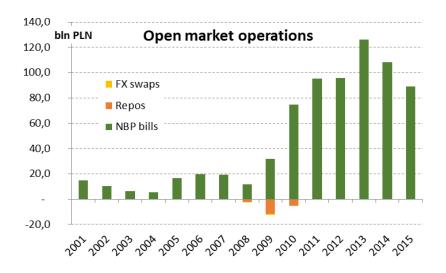
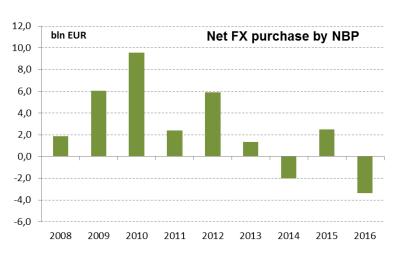
Ewa Szafarczyk

Risk connected with ELA operations

12 th Central Bank Risk Managers' Conference November 2016, Mumbai

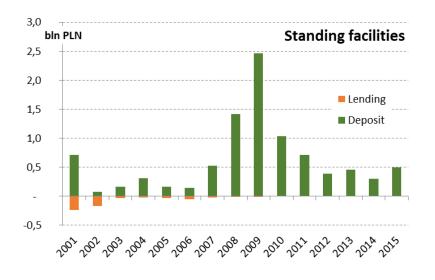
Polish banking sector





Overliquidity of Polish banking sector

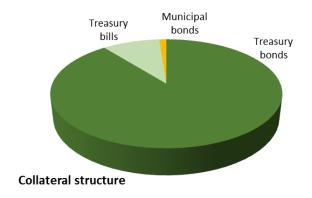
- Inflows from EU funds
- Open market operations liquidity absorbtion
- Intraday credit facilities in order to assure smooth settlement process



Standard liquidity providing facilities

Eligible collateral

- Government securities
- Municipal bonds
- Covered bonds
- EIB bonds
- Corporates (investment grade)



Minimum amount outstanding

Traded at regulated market

- Haircuts differentiated by maturity, credit quality
- Limited turnover in non-government securities → lack of market prices
- Overcollateralization in some cases

Emergency liquidity providing operations

Eligible collateral

- Government securities
- Municipal bonds
- Covered bonds
- EIB bonds
- Corporates (investment grade)
- Other securities
- FX currency
- Bank/Treasury guarantee
- Credit claims

Central bank acting as lender of last resort

- Impact on stability of Polish banking sector
- Solvent bank
- Adequate collateral

- Maturity up to 3 months
- Interest rate set by the Monetary Policy Council
- Collateral haircuts determined by Middle Office based on collateral assessment

ELA experience

12.08.2015 Polish Financial Supervision Authority introduces receivership

13.08.2015 Run on the bank

20.08.2015 ELA granted by central bank

10.11.2015 External audit completed

12.11.2015 NBP terminated ELA agreement

21.11.2015 Polish Financial Supervision Authority suspended the bank

30.12.2015 Default announced

31.12.2015 State Treasury pays out the guarantee

- Biggest cooperative bank
- Liquidity problems caused by the run on the bank
- Significant amount of non-guaranteed deposits

Loan granted up to 4 months

Collateralized with pool of credit claims and Treasury guarantee

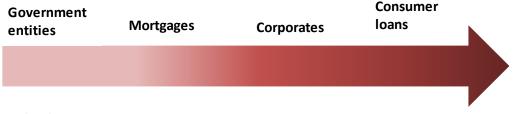
Collateral requirements/preferences

- Performing credit claims
- No credit card loans
- Loans collateralized with mortgage (maximum LtV 75-100%)
- Single exposure less than 5% of portfolio (also for capital groups)
- Standard repayment schedule
- No significant off balance sheet exposure
- No sindicated loans
- Maximum amount of consumer loan

Haircuts determined taking into account:

- bank's credit policy (NPL)
- credit type (4 classess determined based on statistic analysis)

Haircuts in the range 50-72%

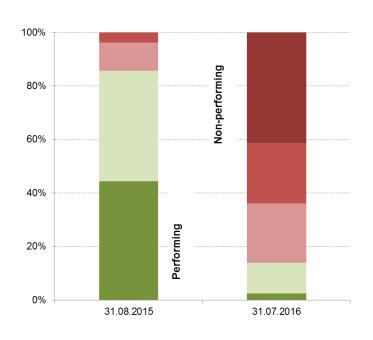


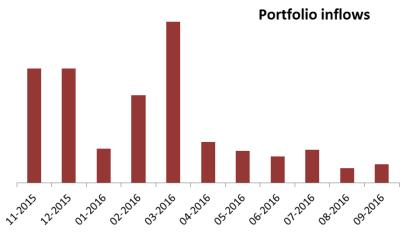
RISK OF DEFAULT

Collateral quality

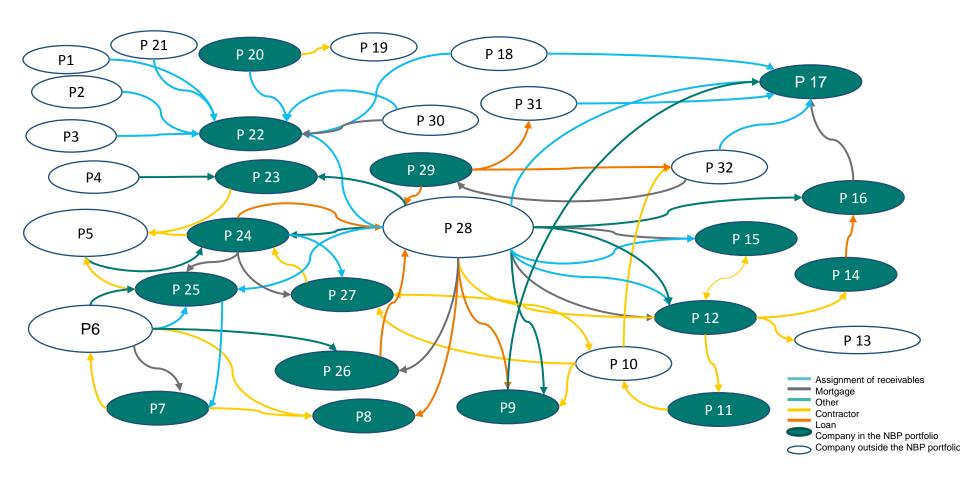
Credit portfolio review highlighted several risks

- Strong portfolio concentration (sector, capital groups, high exposure towards single entities or capital groups)
- Deteriorating financial standing of creditors (start-ups, problems to finance investments)
- Inadequate collateral (overvalued mortgages, pledge on inventories)
- Frauds
- Repayment schedule (baloon installments)





Collateral quality

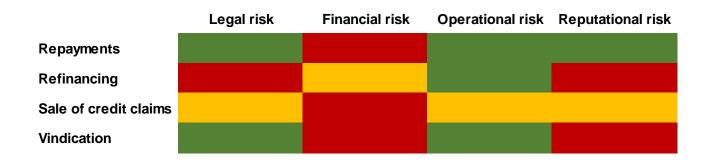


Legal and operational challenges

- Status of credit claims transfer
- Acquisition of loan collateral
- Cooperation with trustee in bankruptcy
- Accounting treatement

Credit claims portfolio management – long term process

- Repayment monitoring requests for payment
- Debt restructuring (interest rates, repayment schedule, refinancing, settlement, bankruptcy proceedings)
- Management of loan collateral
- Credit claims valuation
- Debt vindication



Credit claims valuation

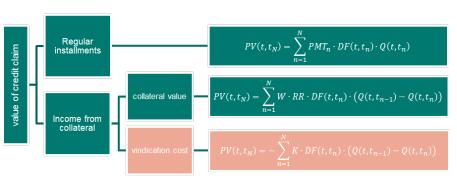
Estimated current value of future expected portfolio inflows

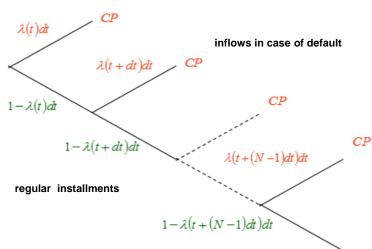
- Based on binominal trees (Jarrow-Turnbull model)
- Probability of default estimated taking into account financial data (comparison with peer group) → scoring model

Collateral value - only mortgage taken into account (other entries mortgage, assumed forced sale,

duration of the sale process)

Cost of vindication proceeding





Future challenges

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We protect the value of money