular the increasingly liquid government securities market, banks as fixed income dealers are likely to be engaged in a significant volume of back-to-back trades. In such a case, the fact that a credit is secured is insufficient to ensure sound liquidity management by banks because a default by a market participant may prevent a counterparty to pay for another back-to-back trade, creating systemic risk. If there is in fact a high volume of back-to-back trades vis-à-vis banks, it is legitimate for NBP to be concerned about ensuring their prudent management of liquidity in dealing with a riskier counterparty.<sup>16</sup>

The risk of default is not unique to classic repos but also applies to SBBs. However, SBBs allow easier foreclosure and liquidation of collateral in case of default or bankruptcy of counterparty because they enable the buyer to gain direct control of the underlying securities. Yet, SBBs also allow the buyer to do further SBBs or repos with the securities obtained by being a counterparty to a SBB transaction (or doing a BSB transaction). This possibility may enable the generation of additional liquidity in the SBB market, allowing

---

15. More generally, the NBP's book entry system may be consolidated into the national securities depository if certain conditions are met. This issue is discussed further in section III.3.4 Custody and Settlement below.

16. This concern sometimes leads to an idea of creating a central counterparty (CCP).

an expansion of back-to-back trades. If so, NBP should make sure to address issues of systemic risk. Market participants may seek a facility to automatically provide liquidity against foreclosed securities. Should such a facility be created, it should be designed to control potential moral hazard by market participants that are given access to it. If NBP is to provide such a facility, it should also be designed to control the impact on money supply.

Another cause cited by market participants for the underdevelopment of classic repo market is a regulatory restriction imposed upon institutional investors to engage themselves in repos. It is conceivable that there are different regulatory concerns about the participation of different types of institutional investors in the repo market beyond the effectiveness of collateral discussed above. For example, it is not uncommon to find some restrictions on borrowing imposed upon mutual funds.<sup>17</sup> Insurance companies may be faced with some restrictions due to prudential concerns with respect to short-term borrowing and lending. Pension funds may be encouraged to invest long-term and limit borrowing. It is worth reviewing whether existing restrictions are justified or whether there is any room to relax some of them without compromising legitimate prudential and systemic concerns.<sup>18</sup>

---

17. In Poland, mutual funds seem to be recognized with legal personality. It is, therefore, not a trust, but nor is it a company falling under the definition of Company Law. A trust is often restricted from assuming liabilities.

18. As of March 2005, the Bank learned that institutional investors would be admitted more freely into the repo market in a few months time.



## Secondary Market and Intermediaries

---

The trading market for bonds is broadly divided into three segments: (1) the Warsaw Stock Exchange, (2) CeTO, and (3) the unorganized OTC market. CeTO operates two debt markets: one for government securities and the other for non-government securities. Among them, the OTC market is the largest in terms of trading volume. CeTO is gradually attracting more trades but from a small base while trading in WSE's fixed income market remains very small despite its listing of government securities.<sup>19</sup> The vast majority of the trading is concentrated in government securities. These are all common characteristics of bond markets across countries due to the characteristics of the instrument and the nature of trading needs in it.

Within CeTO, MTS CeTO trades only government securities including both T-bills and T-bonds although they are supported by different settlement infrastructures. At MTS CeTO, 13 market makers operate of which 11 are PDs while two are voluntary ones. There are also four market takers in MTS CeTO. The PDs are obliged to continuously quote two way prices for nine benchmarks for five hours a day. The strong interest among domestic and European banks in the primary dealership reflects good business feasibility of the market making in the Polish bond market. This in turn implies that the DVP settlement and the government bond repo market<sup>20</sup> are functioning well.<sup>21</sup> In CeTO, the turnover increased more than three times from 2003 to 2004. Most of it is understood to have come from government securities.

---

19. As of March 2005, shares of the three markets were roughly as follows: the OTC market (94 percent), CeTO (5 percent) and WSE (1 percent).

20. As well as the government bond futures market.

21. Without DVP settlement and well functioning repo market, market making becomes very difficult which in turn can undermine the viability of a PD system.

The other market module of CeTO trades sub-national and corporate debt securities. As of March 2005, this module listed securities in an amount of about Zl 2.5 billion, but shelf-registered Zl 20 billion indicating significant potential for growth. Only sporadic trading of very small value has taken place in those<sup>22</sup> securities despite the fact that some market makers in CeTO offer indicative quotes for some of them. Corporate bonds are mainly traded in the OTC market where an organizing bank runs a book and settles transactions. Data are available only from CeTO and WSE, but the trades in the most important OTC market remain unknown. Market participants should be required to report transactions to enhance the transparency of the market.

Of 82 issues of bonds listed on WSE, three quarters are government bonds which are all in large series. This is an expected phenomenon since small series are difficult to trade with the order-driven mechanism of a conventional stock trading platform. The trading of bonds at WSE is designed for individual investors. However, it is unlikely that individuals will generate a significant amount of trading in bonds. Fair access to bond investment and trading for individuals could be provided by at least two other channels. One is through collective investment, and the other is by market making by brokers and/or banks tailored for individual investors.

Unlike the case of equity stock, bonds are often traded in large blocks. Achieving smooth block trades requires a setup different from a conventional order-driven mechanism of equity trading. Even in the case of equity, occasional block trades have to be made outside a conventional order-driven mechanism in order not to disrupt price discovery. WSE could attract more bond trades if it were to create a separate module for bond trading where transactions are brokered to facilitate negotiation of deals or finding of suitable quotes.<sup>23</sup> Yet, allowing WSE to do so may require an appropriate legal framework to permit an “exchange” to be engaged in “brokerage” business, which can create some complexities in the legal framework as it did in other jurisdictions. In March 2005, Poland was understood to be adopting the concept of electronic trading systems under EU Investment Services Directive.<sup>24</sup> This should enable accommodating electronic trading platforms for bonds. However, whether an entity licensed as an “exchange” can be engaged directly in the business of operating such a platform is often a different matter.

Hopefully, the legal and regulatory framework can accommodate inter-dealer brokers (IDBs) which intermediate trading of bonds among bond dealers and market makers. IDBs can contribute to better organization of the most important OTC market. One compelling architecture characteristic of bond markets is to have an information center at its core with several IDBs competing to gather trading business while continuously channeling market information to the information center.<sup>25</sup> This may be called a competitive inter-dealer market. Compared to this, MTS CeTO is a centralized inter-dealer market. IDBs cannot survive inside MTS CeTO because of conflict of interest

---

22. In 2003, there were 25 transactions with PNL 40,000 per transaction.

23. Alternatively, it could organize a market in a highly structured way to limit the participation only to qualified PDs with market making. However, that has already been done by MTS CeTO, and there is little point to create another such centralized market.

24. Which is similar to that of “alternative trading systems” defined under Regulation ATS of the US SEC.

25. In addition to Thailand’s Bond Dealing Center, a model for this function may be found in the Trade Capture system (BTB) and the Central Price Discovery System (ZA Prices) in South Africa, which were put in place in May 2004 and late 2004, respectively.



with it.<sup>26</sup> Therefore, those are de facto mutually exclusive alternatives in organizing a bond market.

MTS may be a natural choice for Poland since it serves as a designated platform for PDs in a number of European countries. Yet, there are also factors that make the future of MTS less clear as Poland adopts the Euro and integrates into the EU market. This is because MOF may shift to syndicated underwriting than competitive auctions for primary issuance, as was done by other EU accession countries. Should MOF choose to do so, it may reduce the business feasibility of market making, the viability of the PD system and, therefore, of MTS CeTO.

In the poorly organized OTC market, transparency of price information seems to remain an issue. Better price transparency would certainly win stronger interest of investors in bonds. Generally, post-trade information (price and volume information after a transaction takes place) is a public good and should be availed as widely as possible.<sup>27</sup> On the other hand, real time dissemination of pre-trade price information (bid and ask quotes) can be a sensitive business for dealers and market makers. Investors can certainly request quotes by PDs or other dealers for particular series of bonds that they are interested in trading. Yet, automatically availing all or many pre-trade price quotes in a centralized screen is often rejected by dealers (except market makers). Dealers also do not wish to disclose inter-dealer quotes, which can be different from those quoted to an investor upon request. For investors, on the other hand, asking each dealer at each time individually is a cumbersome and time-consuming task while the market moves continuously. One possibility may be to make the best bid and ask quotes in the inter-dealer market observable for investors or the public in real time.

Transparency is also not free, and its provision involves direct and indirect costs. Who bears the cost and/or burden will depend on the design of the secondary market structure. Unlike an equity market, a bond market run by dealers and market makers creates different groups of market participants with different degree of access to price information. Different market participants have different business interests which are conflicting. This makes the enhancement of price transparency in a bond market a tricky business. To some extent, some discrimination in terms of access to price information is inevitable because dealers and/or market makers play a special role of “creating market prices.” To do so, they invest in research, expertise and systems and take position risks. In that sense, price information in bond market bears some nature of proprietary information owned by dealers and market makers. Overburdening the PDs by requiring very high transparency may even result in a collapse of the PD system if many of the PDs choose to leave the system.

From the investors' viewpoint, free giveaway of inter-dealer price quotes by all PDs will be most welcome since they can observe the best price available in the market at any given point in time. Provision of all inter-dealer price quotes in one screen would be an ideal world for investors. It would even be preferable if the investors could not only observe the prices but also execute a bond trade against any of them. The free giveaway of inter-dealer price quotes would also be welcomed for MOF if it increases competition on the market,

---

26. Because MTS CeTO and IDBs as its participants would be both in the same business of gathering inter-dealer trades and competing with each other.

27. Except the identity of each dealer or investor.

as it could further narrow the price spread and reduce the primary market yield. Yet, MOF may have to think twice about requiring PDs to do so if this discourages secondary market liquidity by making market making more difficult. Reduced liquidity in the secondary market may discourage aggressive bidding in the primary market, thus actually leading to an increase, instead of a decrease, in the primary market yield.

As to the price transparency of non-government debt securities, the proprietary nature of the information is even stronger than in the case of government securities. Market making is often difficult with those securities and offering of “indicative” quotes is a more feasible form of business. Market participants could choose to disseminate those through private information vendors such as Bloomberg. In Poland as of today, some leading banks quote bids and asks for certain series of CeTO-listed corporate bonds.

An optimal secondary market structure should balance the conflicting business interests of different groups of market participants. Meanwhile, MOF and NBP can enhance the environment for market making from every angle. In particular, achievement of delivery-versus-payment (DVP) settlement of T-bond trades is critical, as discussed in the next section.

## Custody and Settlement— Custody, Payments, and DVP

---

Efficiency as well as safety of settlement is critical to bond trading because inefficiency translates into implicit transaction costs to which bond trading is very sensitive. Settlement of bond trades involves movements of both securities and money, and therefore, there must be appropriate infrastructures and arrangements to support both in a coordinated manner. In particular, delivery versus payments (DVP) is a critical concept for settlement of bond trades because it eliminates principal risk comprising a large part of counterparty risk. Without DVP, money and bond markets tend to be confined to a small group of large and highly creditworthy institutions. DVP enables market participants to expand counterparty exposure limits and deal with counterparties which they would otherwise avoid, thus expanding and deepening the market.

Currently, DVP settlement is achieved only in T-bills and NBP bills which are both registered in NBP's book entry registry that is directly linked with its real time gross settlement (RTGS) system. This arrangement enables DVP settlement on a gross basis in both money and securities.<sup>28</sup> It is understood that NBP now provides free intraday liquidity for banks to settle inter-bank large value transactions by use of the RTGS. Intraday liquidity is indispensable in running a gross payments system. As a result, currently only banks seem to benefit from gross DVP settlement. On the other hand, T-bonds are registered and custodied in the national securities depository (NSD) which also houses listed non-government bonds. Both banks and non-banks participate in NSD. Although NSD participates in NBP's RTGS

---

28. So-called model 1 DVP as defined by Committee for Payments and Settlement Systems (CPSS) under the Bank for International Settlement (BIS).

system, its participants seem to prefer net settlement which requires less money liquidity. NSD is operating seven batch sessions daily for netting. Non-bank participants, which do not have access to NBP's intraday liquidity facility, need to obtain liquidity from a bank if they were to settle bond trades on a gross basis.

NBP does not require banks to pay user fee for the use of its book entry registry. On the other hand, NSD is a commercial entity and charges fees on its members.<sup>29</sup> Some market participants complain about the high fees charged by NSD while NSD does not transfer higher participation fees charged by Clearstream onto its members. It seems worthwhile to comprehensively examine the fee and cost structures of both systems. In doing so, a simple comparison of the fees charged by the two would not be adequate because banks and non-banks are regulated differently in terms of prudential requirements.<sup>30</sup> NBP's book entry registry and NSD also provide different services, for example, NSD provides securities lending and borrowing<sup>31</sup> and access to other national and international central securities depositories such as Crest, Kassenverein, and Clearstream. On the other hand, NSD does not operate a central registry and holds only omnibus accounts.

Because the three markets trade different mixtures of T-bills, T-bonds, and listed and non-listed non-government securities. Because different participants participate in different markets with or without access to some of the settlement systems, the current trading and settlement setup is complicated. Firstly, WSE operates a listed equity and bond market in which brokers participate while only banks participate in its T-bond market. In CeTO, MTS operates a T-bill and T-bond market in which only banks participate. Of those, the NBP RTGS system supports the settlement of T-bills only, while NSD supports that of T-bonds. Only brokers participate in the other market of CeTO trading listed non-government bonds, which is supported by NSD. Bonds can be traded in the OTC market as well, and they are supported by NBP or NSD for settlement. Unlisted non-government bonds are supported neither by NBP nor NSD but by custodians to run a book. NSD is licensed by the Polish Securities Exchange Commission (SEC) while the registry operated by NBP is outside the authority of the KPW.

The trading and settlement structure described above duplicates investment in systems which provide essentially the same functional services. While the parallel operation of the NBP registry and NSD may be practical for a number of reasons for the time being,<sup>32</sup> there seems to be room for consolidation of the two systems and for rationalization of the overall securities settlement framework. In particular, a merger between the NBP registry and NSD may be considered in such a way for NSD to acquire the registry function. There are other alternatives to merger such as outsourcing and agency services. In any case, however, the system should be better linked or integrated. The current complexities are created by an institution-based legal and regulatory framework rather than function-based one.

A comprehensive examination of the NBP registry and NSD should review not only fees and costs but also the fairness in access to their services by banks and non-banks.

---

29. One-time registration fee of 1 basis point and periodical custody fee.

30. Banks need to satisfy reserve requirements which ensure their liquidity but are costly for them. Non-bank financial institutions are faced with different prudential requirements with different cost implications.

31. As both a principal and a agent.

32. For example, repo transactions rely heavily on T-bills as an underlying instrument while repos are a critically important instrument for inter-bank liquidity adjustment which systemic implications.

The access to a settlement system is closely linked to its governance because a key in ensuring sound governance of a settlement system is to have users of the system be able to voice their business needs so that the system will be designed to accommodate those well, and the users are those which have access to the system. The governance is in turn closely linked to ownership or membership, which is the subject of another recommendation by CPSS and IOSCO.

While NBP itself as the monetary authority cannot be governed by market participants, it may not be impossible to create some governance mechanism specifically for the registry with participation of market participants. Yet, in doing so, it may not be easy for NBP to invite non-banks in equal footing with banks. On the other hand, NSD is a corporation owned by NBP, WSE and MOF while WSE itself is owned almost entirely by MOF at this moment. While it seems desirable to increase the stake of market participants, this provides a relatively flexible ownership structure to accommodate various patterns of access to its settlement services without unreasonable discrimination by type of institution.

Yet, it is understood that WSE is due to be privatized in the foreseeable future. In addition, a difficulty in identifying a detailed reform plan of Poland's capital market infrastructures is that it cannot be considered independently of Poland's integration within the EU market. For example, NSD is likely to join Euroclear while NBP's RTGS system is to be linked to TARGET. The consolidation and rationalization of Poland's settlement infrastructures needs to be considered within the context of the ongoing consolidation of the European capital market infrastructures. Examination of the latter is beyond the scope of this report.

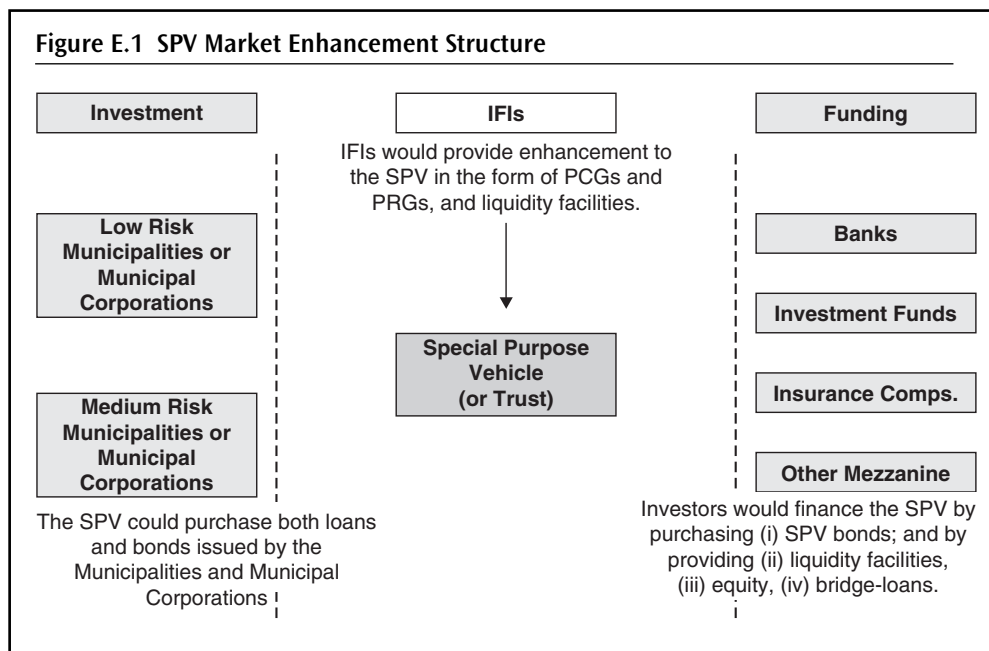


# Pooling/Enhancing Municipal Corporations and/or Municipal Bonds: A SPV Structure

---

One of the most suitable financial structures available to help develop this market segment is the Special Purpose Vehicle (SPV). In general, SPVs can be established to buy one obligation or a portfolio of obligations of municipal corporations and/or municipalities in order to package them and sell them to the open market (that is, banks, underwriters, institutional investors such as pension funds, insurance companies and mutual funds, and private investors on a secondary market basis). Alternatively, SPVs can also be structured to enhance obligations placed directly by municipalities and municipal corporations on the market, through partial credit or partial risk guarantees.

The portfolio of municipalities and municipal corporations' obligations can be composed of bonds, notes, loans and other obligations. The SPV balance sheet can be financed through asset-backed securities, as well as through loans and equity participation by investors and SPV fund managers, depending on the preference of investors. In the following discussion, given the cost of equity financing and the very narrow margins of the Polish market, it is envisaged that the SPV would be structured as an all debt SPV. Additionally, the SPV can be provided with liquidity facilities in the form of credit lines and bridge loans, to address liquidity shortages due to mismatches between recovery of assets under distress and/or liquidation, and due to assets allocation and investments operations. These liquidity facilities could be provided by International Financial Institutions (IFIs) *without sovereign guarantee*. The structure of the SPV market enhancement structure is depicted in Figure E.1 below.



The benefits of structuring a SPV are significant. These benefits would include, among others:

- The possibility to raise financing in the domestic market, and especially in domestic currency.
- Improved market access for low to medium risk municipal corporations and municipalities, thus promoting their names and possibly graduating to stand-alone borrowers and bond issuers over the medium term.
- High degree of flexibility, both on the investment and funding side of the SPV balance sheet. The SPV could package different forms of obligations, thus better meeting the specific needs in terms of financing, maturity and other specific terms of municipalities and municipal corporations. At the same time, the SPV could issue bonds, borrow directly from banks and other investment companies in the form of loans, lines of credit, guarantees, bridge loans, and so forth.
- Ability of SPV to buy small sized obligations which would not under normal circumstances access the capital and money market, with the exception of bank loans, and to package them for investors. Furthermore, the SPV would necessarily be rated by an international rating agency to ensure proper transparency, management and governance arrangements. This would increase its marketability to both local and foreign investors, and promote the names of its final borrowers to market participants.
- Bankruptcy-remote structure, where SPV creditors are not directly connected to the final debtors, *i.e.* municipalities and municipal corporations. This enhances the capacity of the SPV to manage financial distress and bankruptcy at the local level through assets liquidation and general assets management and work-out techniques. Eventually, assets management services could be outsourced to specialized assets management companies against servicing contracts based on success fees.



- Conditioning of access to SPV financing upon a number of prerequisites, requirements and parameters applicable to both municipalities and municipal corporations. These would cover areas such as fiscal sustainability; financial soundness and performance; quality of the investment programs; leverage; legal, regulatory and judicial consistency; transparency, disclosure and accountability, and local currency credit rating (global scale).

The drawbacks of the SPV structure are related to the complexity of the financial structuring and management activities. In particular, SPVs' drawbacks would include, among others:

- Appropriate sequencing in the composition and development of the investment portfolios, the support investment programs of the municipalities and municipal corporations, and the associated funding. In this regard, SPVs are sometimes established by using bridge loans, which enable to build the investment portfolios before accessing the market for funding. Bridge loans would enable the manager to process all required documentation with the municipalities and municipal corporations, including performing the due diligence, preparing the prospectus, registering the pledges and processing the legal documentation, and so forth.
- Management costs could become high, especially when investment portfolios are too complex and/or heterogeneous. Most commonly, SPVs are built on specific assets types or types of borrowers, to enhance transparency and marketability and management efficiency.
- SPVs margins are generally small, especially in a low interest environment. As a result, there might be a tendency in increasing the size of investment portfolios to decrease the weight of fixed operating costs while accumulating resources to cover eventual losses. This would potentially affect credit policies and render the SPV highly sensitive to recovery rates and probabilities of defaults, which are not easily measurable even in the most developed market (especially in the municipal and municipal corporation markets).

## Structuring a SPV in Poland: Terms and Requirements

Setting up a SPV in Poland would require a number of institutional, market and operational conditions, including the following:

- A Fund Manager, or Agent, who acts as organizer and manager of the SPV for its start-up and daily operations. These include accounting; treasury; investment policies; marked-to-market pricing; payments and collection of interests and installments on debt instruments; due diligence of debt issuers to assess feasibility of investment programs, fiscal sustainability, transparency and accountability; market communication and disclosure and so forth. An operational manual with strict requirements for eligibility, policies and guidelines, would be the basis to ensure transparency and governance. The Fund Manager should be, preferably, a local bank or investment company with a high degree of professionalism and know-how.

The SPV manager would work in liaison between the market and the municipalities and municipal corporations, ensuring that the latter consistently meet the above mentioned requirements for accessing SPV funding.

- The SPV should be all Zł on both sides of the balance sheet, as to avoid currency risks.
- The overall rating of the investment portfolio should be slightly lower than the overall debt issued by the SPV itself. This to generate a credit spread making the SPV profitable and self-sustainable. The credit spread should be enhanced through either: (a) liquidity back stop facilities, or credit lines, to enable the SPV to accumulate reserves and address mismatches between partial defaults of municipalities and municipal corporations, and the payments of the coupons of the SPV bond and/or the debt servicing of the SPV loans; (b) a SPV bond, mainly a standard plain vanilla bond; (c) equity, although in the case of Poland, a all-debt SPV would be the preferable option given low margins on the domestic debt market; and (d) a bridge loan, to enable the Fund Manager to build the portfolio before issuing bonds or other debt.
- In order to enhance the rating of the SPV, IFIs could provide a partial credit guarantee to the SPV itself to cover a portion of the debt obligations of the SPV itself beyond the realized recovery (as assumed, see below). Alternatively, IFIs could provide the liquidity back-stop facility to build the necessary liquidity reserves and address liquidity mismatches. The bridge loan, preferably, should be provided by the Fund Manager, to enhance ownership over the investment portfolio.
- The difficulty in assessing the feasibility of such structure is estimating the risk profile of the investment portfolio, and especially the volatility of the obligations in terms of probability of default, and the recovery rates associated with it. Given the limited development of sub-national debt markets in Poland, recovery rates and probability of default could be estimated based on international experience.
- Recovery of defaulted obligations, thus assets management activities, could be serviced-out to specialized assets management companies on a success fee based contract.
- Interest rates would be fixed on both sides of the SPV balance sheet, apart from the liquidity back-stop facility and the bridge loan. This would create a floating rate, or maturity risk in the balance sheet of the SPV equal to the size of the facility itself. This type of risk is generally manageable, given that there is a strong asymmetry between the steepening and flattening of the curve. The SPV would be in fact be at risk in case of a flattening curve, which is generally correlated with improved market and credit conditions, which should conversely decrease the credit and default risks, thus increasing the SPV soundness and profitability. In all cases, it could be assumed that a portion of the investment portfolio is based on floating rates (loans) to perfectly hedge this exposure.

# Bibliography

---

- Batten, J., T. Fetherston, and P. Szilagyi. 2004. *European Fixed Income Markets: Money, Bond and Interest Rate Derivatives*. John Wiley&Sons.
- Bien, W. 2004. *Rynek papierow wartosciowych*. Warsaw: Difin Centrum Doradztwa i Informacji.
- ECB (European Central Bank). 2004. *Bond Markets and Long-Term Interest Rates in Non-Euro Area Member States of the European Union and in Accession Countries*.
- EIU (The Economist Intelligence Unit). 2005. *Country Finance. Poland*. July.
- MOF (Ministry of Finance). 2003. *The Public Finance Sector. Debt Management Strategy in the years 2004-2006*. Warsaw.
- NBP (National Bank of Poland). 2002. *Financial Market in Poland 1998-2001*. Warsaw.
- . 2003. *Monetary Policy Strategy Beyond 2003*. Warsaw.
- . 2004. *Rozwoj systemu finansowego w Polsce w latach 2002–2003*. Warsaw.
- . 2005. *Rozwoj systemu finansowego w Polsce w 2004 r.* Warsaw.
- Noel, Michel, and W. Jan Brzeski. 2005. *Mobilizing Private Finance for Local Infrastructure in Europe and Central Asia*. World Bank Working Paper No. 46, Washington, D.C.
- Swianiewicz, Pawel, and Agnieszka Kopanska. 2005. "Analysis of Impediments to Development of Sub-national Bond Market." Warsaw, Processed.
- Ter-Minassian, Teresa. 1997. *Fiscal Federalism in Theory and Practice*. Washington, D.C.: International Monetary Fund.
- World Bank. 2006. "Poland: Housing Finance Policy Note." Washington, D.C.

# Eco-Audit

## Environmental Benefits Statement

The World Bank is committed to preserving Endangered Forests and natural resources. We print World Bank Working Papers and Country Studies on 100 percent postconsumer recycled paper, processed chlorine free. The World Bank has formally agreed to follow the recommended standards for paper usage set by Green Press Initiative—a nonprofit program supporting publishers in using fiber that is not sourced from Endangered Forests. For more information, visit [www.greenpressinitiative.org](http://www.greenpressinitiative.org).

In 2005, the printing of these books on recycled paper saved the following:

Trees*	Solid Waste	Water	Net Greenhouse Gases	Electricity
463	21,693	196,764	42,614	79,130
<small>*40' in height and 6-8" in diameter</small>	Pounds	Gallons	Pounds	KWH





*The Polish Fixed-income Securities Market* is part of the World Bank Working Paper series. These papers are published to communicate the results of the Bank's ongoing research and to stimulate public discussion.

This book analyzes the recent evolution of the Polish fixed-income securities market, including the money market, the government bond market, and the non-government bond market, focusing in particular on the sub-national bond market. The book examines key policy challenges facing the development of the sector, including policies to: stimulate the development of the classic repo market, increase the reliability of the government bond yield curve, stimulate the overall development of the non-government bond market, and reform the legal and regulatory framework for local government borrowing.

World Bank Working Papers are available individually or on standing order. Also available online through the World Bank e-Library ([www.worldbank.org/elibrary](http://www.worldbank.org/elibrary)).



**THE WORLD BANK**  
1818 H Street, NW  
Washington, DC 20433 USA  
Telephone: 202 473-1000  
Internet: [www.worldbank.org](http://www.worldbank.org)  
E-mail: [feedback@worldbank.org](mailto:feedback@worldbank.org)

ISBN 0-8213-6892-3

