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SELECTED ASPECTS OF DUE DILIGENCE OF SOVEREIGNS**

Key words: due diligence, public debt, sovereign credit rating.

Abstract: The purpose of this paper is to present and analyse the prevailing credit rating methodologies, as an element of due diligence process of countries, in the light of the attributes of the sovereigns and associated risks. The concept of sovereignty introduces many variables to the due diligence analysis and in particular to credit risk analysis. The multidimensional character of a sovereign and its complex decision-making process require special attention from the creditors. The prevailing methodologies stress the fact that both quantitative and qualitative elements need to be taken into consideration. Debt affordability, referring to debt size and financial ability to repay it, remains an important factor in a quantitative analysis, but not a decisive one. Qualitative elements such as the assessment of the institutional capacity become essential, since in the case of the sovereigns, the ability to repay does not necessarily imply the willingness to repay. Due diligence of IFIs goes beyond traditional credit risk assessment in the domains, where states 'surrender' their sovereignty to the regulation of international law, particularly in the sphere of human rights and environment.

Translated by Sebastian Hyżyk

WYBRANE ASPEKTY OCENY WIARYGODNOŚCI KREDYTOWEJ PAŃSTW

Słowa kluczowe: credit rating, dług publiczny, due diligence, ocena wiarygodności kredytowej.

Abstrakt: Celem niniejszego artykułu jest prezentacja i analiza głównych metod oceny zdolności kredytowej jako elementów due diligence państw, w świetle cech wyróżnia-

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jących państwa jako pożyczkobiorców i związanych z tym ryzyk. Wielowymiarowość koncepcji suwerenności państw oraz złożony proces decyzyjny wymagają wzmożonej uwagi ze strony pożyczkodawców. Główne metody podkreślają znaczenie zarówno ilościowej, jak i jakościowej oceny zdolności kredytowej. Zdolność do obsługi długu wyznaczana zarówno przez jego wielość, jak i dostępność środków finansowych pozostaje ważnym czynnikiem w ilościowej ocenie, ale nie decydującym. Ilościowe aspekty, takie jak ocena zdolności instytucjonalnej, stają się kluczowe w przypadku państw, gdyż ich zdolność do spłaty długu nie musi automatycznie oznaczać skłonności do spłaty długu. Proces due diligence prowadzony przez międzynarodowe instytucje finansowe wybiega poza ramy tradycyjnej oceny wiarygodności kredytowej w obszarach, w których suwerenność państw jest ograniczona prawem międzynarodowym, a w szczególności w sferach praw człowieka i ochrony środowiska.

■■■ INTRODUCTION

Governments' debt plays a pervasive role in the financial markets. Globally, it represents over 45% of the stock of issued bonds (March 2012). Sovereigns' debt instruments are used in collateralising financial operations conducted by central banks.

The financial crisis and the recession that followed have worsened the condition of public finance in advanced economies and have increased the investors' concern about sovereign risk. This concern translates into higher funding cost for governments and adversely impacts banks and financial markets.

Furthermore, sovereigns' creditworthiness impacts credit ratings of non-sovereigns and ultimately also supranationals controlled by sovereigns. Therefore, a proper assessment of the sovereigns' creditworthiness is a systemic important issue.

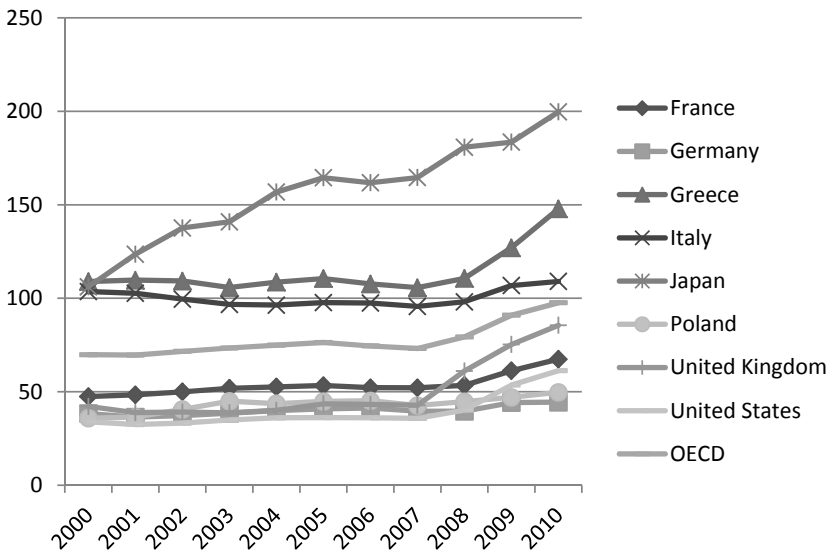
The purpose of this paper is to present and analyse the prevailing credit rating methodologies, as an element of due diligence process, in the light of the attributes of the sovereigns and associated risks.¹ Those risks are often encapsulated by the term of a country risk. It includes risks related to lending to sovereigns (sovereign risks), which will be addressed by this paper, and risks related to investing or doing business in a country.

¹ After Knight's influential contribution (Knight 1920) risk is commonly referred to as measurable uncertainty over future realisation of expected outcome. It is often reduced to analysis of a negative outcome, which for lenders to sovereigns entails losses incurred due to default of borrower.

1. SOVEREIGNS' BORROWING

Most of the governments of the advanced economies persistently run a deficit and consequently need to finance it mainly through the debt markets or loans from International Financial Institutions (IFIs). Over the last decade, gross general government debt of the OECD countries (measured in relation to GDP) has increased from 70% to 97% – Figure 1 (OECD 2011).

Figure 1. General government debt as a percentage of GDP



Source of data: OECD 2011.

Around 75% of this debt is primarily held in marketable bonds, a further 16% in money market instruments, whilst 9% are non-marketable instruments like saving bonds or loans (OECD 2010). Governments' net issues of international debt securities in 2011 reached USD 174bn, increasing the total outstanding international debt at the end of the year to USD 2,534bn (BIS 2012). Domestic issues further raised the stock of domestic government debt by USD 2,540bn to USD 42,109bn in 2011, an increase of over 20% since 2009 (BIS 2012).

In the medium to long run, the governments' borrowing in advanced economies is expected to rise as fiscal deficits will remain high, due to the effects of the ageing population and subsequent increase in healthcare and pension costs.

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2. FINANCIAL AND LEGAL RISKS IN LENDING TO SOVEREIGNS

The financial markets are well accustomed to the risk of sovereign default. Recent history recalls the Latin American case in the 1980s and the Russian case in 1998. Reinhart and Rogoff collected over 250 sovereign external defaults over the period of 1800–2008 (Reinhart, Rogoff 2009). Nonetheless, markets are not always properly valuing that risk and when they are, it is with delay. Defaults have often occurred, in a periods of reduced economic resilience when the governments were confronted with external shocks and rapid shift in market perception.

Lenders are predominantly occupied with credit risk, which involves the risk that the governments will stop servicing debt or force creditors to accept a variation in bond terms that results in the loss of value.

However, in the case of governments, one has to consider the consequences of the concept of sovereignty, which is referred to as an ability of states to legislate without legal limitation other than that set by themselves and the reach of international law. It relates to a "government decision-making power", exercised over its territory and citizens (Jackson 2003). The concept of sovereignty entails the possibility for the government to refrain from servicing the debt, even if it has sufficient resources. The government may decide that the economic, political or social costs of repaying the debt may outweigh the consequences of default. In fact, Reinhart and Rogoff concluded that most of the defaults in the period of 1970–2008 occurred at levels of external debt to GDP below 60%, which could have been in most cases sustained (Reinhart, Rogoff 2009).

Sovereigns' creditors are also exposed to legal risks i.e. the risk that inadequate legal rules in the relevant jurisdiction do not allow interests in securities to be acquired, enforced and transferred (transfer risk). This risk also arises when the law of one constituency does not recognise interests in assets created under the law of another constituency.

The current Eurozone debt crisis encompasses another aspect of the legal risk. The monetary union may break up² in the absence of legal rules governing such a process. There is an uncertainty when and how such rules will eventually be adopted, and more importantly in what currency the debt will be serviced. The country leaving the Eurozone may, by law and in line with the concept of sovereignty, redenominate its debt into another currency worth less than the euro.

3. CREDIT RISK ASSESSMENT

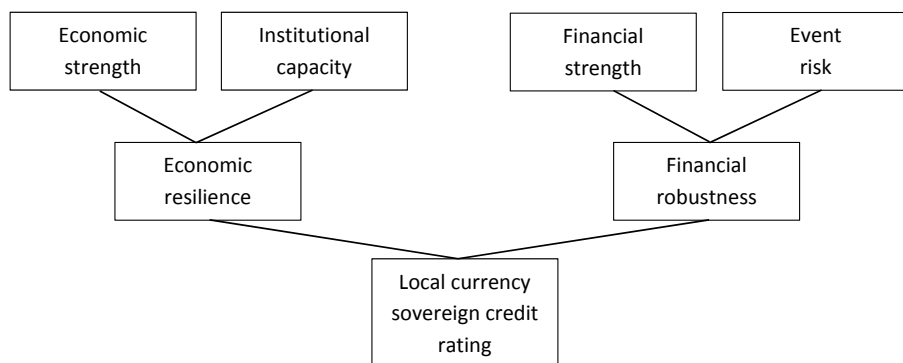
The multidimensional concept of a sovereign and its complex decision-making process require special attention from the creditors and pose a challenge in the assessment of the probability of default. To this end, the investors or lenders may rely on the ratings provided by the credit rating agencies or develop their own proprietary methodologies. Publicly available methodologies of the credit rating agencies also provide a benchmark for in-house models. Hereafter, the core elements of two such methodologies applied by the dominant credit rating agencies will be presented.³

Moody's approach examines two factors: a country's economic resilience and financial strength (Figure 2). The former is further analysing the economic resilience of the sovereign in terms of ability to absorb shocks and its institutional capacity and governance framework. The latter focuses on the financial strength of the sovereign and its susceptibility to event risk (Moody's 2008).

In order to determine the capacity to timely raise funds in the local currency, Moody's analyses the financial resources of the sovereign and the ability to monetise them. In general, a governments' spectrum of tools comprises increasing revenues through taxation and/or reducing expenditures through cuts, assets privatisation, and obtaining financing from the central bank. All of these approaches, however, entail risks of rising political or social discontent.

² Among the current challenges faced by the major European economies is the loss of their competitiveness. In the past, currency devaluation was a short-term option to inject dynamism into the economy. Within the Eurozone that option is not available. Hence, the possibility of a return to local currency and its subsequent devaluation is sometimes discussed among policy options.

³ The credit risk ratings market is an oligopolistic one, dominated by Moody's and Standard and Poor's, which together have 88% of all outstanding governments' ratings (US Securities and Exchange Commission 2012).

Figure 2. Basic factors influencing credit rating of sovereign in Moody's model

Source: based on Moody's (2008).

The economic resilience is analysed by looking at GDP per capita (multi-year average in PPP terms), scale and diversification of the economy (measured by long-term volatility of output) and long-term structural factors (such as investments in human capital, innovations or integration into economic or trade zones).

Given the abovementioned attributes of sovereigns, the framework looks both at the ability to repay and the willingness to repay. The latter is analysed with the aid of the assessment of governance framework or institutional strength. Institutions are considered in a sense of institutional economy i.e. as a set of formal rules or informal conventions like property rights, contracts enforcement, government policy, predictability and transparency. Immature or unpredictable institutions increase the risk that sudden shocks will result in default. The metrics that supplement the qualitative judgement include the World Bank Rule of Law, and the Government Effectiveness Index (Worldwide Governance Indicators). The Rule of Law indicator attempts to capture the quality of contract enforcement, property rights, effectiveness of the police, and the courts, as well as the occurrence of crime and violence.⁴ The Government Effectiveness Index attempts to assess the quality of public services, the quality of the civil service and its independence from political pressures, the quality of

⁴ The indicator ranges from -2.5 (weakest) to 2.5 (strongest). As for 2011, Finland scores 1.96, Germany 1.62, while Poland 0.73, Greece 0.57, Italy 0.41 and Bulgaria -0.09.

policy formulation and implementation.⁵ These indicators aggregate data from various public and private datasets and surveys (Kaufmann et al. 2010). The rating methodology is based on the assumption that strong institutional capacity of the public authorities will enable them to formulate and implement sound policies (effectiveness), which will be further respected by the citizens (rule of law), thus increasing resilience to economic shocks and reducing risk of default.

This is further complemented by the examination of the financial strength of a country. This will attempt to determine if the debt level is affordable for a sovereign, given the resources that could be mobilised through its balance-sheet. The analysis is twofold. It assesses the debt intensity (interest payments/revenues metrics), debt structure, its repayment profile and dynamics. In particular, the impact of an ageing population on the future liabilities to the national pension schemes is taken into account. A stress test of the debt affordability in response to the interest rate and exchange rate shocks enhances the picture. Furthermore, the Moody's model examines the potential of a government to generate resources in terms of access to markets, privatisation or fiscal adjustments. The depth of the financial market is approximated by the relation of aggregated bank's balance sheets and marketable financial instruments to GDP. The sovereign's flexibility in fiscal adjustment is measured by debt/revenue ratio. However, it should be noted that this flexibility may be hampered practically by institutional constraints and public acceptance of taxation.

The last factor taken into consideration is the country's susceptibility to event risk, which helps to make a distinction between sovereigns that may be affected by a sudden economic, financial or political shock and do not have the capacity to withstand it.

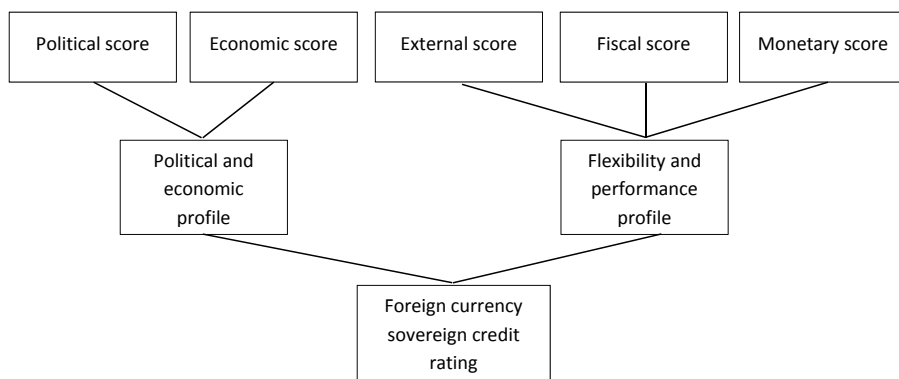
A combination of those two elements, a country's economic resilience and financial strength, mapped on relative ordinal scales, leads to the proposal of a credit rating range in local currency. In order to translate it to a rating range in foreign currency, it requires additional assessment of the ability of a government to conduct the exchange operation. It relates to the resilience to a currency crisis and the condition of the balance of payments of a country. Sovereigns with a limited access to international markets, low foreign reserves (driven by deficit in current account) will therefore be more susceptible to default. In some cases there might be a difference between local and foreign currency ratings.

⁵ The Government Effectiveness Index ranges from -2.5 (weakest) to 2.5 (strongest). Finland currently scores 2.25, Germany 1.5, while Poland 0.68, Greece 0.48, Italy 0.45 and Bulgaria 0.01.

It should be noted that there is certain room for overruling this “mechanical” proposal generated by the scorecard as long as other elements not captured by the framework exist and can influence the ability or willingness to repay the debt by the sovereign.

Standard and Poor’s method builds on five factors, which attempt to capture the same characteristics of sovereigns as Moody’s, and assigns to them: a political, economic, external, fiscal and monetary score (Standard and Poor’s 2011). The rating process first assigns scores for each of these factors and then combines these political and economic factors into one common “political and economic profile” and the remaining ones into a “flexibility and performance profile” (Figure 3). A relative assessment of these profiles together with adjustments due to exceptional factors determines the indicative credit rating level.

Figure 3. Basic factors influencing a sovereign credit rating in Standard and Poor’s model



Source: based on Standard and Poor’s (2011).

The political score assesses the governance framework, its stability, effectiveness, and predictability of a policy-making process of a sovereign. It also looks at the transparency, accountability of institutions and reliability of statistical information provided by the government. Initial score could be adjusted downward in the presence of a poor track record of debt servicing or high security risks. If a sovereign receives institutional support from an external organisation (e.g. IMF) it could lead to an improvement in the score. The assessment is supported by the various external sources like the World Bank’s “Doing

Business” reports, Worldwide Governance Indicators, UN Human Development Indicators, and Transparency International’s “Corruption Perception Index”.

The economic score is based on the examination of income level (GDP per capita), which could be further adjusted due to growth prospects (GDP growth trend metrics) and economic diversity and volatility. The economic concentration and high volatility lead to downward adjustment.

As far as the external score is concerned, it attempts to assess a country’s ability to generate the foreign currency necessary to meet its debt obligation to non-residents (as the Standard and Poor’s methodology is primarily oriented on the foreign currency rating). It favours sovereigns with reserve currency and looks at external liquidity (measured by an average of the current year and forecast of two to three years of gross external financing needs to cover current account payments and maturing debt) and external indebtedness (measured as a stock of foreign and local currency debt to non-residents reduced by liquid external assets).

The fiscal score is an average score of the fiscal performance and flexibility factor, and the debt burden factor. The assessment of the former is primarily based on the change in general government (i.e. including central, regional and local tiers of the administration and social security) debt stock as a percentage of GDP. The initial score is adjusted by considerations of fiscal flexibility of the government and impact of the demographic situation and overall level of development (Human Development Index). The debt burden is assessed by the combination of general government debt level (as a percentage of GDP) and cost of debt (measured as general government interest expenditures as a percentage of general government revenues). The initial score could be adjusted by presence of significant contingent liabilities (e.g. related to the financial sector in the case of a financial crisis). Further factors pushing down ratings would be a considerable exposure to exchange rate risk, a dominant share of the debt held by non-residents, and a large share of government debt on the resident banking sector balance sheet.

The analysis is complemented by the monetary score which examines the potential role of monetary policy in addressing the economic shocks, which will be different in a spectrum of regimes from free floating to currency board. It also verifies the credibility of a monetary policy through inflation trends and a degree of central bank independence. Finally, it looks at the depth and development of a financial system (measured by the maturity of debt issued by the government in a local currency in meaningful amounts and traded on second-

ary markets) and capital markets (measured by market capitalisation in relation to GDP).

In the case of Standard and Poor's methodology, adjustments play an important role. Factors such as the risk of debt rescheduling, security risk (war), severe natural disasters could lead to a decrease in the rating. Similarly, a very high political risk is effectively capping the rating at speculative-grade levels. On the other hand, exceptionally large liquid assets owned by the country could support a higher rating.

The Standard and Poor's model is providing the indicative level of credit rating in foreign currency as a starting point. In order to provide a rating in the local currency, a credit analyst may increase it by up to two notches, given the powers that the sovereign may execute to raise funds in the local currency. It should, however, be noted that when a country has ceded its monetary policy to an economic organisation (as is the case of the Eurozone) or is using the currency of another country, upward adjustment will not be possible.

In methodological terms, credit ratings represent an example of a multicriteria analysis, which weights different factors believed or proven to have an impact on the rating opinion. Both Moody's and Standard and Poor's attempt to analyse similar factors related to institutional capacity, resilience to external shocks, economic and financial strength of sovereigns. Therefore, in the long term the ratings for a given sovereign should converge. The less mechanical (or transparent) elements of the methodology are linked to the adjustments.⁶ In comparison, the rating models accepted by the ECB ought to be primarily 'mechanical' to reduce discretion in assessment.

4. CONTROVERSIES OVER CREDIT RATINGS

In general, the ratings of sovereigns proved to be consistent as far as they provide opinions on the reliability of the borrower. Since 1975, an average of 1% of the investment-grade sovereigns have defaulted on their foreign-currency debt, while in the class of speculative-grade, this reached 30% (Standard and Poor's 2012). Nevertheless, the available sample is still limited and skewed towards the investment-grade sovereigns, where credible default scenarios are

⁶ The European Central Bank relies on the Eurosystem Credit Assessment Framework (ECAAF) in order to determine high credit standard of the eligible assets acceptable for collateralising the monetary policy and payment system operations (ECB 2006).

normally difficult to identify. In contrast, the speculative-grade strand is associated with clearer default scenarios and the probability of default metrics become more telling.

The accuracy and soundness of the rating methodologies is sometimes disputed, in particular with relation to the failure of rating agencies in predicting market crises. It appears, however, that much of the controversy stems from the use of the actual ratings and wider effects they trigger in the markets, rather than their methodological strength. The main point of criticism from the sovereigns is therefore the timing of credit rating announcements.⁷ This is believed to cause market disruptions and accelerate a “cliff effect”, where a downgrade under certain thresholds leads to a series of cascading actions. This is related to the issue of overreliance on the external ratings, enforced by the references to them in legislation and contractual clauses. Within the EU, a set of legislative measures has been adopted to reduce it. To this end, for instance, financial institutions will have to strengthen their internal rating capacity.

5. EXAMPLE OF THE DECOMPOSITION OF CREDIT RATINGS

Decomposition of ratings of selected EU countries will illustrate the Moody's methodology (Table 1). Germany is currently among few economies enjoying Aaa rating, however, with a negative outlook. The solid fundamentals of German economy are given by its diversified and advanced structure and stable, mature institutions. Unlike Italy and France, it has not experienced a sharp rise in unit labour cost in the last decade, which supported its competitiveness and world demand for its goods. It is also enjoying investors' confidence leading to highly affordable borrowing costs. Hence, Germany notes the highest scores in all partial ratings. The factors indicating negative outlook are related to the Eurozone crisis and exposure of German banking sector to the distressed EU economies. It should be noted that Germany also faces challenge of ageing population and related rising costs of healthcare system.

⁷ The recent amendment of the Regulation (EC) No 1060/2009 on credit rating agencies allows publishing of unsolicited rating only three times a year at predefined calendar.

Table 1. Decomposition of credit ratings of selected countries (as of 20.02.2013)

Country	Bond rating	Economic strength	Institutional strength	Financial strength	Event risk
Germany	Aaa	Very High	Very High	Very High	Very Low
Poland	A2	High	High	Moderate	Moderate
Italy	Baa2	High/Moderate	High/Moderate	Low	High
Greece	C	Moderate	Low	Very Low	Very High

S o u r c e : Based on Moody's credit analyses for respective countries.

On the other side, the rating of Greece reflects the fact that Moody's considers the bond buyback programme executed in December 2012, in which private-sector bondholders incurred a loss of over 60% in net present value terms, as a default. Undiversified Greek economy is one of the smallest in Europe. Despite its GDP per capita levels (higher than in Poland) there is not sufficient economic strength to absorb shocks. GDP in nominal terms is contracting the fourth consecutive year. Greek institutions suffer from ineffectiveness (although Worldwide Governance Indicators place them on a higher level than Italian) and implementation of reforms remains uncertain in the absence of the support from the citizens. Problems with official statistical data negatively impacted track record of Greek authorities. The country remains highly susceptible to event risk, including political risk and further deterioration of Greek banking sector (financial risk). Debt burden at 164% of GDP is not sustainable. Currently Greece does not have access to long-term financial markets due to prohibitive interest rates and relies on the assistance package from the Troika.

Italian economy is large and diversified with a strong manufacturing base of its SME sector. Nevertheless, economic strength is judged by Moody's analytics between *High* and *Moderate* amid structural challenges, low productivity and inflexible labour market. Italian institutions are adhered to the *acquis communautaire*, but at the same time exhibit weaknesses, in particular in the southern regions. The International Monetary Fund (IMF) estimates the effect of potential structural reforms in energy, transport, professional services, judicial system and public services at 5.7% of GDP in five years' time. However, financial strength remains *Low* due to uncertainty of structural reforms, which may be impeded by the financial crisis, and high stock of public debt, which may become unaffordable. As the Eurozone crisis continues to threaten the economies with high debt, Italy's susceptibility to event risk remains high.

Against the backdrop of distressed European economies, Poland has presented robust growth. It used to be driven by EU-supported investments and domestic demand, factors which influence has recently weakened, leading to a slowdown. Stable, democratic institutional environment is supported by implementation of EU standards. Hence, the economic resilience is judged *High*.

Strong demand for Polish debt and credible liability management pushed the funding cost down increasing debt affordability. Poland's external finances are still weaker in comparison to other 'A' peers, and would benefit from reduction in external deficit. Whilst political factors in the event risk are judged low, economic and financial ones still represent moderate threat to Poland's creditworthiness. The ability to withstand external shock is hampered by relatively low foreign-exchange reserves in relation to debt maturing in one year. Mitigating factor is provided by flexible credit line of USD 33.8bn from the IMF. As far as the financial factors are considered by Moody's, foreign currency loans in the banking sector pose constraint on rating. Nevertheless, outlook for Poland's rating has recently been confirmed as stable.

6. LOANS FROM IFIs

Raising funds through non-marketable credit instruments involves liaising with IFIs. Their due diligence process goes beyond credit rating methodologies as often they do not have a mandate to finance sovereigns' budgetary operational expenditures and can only provide a project-linked financing.

Apart from the credit rating of the borrower, in project-linked financing, IFIs will also focus their due diligence on the soundness of the project itself. The appraisal will entail sectorial characteristics of the project and its technical, financial and economic feasibility. The project features that are subject to due diligence will be different for a wastewater treatment plant as they are for motorways, but in essence the IFIs will try to confirm the 'business case' for the project i.e. appropriate market demand from the project's output, tariff policy, and conduct a cost benefit analysis in order to justify the soundness of the project with a generally accepted economic rate of return or multi criteria analysis. Another important aspect of a project due diligence will focus on the institutional capacity of a project sponsor/promoter and the procurement procedures applied. This is to ensure that the project will be delivered in a cost-effective way.

With a growing impact of voluntary corporate responsibility initiatives, increasing NGOs and other stakeholder involvement, also in the financial sector

(e.g. The Equator Principles 2006), the lenders, including IFIs, have become increasingly sensitive to non-financial aspects of the credit operations. These aspects often concern the domains, where states 'surrender' their sovereignty to the regulation of international law, particularly in the sphere of human rights and environment. Therefore, the credit decision of IFIs is preceded by an appropriate environmental and social assessment. Such an assessment would typically analyse the sovereign's policies and standards in relation to labour and working conditions (e.g. benchmarking with the International Labour Organisation core labour standards), environmental protection and biodiversity conservation, resource efficiency, pollution prevention, access to information on environmental matters (Aarhus Convention), land acquisition and involuntary resettlement, indigenous people, protection of human rights and community health, safety and security, status of minorities, and protection of cultural heritage.

■■■ CONCLUSIONS

The concept of sovereignty introduces many variables to the due diligence analysis and in particular to credit risk analysis. The multidimensional character of a sovereign and its complex decision-making process require special attention from the creditors and pose a challenge in the assessment of the probability of default.

Therefore, the prevailing methodologies stress the fact that both quantitative and qualitative elements need to be taken into consideration. Debt affordability, referring to debt size and financial ability to repay it, remains an important factor in a quantitative analysis, but not a decisive one. Qualitative elements such as the assessment of the institutional capacity become essential, since in the case of the sovereigns, the ability to repay does not necessarily imply the willingness to repay.

Due diligence of IFIs goes beyond traditional credit risk assessment in the domains, where states 'surrender' their sovereignty to the regulation of international law, particularly in the sphere of human rights and environment.

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