Embargo and sanctions screening in Treasury

Personal responsibility in a dynamic environment

Finance- and Treasury Management Switzerland

Embargo and sanction lists contain persons and organizations with whom no business relations may be entered into for various reasons. The potential risk of disregarding these lists and the resulting penalties and reputational risks are often underestimated or even ignored, despite the fact that the responsibility to prevent such crimes lies entirely with the companies.

Individual companies must not only screen master data against daily updated lists, but also take financial transactions in Treasury into account. The resulting challenges are becoming increasingly complex. Not only are the relevant regulations extensive and numerous, but the relevant laws are also subject to constant changes and new sanctions are added frequently.

In order to get a better grip on these challenges, in a first step, a distinction should be made between embargoes and sanctions. Sanctions are generally defined as reactive; they are punitive measures threatened by law aimed at either punishing or enforcing a particular conduct. The primary goal of financial sanctions is the prevention of economic activities that finance terrorism.
Sanctions in turn form the basis for embargoes, which constitute a form of sanction exercise. Embargoes for instance restrict foreign trade with certain countries through import and export bans, thus also restricting the execution of financial transactions.

Requirements are increasingly onerous

Companies have to comply with the requirements of several regulators in order to rule out possible violations of embargoes or sanctions.
European Union regulations (EU Regulation 2580/2001; 881/2002) clearly state that companies must monitor their payment transactions and will be held accountable for any violations.
In addition, in the Federal Republic of Germany, BaFin imposes special requirements on payment factories and shared service centers (SSCs) as a result of the German Payment Services Supervision Act (Zahlungsdienstaufsichtsgesetz; ZAG). These requirements are subject to constant change and affect the payment processing of all transactions. Accordingly, a BaFin announcement on the ZAG bulletin now obliges all payment factories and SSCs to set up additional processes and systems to prevent money laundering, sanction violations and terrorist financing.

In addition to these requirements, there are numerous other national and international regulations that companies must observe. New sanctions are constantly added to the already extensive compliance requirements. For instance, the Office of Foreign Assets Control (OFAC) has just published in November 2018 new sanctions against nine Russian companies and three individuals for their activities on the Crimean peninsula and in Eastern Ukraine. This resulted in their inclusion on the US

SDN list (SDN List = OFAC's list of Specially Designated Nationals and Blocked Persons). From the point of view of the US government, no transactions may be carried out with the sanctioned persons and organizations nor with companies in which these hold an interest of 50% or more. These sanctions are also relevant for non-US companies as they are designed as “secondary sanctions”. This means that from the point of view of the US government, foreign companies must also ensure that they do not enter into business relationships with these listed Russian individuals / companies.

This development is only one current example of the increasing complexity that will continue to increase in the future. It turns out that even banks cannot entirely avoid getting fined. The French bank Société Générale, for example, had to pay a record fine of 1.2 billion US dollars for handling dollar transfers for companies located in US-sanctioned countries. The problem of money laundering is also on the rise in Europe. This was exemplified by the case of ING, which had to pay a fine of 775 million euros in September this year due to a lack of controls.

Playing it safe

As a result, it is essential for companies in all industries to implement and integrate processes and systems that successfully prevent non-compliance with sanctions. As a first step, companies should analyze and review their existing screening mechanisms and extend them to financial transaction monitoring in Treasury. In the second step, the most important aspects such as the assessment criteria, the database, the workflow, etc. must be defined. In this context, it is necessary to analyze which fields are being screened. In which system does the assessment take place and at what time? Before creating the payment file or before releasing it to the external bank? How are payments screened outside a payment factory? Are whitelists used to override false positives? By implementing the appropriate measures and introducing a system-based, regular sanctions screening, the risk of executing illegal payments to listed individuals / organizations can be minimized.

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Modifications of financial liabilities in practice

In 2018, many companies will have to apply the IFRS 9 rules on the treatment of non-substantial modifications for the first time. In part, this will apply retrospectively for refinancing that took place already some time ago. The following article shows the quantitative effects in detail for selected examples.

Although the rules for modifications of financial liabilities in IAS 39 and IFRS 9 initially appeared unchanged, various communiqués already made it clear in 2017 that non-substantial modifications generally would lead to a modification effect reflected in the income statement, as this effect can no longer be distributed over the term with a changed effective interest rate, as is currently the practice under IAS 39.

In the following examples, we will show the differences in the treatment of non-substantial modifications and explain how these are to be treated when transitioning to IFRS 9.

Example 1

At the beginning of 2015, a company took out a bullet loan of EUR 100 million with a term until the end of 2019. The interest rate was 4%. Taking into account transaction costs in the amount of EUR 3 million, the effective interest rate on the issue was 4.7%, resulting in the following amortization schedule:

Year	Carrying amount 1.1.	Interest rate	Repayment of principal	Carrying amount 31.12.
2015	97,0	4,0	0,5	97,5
2016	97,5	4,0	0,6	98,1
2017	98,1	4,0	0,6	98,7
2018	98,7	4,0	0,6	99,3
2019	99,3	4,0	0,7	100,0

At the end of 2015, the company refinanced the loan. The term was extended by two years and the interest rate was reduced to 3%. As this modification was considered to be insubstantial, in accordance with IAS 39, a commonly used method was selected to calculate a new effective interest rate in order to spread the lower interest rate over a longer term based on the initial carrying amount of EUR 97.5 million as at the end of 2015. This effective interest rate amounted to 3.5%. Under IAS 39, amortization using the new effective interest rate results in a carrying amount of EUR 98.3 million as of 31 December 2017.

Upon the first-time use of IFRS 9 on 1 January 2018, the company had to account for the existing loan in accordance with the provisions of IFRS 9 retrospectively. It therefore had to determine the modification effect at the time of refinancing using the original effective interest rate of 4.7%, using the following calculation:

Year	Carrying amount 1.1.	Interest rate	Repayment of principal	Carrying amount 31.12.
2015	97,0	4,0	0,5	97,5
Gains due to the modification				**-6,2**
2016	91,4	3,0	1,3	92,6
2017	92,6	3,0	1,3	94,0
2018	94,0	3,0	1,4	95,4
2019	95,4	3,0	1,5	96,8
2020	96,8	3,0	1,5	98,4
2021	98,4	3,0	1,6	100,0

The interest savings are therefore not spread over the term but recognized in the income statement at the time of refinancing in the amount of EUR 6.2 million. The gains made due to the modification mainly result from the interest amounting to EUR 4 million saved for the original term, the interest rate that was lowered by 1.7% for the last two years compared to the effective interest rate, and a modified distribution of the original transaction costs.

When preparing the opening balance sheet, the difference resulting from the amount under IAS 39 (see above, EUR 98.3 million) and the carrying amount under IFRS 9 (see table, EUR 94 million) of EUR 4.3 million was recognized **not affecting operating result** as of 31 December 2017. This difference is reflected in a correspondingly higher interest expense in subsequent periods, which, in contrast to the transitional entry on 1 January 2018, is recognized **in profit or loss**.

Example 2

In this example, the above loan is now modified to the effect that it was increased by an additional EUR 50 million as agreed at the time of refinancing. The company does not regard the increase in the loan as a new loan. In this case, the gains due to the modification jump to EUR 10.5 million. This results mainly from the interest savings described above, but now of course for 150% of the amount borrowed.

Year	Carrying amount 1.1.	Interest rate	Repayment of principal	Carrying amount 31.12.
2015	97,0	4,0	0,5	97,5
Gains due to the modification				**-10,5**
Loan increase				50,0
2016	137,0	4,5	1,9	138,9
2017	138,9	4,5	2,0	141,0
2018	141,0	4,5	2,1	143,1
2019	143,1	4,5	2,2	145,3
2020	145,3	4,5	2,3	147,6
2021	147,6	4,5	2,4	150,0

Conclusion

At the time of the transition to IFRS 9, the main challenge was to determine correct carrying amounts for the opening balance sheet in accordance with IFRS 9. Particularly in the case of multiple refinancing events in the past, determining the carrying amount is complex. Because the interest rates in the past were generally higher, significant adjustments to the effective interest rates used have been observed. The associated changes in carrying amounts and future interest expenses may also lead to differences in the company's performance indicators or its contractual covenants, which should therefore also be analyzed in this context.

However, a non-substantial modification does not always lead to the effects described above. If a variable-rate loan is modified, it may be appropriate to use an adjusted effective interest rate for subsequent accounting rather than the original effective interest rate, with reference to IFRS 9B.5.4.5. What has to be examined in detail is which contractual parameters were changed and whether the change represents an adjustment to market conditions. In order to be able to determine the appropriate accounting approach as well as any gains or losses arising from the modifications, a detailed case-by-case analysis is indispensable.

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Computer models in the energy sector

Marketing the intrinsic value of power generating plants

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In the last part of our newsletter on the energy sector, we presented fundamental models for the long-term modeling of the energy production landscape and the resulting price developments. These forecasts are often used to evaluate long-term investments. But how about the short-term marketing of generating plants?
Fundamental models do not work very well for this aspect because their forecasts are not granular enough and in any case, the futures market provides another more reliable data source. However, the available futures market prices are sometimes not sufficient for many types of plants because their use has to be calculated on an hourly basis in order to maximize marketing results. This also requires hourly prices, which must be calculated with models. We would like to provide a more in-depth look at these models and the operational planning based on these.

Power plants are very often marketed years before any actual power is generated, primarily for planning reasons. But how do we know how much power a power plant will be producing in a specific hour two years in advance? The deployment of the power plant depends very much on the electricity price that can be achieved in that hour. The different classes of generation plants have to be regarded differently. Volatile power plants, such as wind farms or photovoltaic plants are generally not managed as they produce electricity depending on environmental influences. On the other hand, there are manageable power plants such as most conventional power plants, but also biogas plants and power storage facilities. Their planned use not only depends on the price of electricity but also many other factors.

How quickly can a power plant be started up or shut down? What costs are involved? Are these costs static or do they depend on the market? The answers to these questions depend very much on the investment classes. A lignite-fired power plant, being an inflexible baseload power plant that is difficult to adjust, therefore will have a very different deployment planning than a highly flexible gas-fired power plant. A gas-fired power plant can react to price signals within 15-minute intervals. As a result, the average price listed on the futures market will not be sufficient to forecast its deployment planning.

The forecasts need to be timely and exact, and the inherent fluctuations are a necessity. For this, so-called hourly price forward curves (HPFCs) have to be calculated. Usually, these HPFCs are generated as follows: The fluctuations of historic price curves are used and adjusted to the prices quoted for base and peak bands on the futures market. In doing so, the different fluctuations for workdays and weekends, specifically also bank holidays, such as Easter or Christmas, are considered. Sometimes average values are used for these so-called typological days, which is generally not recommended as this changes the variance. A peak-load power plant which is only in the money with very high prices, would be used only infrequently in this procedure and would therefore be undervalued.

A better approach is therefore to analyze the irregularities and calculate them by a stochastic process. To do this, all periodic fluctuations are deducted from the historical data, as well as predictable fluctuations due to banking holidays, vacation periods or even large sports events such as the Football World Cup. What is left is a curve whose statistical characteristics are modeled with a suitable stochastic process. All previously deducted fluctuations are then added again to this modeled time series. In a last step, the prices averaged over suitable periods are adjusted to the current futures market in order to attain freedom of arbitrage. The result is a statistically solid forecast of hourly rates for the next few years.

Once the HPFC is available, it becomes possible to calculate the deployment. Just as mentioned above, a difference needs to be made between the different types of power stations. Concerning deployment planning, it is especially flexibly manageable power stations, such as coal or gas-fired plants, that are interesting. Coal-fired power plants can be operated with minimum or maximum load, depending on whether they are in the money or not. In this way, the loss due to production in unprofitable hours can be minimized. Gas-fired power plants in their most flexible form as gas engine power plants are able to switch between maximum load zero load within a quarter of an hour. This allows them to exactly trace the price signals of the intraday market. Although the number of start ups will affect maintenance negatively, these costs are not highly variable.

Deployment planning becomes more difficult with power stations that produce not only electricity. These days, where various sectors are connected, this is the case with an increasing number of plants. In addition to conventional power stations for district heating, small to medium-sized biogas plants used to heat individual buildings or neighborhoods should also be mentioned here. Beyond this, refrigeration is also increasingly being provided by electricity-generating plants. This combination of different loads causes further restraints in operational planning.

During heat production, a heat accumulator is usually connected in between to ensure maximum flexibility. In such a case, every hour, the question is whether the forecast thermal load should be used from the heat accumulator (i.e. the power station does not produce it) or whether the power plant should produce electricity and heat, thus replenishing the heat accumulator. Among other things, this can lead to a scenario where a power plant produces electricity even though it is not in the money, for instance if the subsequent hours show even lower electricity prices. This connection has to be analyzed across all hours because the optimum can be determined only when looking at the entire observation periods. This requires linear programming algorithms such as the simplex method. Put simply, these try to find the most likely combinations of storing versus drawdown, and using many iterations through systematic variations try to close in on the economic optimum.

An optimal operational planning only represents the inherent value of a manageable power plant. In view of the possibility that the power station can be shut down if prices are below short-term marginal costs, this power station is a true option. In this sense, it also holds an intrinsic value in addition to a time value, which increases incrementally the closer the price of electricity is to short-term marginal costs.

The time value results clearly from the asymmetrical disbursement function. If the future electricity price is lower than the forecast price, which is below the short-term marginal costs, the plant remains down and the loss is limited to the long-term marginal costs, which are incurred anyway. If the future electricity price is higher, however, there will be additional profits from higher sales proceeds. The expected value across all possible future scenarios is thus higher than for the forecast underlying the intrinsic value. The next part of our series will deal with the complex presentation of future scenarios and their implementation in the form of delta hedging.

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