

PROBLEMS WITH LONG-TERM FINANCIAL SUSTAINABILITY OF EXPORT CREDIT AGENCIES*

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Abstract

This paper focuses on national support for export and examines whether, following the OECD arrangement, long-term financial sustainability is assured without sustained fiscal help. Rules on permitted state support in this area are stated by the OECD Consensus, which is meant to guarantee a level playing field for all exporters, to encourage competition among exporters based on the quality and prices of goods, and at the same time, not distort the free market. The main objective is that every export credit agency (ECA) should be self-sustainable with no need for state subsidies. However, this may not be achieved. This research proves inadequacy of minimum premium rates (MPR) due to insured interest. This issue arises mainly from the application of MPRs to the principal value of the insured loan with no correspondence to the insured interest amount. As many ECAs are publicly owned, all systematic losses must be covered by state budgets, which is against OECD agreements and is not allowed.

Keywords: State support, export credit, minimum premium rates, OECD consensus, export credit agency

JEL Classifications: G22, G29, H81

1. Introduction

Developed countries with a mature financial market and high GDP usually support the export of national products. In today's world, international trade plays a huge role in the global economy, and a significant part of global export volume is financed by special export institutions that are either directly owned by governments or at least follow national

* This paper was supported by the Czech Science Foundation (Project No. GA 18-05244S) and University of Economics in Prague (Projects No. VSE IP100040 and No. IG102029).

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interests. When analysing the support for exporting companies, we talk about institutions called export credit agencies (ECAs). These ECAs create room for the financing not only of a significant part of the world's exports, but, according to Gianturco (2001), they have also strongly contributed to the development of the world trade and to the process of globalization, as we all have witnessed over the last few decades. Based on data from the Berne Union, and also from a competitiveness report from the US EXIM bank, these institutions provided trade-related financial support with a yearly volume ranging from 200 to 250 billion USD during the period 2013–2017. This amount demonstrates the importance of ECAs as a significant player influencing the volume of global trade.

ECAs open up possibilities for emerging market economies to start necessary building projects which are highly needed to raise the standard of living, such as hospitals, schools, power plants, infrastructure and many more. These projects are expensive and, more importantly, take a long time to build. They also need a developed financial system in order to receive such credit, which is something that these countries usually lack. Trung and Hilmar (2014) support the idea that ECAs not only bring credit from their home country, but also provide a comprehensive solution for the importer by finding a skilled producer (exporter) who can build the required projects with reasonable and, more importantly, acceptable financing terms. Moreover, the existence of such institutions reduces the interest rate spread on the financing of long-term projects by covering the insured parties against political risks in emerging economies (Sorge, 2004). It must also be understood that commercial insurance companies cannot provide such long-term credit insurance due to high capital requirements and low profitability (a high level of uncertainty about future developments, especially in emerging market countries), unlike ECAs, which are backed by their governments with large state budgets and have different goals.

Supporting national interests and promoting export companies brings more benefits than simply profits for the government. These benefits include higher tax revenues, lower unemployment in targeted areas and other positive effects, which are not so attractive for commercial banks or insurance companies. Effective state support usually becomes more important during recessions, when the finance industry tends to freeze and financing may be hard to get for some importers. ECAs are therefore considered to be anticyclical institutions, and they operate as such. These benefits for the government are also analysed in detail for the Czech Republic and the results indicate that despite the huge losses that were historically generated by the Export Guarantee Insurance Corporation (EGAP) in the Czech Republic, the programme was more than acceptable to the government due to the other benefits that it created (Pycha, 2017).

This means that the government of any developed country may tend to finance possible losses arising from its stronger support to exporting companies in the long

term, even though, according to the OECD arrangement, they should break even in the long run. For such risks, there are rules stated by the OECD, as well as a consensus which acts as a gentlemen's agreement between all ECAs – the OECD Arrangement on Officially Supported Export Credits (known as “the OECD Arrangement” or simply “the Arrangement”). These rules set the basic framework for the maximum permitted state support in the form of minimum interest rates for banks and minimum premium rates for insurance companies. In this paper, we will focus on export credit insurance companies, as these are the core institutions in this field, as credit is basically created only when an insurance agreement is signed.

The main hypothesis of this paper is a possible weakness of the pricing of credit risk under the OECD Arrangement with a negative impact on state budgets. Minimum premium rates for all ECAs that are insurance companies determine the lowest level of premium that shall be charged for a credit risk when officially supported export credit is provided. This price limitation has one clear goal according to the OECD Arrangement, which is to provide a framework for the orderly use of officially supported export credits by fostering a level playing field in order to encourage competition among exporters based on the quality and prices of goods and services exported rather than on the most favourable officially supported export credits. The ultimate goal of this paper is to prove the hypothesis, which states that it does not work like that in the real world. All ECAs have the same limitation on the price, but it is not very clear for what extent of cover such a price should be charged. The first issue is that many ECAs may provide higher cover for the same price, which basically means more favourable credit conditions in comparison with others.

The OECD Arrangement states that the premium charged by the participants shall be risk-based, shall converge and shall not be inadequate to cover long-term operating costs and losses. In other words, it should make an ECA a sustainable, non-profit institution. The MPR is expressed as a percentage and it applies to the principal value of the provided credit only, which instantly raises a question: How is the corresponding interest taken into account? Is it also insured? Yes, it is insured and one can only guess how it could be taken into account when some ECAs apply limitations on insured interest and others do not.

We found this to be a major problem that must be analysed and deserves a lot of attention. The Arrangement does not mention any limitation on the amount of insured interest, and therefore there is a big question as to how much of it can actually be covered by an MPR. Logically MPRs cannot cover an unlimited amount of interest since they are applied to the principal amount only, especially in long-tenor credit insurance, where the sum of interest may easily reach the level of a very significant part of the principal. Imagine insuring two different credits/loans with the same MPRs and the same principal amounts, but with totally different contractual interest rates, as they may be issued

by different banks. In the case of default for the higher contractual rate loan, the ultimate loss (payments to the insured party) for the insurer outruns the ultimate loss of the lower contractual rate loan. However, both of these loans are priced the same under the current system of MPRs, and this just does not sound right.

The current set of MPRs was set by participating countries in 2011, and since then no revision has been made. The Arrangement does not show how the MPRs were calculated in detail; it does not show what expected losses (in terms of loss given default, probability of default and recovery rates) were taken into consideration. Therefore, we simply cannot know whether or how much of the interest amount was used to set up the MPRs currently in use. If we had such knowledge, then we could validate whether the MPRs cover the corresponding costs and whether there should be any limitation on insured interest. Nevertheless, we want to prove in this paper that insured interest plays a huge role in the amount of expected loss calculation even though we do not know any details about calculations made by the Arrangement. The final output shall show at any rate that the current set of MPRs cannot fully cover any interest in the long term.

While researching how the MPR calculation works in the Arrangement, one can find formulas used for getting an applicable MPR for export credit involving an obligor/guarantor in a country classified in country risk categories 1–7. This can be found in Annex IX to the Arrangement, but it says nothing about how much interest generated by the principal amount is actually covered. Nobody seems to care about that. This creates a grey zone among all ECAs, because the insured credit will differ in terms of the contractual interest for each supported business case and also for each ECA, especially when considering the different values of money (interest rates), not only between different currencies, but also within the Eurozone between northern and southern countries. This means that the absolute insured value will differ and some ECAs will provide a higher insurance cover than others for the same price.

2. Literature Review

In this part, we want to deal with the development of literature on state support for exports and its blind areas that could be researched. The history of ECAs starts right after the First World War in 1919 with the establishment of the Export Credits Guarantee Department in the United Kingdom, which is considered to be the first ECA of its kind according to De Ricolfis (2011). The paper basically sums up the historical background to the establishment of the ECA world and explains the role of the Organization for Economic Co-operation and Development (OECD) and the Berne Union, as they created the basic rules for such institutions. Many researchers focus their interest on ECAs as they can create the credit

required to boost exports and therefore play an important role in global trade. According to Auboin and Engemann (2012), trade credit insurance has a strong positive effect on world trade and, interestingly, they also found out that this effect is fairly stable over time and does not vary during recessions or periods of expansion. Their research also points out the importance of the extensive data sets that are provided by ECAs through the Berne Union and which can be used for this kind of analysis. As these institutions may have a very positive impact on global trade, many researchers focus on something else. They analyse the type of country that could run such an institution and ask whether it is reasonable and useful for any country to have an ECA. Chauffour *et al.* (2010) analysed this issue for developing countries, which nowadays do not generally have ECAs. The importance of such studies is obvious, because having its own ECA helps a country's financial market not to dry up completely in deeper recessions. However, the conclusion of the study is not clear, because the authors agree with the establishment of an ECA in a developing country only if certain prerequisites are met. Among these, the financial and institutional capacity and the type of governance are the most important.

Another interesting study that supports the existence and use of ECAs is by Rienstra-Munnicha *et al.* (2013). The study compares the impact of a direct subsidy on exporting companies with the use of export credit support provided by ECAs. The study tries to measure the benefit of both these different ways of support, and concludes that providing support through ECAs becomes cheaper for the state budget than a direct export subsidy aimed at achieving the same level of national welfare. The authors also state that with credit support the net welfare of any exporting or importing country improves, while the use of a direct export subsidy worsens it. There are, of course, not only positive articles about the influence of ECAs. According to Wright (2011), ECAs support the financing of countless large-scale, carbon-intensive energy projects such as coal power plants, and this has a very negative impact on developing countries during the process of building a self-sufficient and, more importantly, sustainable and clean energy production infrastructure. It must also be mentioned that support to carbon-based energy projects has already been banned as it has a negative effect on the environment. Wright (2011) also explores and questions the effectiveness of the current system with rules set mostly by the OECD Arrangement, as many newly established non-OECD member ECAs do not have to follow them.

The fact that the Arrangement is not followed by the majority is also revealed by the Competitiveness Report (2017) published by the US EXIM Bank in June 2018. According to the Report, the Arrangement and its rules are followed in less than 30% of the volume of world export that is actually supported by ECAs. It means that there is a growing issue of ECAs in the eastern part of the world, as they do not keep a level

playing field or do not operate within an environment of official support that does not distort free markets.

All these articles target global issues regarding the way ECAs work and are supposed to work, and many studies aim to analyse local issues from one specific country's perspective. Many authors analyse the existence of ECAs and issues connected with them from multiple angles. Baas (2010) takes a closer look at the approaches and challenges to political risk assessment in Canada. Ilias *et al.* (2012) deal with the National Export Initiative introduced by President Obama to boost the exports of the United States of America, and describe the issues that were discussed by the US Congress. The aim of this initiative was to create jobs in the USA and to promote US export companies, although it faced many arguments during the debate in Congress, which were supported by many economic approaches which oppose government interventions in general. Then Ključnikov and Popesko (2017) prepared a case study from Slovakia presenting how much small and medium enterprises know about state support to exports and also analysing to what extent exporters use this state support. The result was somewhat shocking, as it was found that entrepreneurs hardly use the state support tools at all. It seems, therefore, that Eximbank SK and its products for SMEs are far from the required path. Credit support to exports is also analysed in the Czech Republic by Janda *et al.* (2013). They analysed a panel of 160 countries and estimated two gravity models to describe the structure of Czech trade and its patterns. The paper uses many econometrical approaches and concludes that higher GDP, a shorter distance from the domestic market, and lower political risk benefits exports.

Although there are many articles about the global system of state support to exports, or about various countries and dealing with more particular issues, there is a gap in the literature on the topic of the structure of minimum premium rates (MPR) and their sustainability. This paper formulates a main hypothesis which deals with the possible insufficiency of MPRs, and this may enrich the current literature. The premium is the most important part among the revenues of ECAs and is strictly limited from below by the OECD Arrangement, to ensure the ECAs do not distort the free market. The area of MPRs has not yet been analysed in depth, and therefore it should be discussed more by researchers in relation to their calculation and clarity. It is my major concern to enrich the current state of knowledge in this field and, to the best of my knowledge, there is no other paper dealing with MPR insufficiency whatsoever.

3. Methods

To support the idea that MPRs may be insufficient to cover all corresponding expenses and therefore create systematic losses for state budgets, it is necessary to validate that the amount

of contractual interest affects the premium rate if it applies only to the principal value of the insured loan. We have based the development of all equations lower on a simplified method for pricing credit risk based on the expected loss calculation. According to Fons (1994), this calculation works with flows of payments that are generated by a bond and is generally used for pricing coupon bonds (or at least it is so in that specific research). The basic methodology works with all financial flows, while each of them has a certain probability of default and earns a certain interest that corresponds to the risk of such a default in each period when flows take place. The important part of this method is that a risky asset, a bond or a loan in our case, must bring a yield high enough to compensate the investor for the risk accepted. A very similar approach to pricing credit risk is used by Hull *et al.* (2005) in their study, in which they set the credit spread as the difference between the risk-free rate and the bond's yield. To compare the chosen methodology regarding the measurement of credit risk, we analysed the approaches in a more recent book by Saunders and Allen (2010), who emphasize new possible ways of measuring the credit risk after the recent credit crisis. The book provides a description of new techniques for measuring credit risk which may be commonly used in banks and other financial institutions at the beginning of the new millennium.

The approach to the analysis of financial flows can also be used for pricing the insurance cover provided by ECAs, as we believe there are no differences between credit spread (sometimes called a margin) and the annual premium rate. This value is basically a premium margin which is meant to cover the risk of default when applied to the insurance industry, and it shows how much more an investor would demand when he invests in a risky loan or asset compared with the option of investing in a risk-free loan or risk-free asset. In order to obtain the right premium, we use a basic theory of expected loss calculation, which derives from the portfolio theory and is commonly used among credit insurance companies to calculate expected losses (*EL*). The *EL* is equal to the probability of default (*PD*) multiplied by the loss given default (*LGD*), which is equal to one minus the recovery rate (*RR*). The recovery rate in the study mentioned above means the residual price of a bond after the default of its issuer, while for an ECA it means the amount that is expected to be recovered from the insured loan. All the variables used in the following equations are explained under Equation 5.

Equation 1: Expected loss calculation

$$EL = PD \times LGD; \text{ where } LGD = (1 - RR)$$

As already mentioned above, the key to deriving the premium margin is to analyse the repayments of principal and interest. The future value of such a stream of flows

depends on the interest rate that is used for discounting. According to Fons (1994) and his findings, we can state that a loan issued at a risk-free interest rate must have the same future value as a loan issued at an interest rate appropriate to the riskiness of such a loan. One can now construct an equation that sums up the logic of this approach.

Equation 2: Equilibrium of investing in a risk-free asset and in a risky asset

$$(1 + IR^{FREE}) = (1 + IR^{Risky}) \times (1 - p) + (RR) \times p$$

This shows us that the IR^{Risky} must be high enough compared to the IR^{FREE} to compensate for the default risk of a principal value and also the corresponding amount of interest. The difference between these two interest rates defines the premium margin that any ECA should charge for such credit risk to be insured. From the perspective of the issuer of the loan, two possible outputs are presented in Equation 2. The first one is that the loan will be fully repaid by the debtor with the IR^{Risky} and the probability of no default, while the second one is that the debtor fails to repay, with the probability of that occurrence, while the recovery rate remains. This logic leads us as lenders to use the following equation and calculate the required IR^{Risky} .

Equation 3: Calculation of a risky interest rate

$$IR^{Risky} = \frac{IR^{FREE} + p \times (1 - RR)}{1 - p}$$

Using the theoretical background described above, it seems that the expected loss approach is the correct way to derive the required premium margin based on the riskiness of a loan. The required premium margin, for ECAs the annual premium rate, will be acquired from the analysis of all cash flows that are generated by a risk-free asset and by a risky asset. The risk-free rate generates certain cash flows and therefore no probability of default is needed for this sum of payments. The risky interest rate, on the other hand, generates cash flows that are not as certain to happen. Therefore, this sum comprises two parts, where the first part is composed of the successful repayments of principal and interest payments with the probability of $(1 - p_i)$ for each one of them. The second part is the sum of defaulted payments with the probability p_i and the relevant expected recovery rate. These two sums of streams of payments must be equal to the sum of cash flows generated by a risk-free asset (or loan). Based on this theory, we can now form the following equation.

Equation 4: Equilibrium between cash flows generated by risk-free credit and risky credit

$$\sum_{i=1}^n [CF_i + (PV_i \times IR_i^{FREE} \times t)] = \sum_{i=1}^n (p_i \times RR \times CF_i + (1 - p_i) \times [CF_i + (PV_i \times IR_i^{Risky} \times t)])$$

Equation 4 is straightforward and both sums are relatively describable. The sum on the left side of the equation defines the expected return generated by a risk-free asset, while the sum on the right side defines the expected return generated by a risky asset. This equilibrium is required, and in theory must be achieved, as any investor will require a specific margin above the risk-free rate to bear the corresponding risk. Having established this equation, it has to be adjusted now a little by defining it for the risky interest rate (IR^{Risky}). Following Equation 5 allows us to calculate the required interest rate and also to find the premium margin (or annual premium) associated with the examined risk.

Equation 5: Calculation of interest at risk

$$IR_i^{Risky} = \frac{\sum_{i=1}^n [(CF_i + IR_i^{FREE} \times PV_i \times t) - (p_i \times RR \times CF_i) - ((1 - p_i) \times CF_i)]}{\sum_{i=1}^n [(1 - p_i) \times PV_i \times t]}$$

CF^i = nominal cash flows associated with the loan (drawdown or repayment);

PV^i = principal value;

IR_i^{FREE} = risk-free interest; IR_i^{RISKY} = interest at risk; p_i = probability of default;

RR = recovery rate;

t = time factor for the interest calculation

Using this approach, we also need to introduce some further simplifications in order to reach the desired result. We expect that MPRs, as they are set today, will cover the risk-free interest rate generated by the loan, and then we calculate how the premium rate alters as the contractual interest of the underlying loan contract changes. This simplification does not really have to hold, because once our hypothesis is confirmed – the premium rate changes with the different contractual interest rates of the underlying loans –, then we know that there cannot be just one set of MPRs, and the Arrangement should pay great attention to the coverage of interest payments. The amount of attention that should be paid to such a matter depends strictly on the magnitude between the premium rates for insuring credit with various interest rates.

4. Empirical Analysis

The hypothesis of my paper is supported by the finding that higher contractual interest creates a higher expected loss and also the need to increase the premium rate charged for such a risk to be insured. The magnitude of such an increase depends on the chosen rating of the debtor, on a tenor, and, of course, on the difference between the risk-free interest rate and the contractual interest. It is important to state here that no matter what

interest rate is included in the current set of MPRs (set in 2011 by the participants' agreement), a higher contractual interest rate always increases the expected loss and, therefore, the required premium. This means that applying MPRs to the principal value creates an issue, as no ECA can know for sure whether the expected loss is fully covered, as that depends on the simplifications made by the OECD (if any) about the amount of interest covered by the current set of MPRs. This may lead to the creation of a significant and, more importantly, systematic loss. The results presented are based on inputs that are variable (PD based on ratings, tenors based on the type of business case and the difference between risk-free and contractual IR). For this reason, we will present only some outputs for selected business cases that are, to the best of our knowledge, the most common types to be insured by ECAs. PD values are taken from Standard & Poor's cumulative default rate study for the time period matching the set of PS values that were used for establishing MPRs. This study assigns a certain PD value to each rating, which enables me to calculate the final expected loss. The results are presented in Table 1.

Table 1: Development of annual risk premiums due to different contractual interest above the assumed risk-free rate

Repayment length (tenor)	Debtor rating	El annual premium pate (%)			Differences between premium rates (%)	
		Risk-free IR	Contractual loan IR			
		0	2	5	{2; 0}	{5; 0}
5 years	BBB	0.26	0.27	0.29	4.54	11.36
	BB	1.26	1.31	1.40	4.51	11.27
	B	5.32	5.59	5.99	4.98	12.45
10 years	BBB	0.37	0.39	0.43	7.50	18.76
	BB	1.51	1.63	1.81	7.96	19.89
	B	4.64	5.07	5.70	9.08	22.70

Source: Own analysis based on the chosen methodology

As Table 1 presents, different contractual interest rates require a specific premium rate. One can see that the premium rate has a strong reliance on the tenor (the total length of the repayment) and also on the probability of default arising from the particular rating. As the tenor gets longer, the correct premium rate based on the expected loss calculation moves further away. The same applies to the ratings: as they worsen, the correct premium

rate grows. Table 1 shows premium rates for insuring loans with contractual rates of 2% and 5% and also with the risk-free rate. This risk-free rate has been added, as we anticipate that such a rate might be used by the OECD when setting current MPRs. There will be a focus on the difference between the calculated premium rates that should be correctly charged for similar loans with different ratings and tenors. These differences can be seen in the last two columns in Table 1 and actually show the possible deficiency of premium rates due to the high contractual interest rate that is covered. More importantly, this shows the factual dependence of the correct premium rate on the different levels of the contractual interest rate. It is clear that there is a missing connection between the MPR and the amount of contractual interest rate under the OECD Arrangement.

Depending on the chosen tenor, contractual interest rate and rating presented in Table 1, one can see possible deficiencies ranging between 4.54% and 22.70%. This means that many ECAs following MPRs charge their premium way lower than the one that guarantees long-term sustainability. Of course, this magnitude may rise even more if the rating, tenor or interest rate spreads increase. These are very significant results that support the tested hypothesis and may lead to the occurrence of systematic loss in the case of many ECAs, as their written premium will not be able to cover all future expenses. Of course, the level playing field cannot be guaranteed when current MPRs do not differ when the contractual interest rate of an insured loan changes.

This issue is real, even if we abandon the assumption of a risk-free rate, because there must have been some kind of interest rate included in the creation of MPRs in 2011. However, these MPRs are used by all ECAs with no relevance to the underlying currency in which the loan is issued. As can be witnessed today, the risk-free rates differ greatly between major currencies. Table 2 summarizes the most recent available risk-free rates published by EIOPA that are commonly used for discounting purposes by insurance companies in Europe.

Table 2: Risk-free interest rates (yield curve) in major world currencies (November 2019)

Currency name	One-year risk-free interest rate (%)	Two-year risk-free interest rate (%)	Three-year risk-free interest rate (%)	Four-year risk-free interest rate (%)
Euro (EUR)	−0.444	−0.438	−0.410	−0.374
US dollar (USD)	1.606	1.483	1.446	1.441
Pound sterling (GBP)	0.698	0.678	0.690	0.706
Swiss franc (CHF)	−0.791	−0.785	−0.753	−0.716

Source: EIOPA - Term structure, 11/2019

Table 2 presents huge differences between the risk-free interest rates for major currencies. The risk-free interest rate of the US dollar is approximately 2% higher compared with the Eurozone risk-free rate. The price of loans will, of course, differ in these countries, but the difference between risk-free and contractual interest rates most probably will not.

5. Conclusion and Further Research Opportunities

The present analysis proves that the insured amount of interest plays an important role when calculating the needed premium rate, which may differ significantly from the current set of MPRs. The OECD does not publish exactly how the MPRs were calculated, and therefore we may only assume that some interest rate may or may not have been included when the MPRs were set and all the participating countries agreed to their use in 2011. Irrespective of that, this analysis shows that the stated hypothesis is proved, because the different contractual interest rates directly influence the correct premium rates.

Almost all ECAs are financed by state budgets, which means that they are connected to public money, and one of the main objectives of the OECD Arrangement for export credit states that ECAs must be long-term sustainable and must provide their support without the need for state subsidies. The analysis presented in this paper shows that this objective is most probably in danger due to the insufficient level of current premium rates. The main reason for such a strong statement is the fact that the premium rate is applied only to the principal value of the insured loan and the corresponding interest is not taken into account at all. This means that ECAs can insure any interest amount they find acceptable for the same price. Our research confirms, based on the expected loss methodology, that insured interest increases the premium rate needed to cover future expenses. We assume that some countries may want to run their ECAs even with heavy losses and may actually offer far more favourable financial terms for insured interest and therefore provide stronger financial support than others do. In the end, the exporters will get more cover for the same price, and the net loss created will be covered by public money, unless the values of other parameters used for the EL calculation, mostly the PDs or LGD, are lowered.

To sum up, we proved insufficiencies in the order of tens of percent, indicating that a significant amount of money should have been collected from the insured parties, but must be collected from tax payers instead. As mentioned at the beginning of this paper, governments may tend to run their ECAs even with the creation of systematic loss, because the ECAs bring benefits to them other than just the profit sought by commercial entities. On the other hand, it should be guaranteed that the level playing field mentioned in the OECD Arrangement is maintained. The Arrangement states that this is in order

to encourage competition among exporters based on the quality and price of goods and services exported rather than on the most favourable officially supported financial terms and conditions.

To avoid such issues, which have a negative impact on state budgets, we have a few suggestions that might help. The amount of insured interest should be discussed among ECAs so that this grey area is covered by some basic rules limiting the amount, and those rules should apply to all participating members. The amount of insured interest should be sufficient to enable the insured parties to recover the full amount of the principal and to cover the refinancing costs, but should never cover any profit margins. This is very important, because the structure of the contractual interest rate is only rarely disclosed by banks, and, therefore, an insuring ECA has hardly any idea how such an interest rate is constructed. As ECAs cover all credit risk, and only self-insured retention remains with the banks, the only acceptable margin covered by the insurance provided by ECAs could be the expected loss stemming from self-retention. This leads us to structure an interest rate that will be maximal in terms of interest rate coverage. Our favoured suggestion would be a floating interest rate (LIBOR, EURIBOR, etc.) connected to the appropriate currency in which the loan is issued.

Apart from such a floating interest rate, we do not want to forget considering the overhead costs that are needed to run a bank. These costs should, of course, be covered by the insurance agreement too; our suggestion, therefore, would be to increase the coverage of the maximal floating interest rate by a fixed amount of overhead costs. The amount of such costs should be optimally based on the historical experience of the evolution of the overhead costs of the participating banks, which is quite difficult to obtain. However, this figure is already mentioned in the OECD Arrangement in the section dealing with CIRRR (Commercial Interest Reference Rates¹), which allows banks to charge 100 bps above such interest rates. This seems a very appropriate amount as a maximum for limiting the insurance coverage of overhead costs.

As long as the premium rates apply to the principal amount only, the limitation on insured interest must be applied (or alternatively the acceleration of loss indemnification should be a common practice among all ECAs). It is important to define clear rules dealing with insured interest in order to prevent any ECA from providing financial support that gives national exporters an advantage over foreign exporters and results in losses for the national government, which, in the end, are covered by public money.

1 Calculated monthly and based on government bonds issued on the country's domestic market in the country's currency.

This area offers a lot of room for further research opportunities. One possibility would be a deeper analysis of the probabilities of defaults used for MPRs in 2011, which is meant to test how they have changed until the present day. As these probabilities decrease during an economic boom, we expect them to be lower than they were in 2011. Another area of research is the question why ECAs do not accelerate repayments of loans and keep repaying of loans to insured parties according to official terms, even with interest payments. These interest payments are based on the credit risk of the debtor, but have no connection to the ECA after default. Why do these interest payments not shrink after the above-mentioned default of the debtor, as the credit risk of the ECA is significantly lower compared to that of the debtor? Finally, it would also be worth researching whether the institutional organization of ECAs plays any role in their effectiveness, as almost every ECA has a slightly different ownership structure and may have different goals as well.

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