Abstract. This paper discusses the essential aspects of the methodology of creating a risk premium. It is expressed by the level of systematic risk in the economy and part of the expected return on investment. It only exists because it is impossible to estimate the future values of a selected investment and it expresses a certain degree of uncertainty. The aim of the paper is to compare the calculation methods used for the risk premium of the Czech Republic. The methodology provides an analysis of calculation methods, in particular the basic CAPM method and modified Tax-CAPM, or the relative standard deviation method, government bond default spreads and the risk-adjusted discount rates according to Damodaran. The modified concept of the CAPM model according to Damodaran seems to be most appropriate for the Czech Republic. The model includes a country risk premium. However, the size of a company must be taken into account and the recommended market volatility coefficient of 1.5 may have to be adjusted to a higher value. However, no exact rules of procedure are available to clearly determine which models would be most appropriate for use. These are only speculations and approximate estimates in the calculation.

Keywords: CAPM model · Financial management · Investment · Systematic risk

1 Introduction

The topic of the risk premium is the most important aspect in finances as it is the investors, managers and academics who are very interested in proper evaluation of this important measure to assess the success of their investment projects to obtain this long-term premium. It is expressed by the level of systematic risk in the economy [11]. Damodaran looks very closely at the topic and development of risk premium, mainly in the US stock market, in his research [4]. He modified the CAPM model and included a country’s risk premium in the calculation. This model is considered to be the most accurate picture of reality. The Damodaran’s approach is not appropriate for the Czech Republic as some calculations and indicators need to be adjusted and this model does not consider a company’s risk profile in regard to its size. It is based on the difference in the government bond yields of the given country and countries with AAA rating. The US capital market data are primarily used to calculate the beta coefficient and the market risk premium. Each investment and the related capital cost reflect the
environment where they are located and this premium obtained in the best global markets must be adjusted for the given country [9].

The financial sector in the Czech Republic has more than doubled in the last decade [13]. The key for the evaluation of the risk premium is to properly evaluate historical results which allows to implement higher profits in the future. The monitoring of the risk premium provides an important input into the estimation of the magnitude of the capital cost. It is the essential return and risk component of any model [31]. The aim of the paper is to compare the calculation methods for the risk premium in the Czech Republic. Specifically, the basic CAPM method and its modification will be compared. Damodaran primarily applies the values of the Moody’s rating company and the second largest S&P. In her book, Kislingerova refers to the value sizes of the risk premium for the Czech Republic [18]. The Moody’s rating is 5.85% while the S&P rating value is 7.2%.

2 Literary Research

The country risk has become a sensitive issue for the financial markets, therefore being discussed by many authors. For example, Bouchet et al. not only examined the economic, political but also the financial risk of a country [3]. Howell developed a methodology together with the PRS group to measure a country risk based on the score obtained from the category of these three risks [14]. In contrast, Busse and Hefeker only focused on the issue of political risk, especially in developing countries [2]. Haugh et al. studied the development of government bonds with regard to the countries in the Euro zone during the financial crisis 2008–2009 [12]. The problem of high spreads was identified to have been caused by economic inefficiency and deficit of some countries. Similarly, higher risk aversion of investors during this crisis.

The monitoring of ratings is very important for potential investors to be able to make decision on the purchase or sale of securities [17]. This evaluation is provided by independent credit rating agencies. They determine the level of risk of non-compliance arising from the issue of bonds or other fixed-income investments. The country’s risk premium increases as the country risk increases. These agencies help to improve the efficiency of financial markets because the information failure and costs are reduced. The creditworthiness and credit quality of the issuer are also assessed. Following the analyses, the entity will be assigned a rating from the specified rating scale. Nevertheless, this rating is only considered an independent risk assessment [27]. The bond quality classification is divided into two grades: investment grade (AAA-BBB ratings) and speculative grade (BB rating and beyond). Credit rating agencies do not have a lot of ability to predict developments. It was confirmed in the global crisis 2007 and it was obvious that credit rating agencies only responded to market developments [1]. Standard & Poor’s, Moody’s and Fitch are amongst the largest credit rating agencies on the market. The country rating helps to, for example, attract foreign investors or issue securities on foreign markets. It also allows better access of the country to the international capital market. The agencies can assess a country risk, for example, on request of a government, central bank or provide this service to their investors [7].
The discount rate consists of the risk premium and the risk-free rate. The risk-free rate is the theoretical rate of return of an investment with zero risk. Zero risk cannot be achieved for any asset, it can only be reduced as much as possible. Treasury bills are the least risky and most liquid investment [22]. The investment in government bonds issued for 10 or more years of repayment would be longer-term and more appropriate. The risk-free interest rate on return of these government bonds is even called for in practice. The risk premium consists of the return above the risk-free rate level. It is primarily the profit for the risk taken by the investor [21]. The Chkili’s et al. study supports the appropriate use of the FIAPARCH model to predict the portfolio market risk exposure and the existence of the diversification advantages between the equity and foreign exchange markets [15].

For the sake of simplification, Damodaran recommends to replace the stock and bond volatility coefficient with the value of 1.5 because it is not easy to collect this data [6]. Beta coefficient is another important aspect. Here the level of risk and sensitivity of the return rate is derived from the difference between the risk-free rate and the return rate of investment. This market risk called beta is estimated based on the individual market risk factors, each of which has its own price. In the calculation of the risk premium, Damodaran uses 5 essential estimation methods by Othieno and Biekpe [25]. These mainly include the estimated demand, the method of supply, the historical estimate, the implied ERP estimate and the approach-based survey. For the calculation of the risk premium, the level of risk of the asset against other assets must be determined. The CAPM model based on the capital market will be most appropriate. Qin suggests to build a conceptual framework to understand the aggregate risk effects [26]. It also means that risk aversion is a potential reason for settlement of the securities market and a high risk premium. The standard CAPM model does not consider the risk premium. Modifications and adjustments are required to include the risk premium in the calculation [1].

The financial market is sensitive to the country risk. It is important to examine the score obtained from the review of the economic, political and financial risks of the country. These evaluations are reviewed by the credit rating agencies. It increases the efficiency of the financial market by reducing the information failure and transaction costs. They can also help some countries to attract foreign investors. Nevertheless, credit ratings are only considered and recommended as an independent risk assessment. The CAPM model based on the capital market is the most appropriate model for the calculation and Damodaran applies its modified version. Invasive globalization and turbulent financial changes foster the competitiveness across the areas of business, placing considerable emphasis and pressure on business profitability. The investment will only be successful for investors if the rate of return on the contribution contains the reasonable remuneration or risk premium.

3 Methodology

The risk premium in evaluating the success of investment projects is expressed by the level of systematic risk in the economy. According to Damodaran, his modification of the CAPM model is the most accurate picture of reality. In his modification,
Damodaran also included the country’s sovereign risk premium in the calculation. However, his approach is not suitable for use in the Czech Republic due to the required adjustments of calculations and indicators. However, it is to be noted that the model does not consider the level of risk of the company in relation to its size. It is based on the difference in the government bond yields of the given country and countries with an AAA credit rating.

3.1 Rating

The rating allows to assess the investment level of risk. Credit ratings are divided into two grades, namely investment and speculative. The highest sovereign ratings are obtained by the most developed countries in the world that offer the investors a stable and growing economy with low inflation and unemployment rates, and good quality infrastructure and an educated population [10]. At the other end, there are countries with high debt ratios and an overall insolvency. In the history, for example, the sovereign rating downgrade of Greece temporarily weakened the euro due to concerns about the spread of the crisis across the euro zone. In the calculation of a rating, the credit rating agency works together with the national institutions such as the central bank, the ministry, and government agencies, or trade unions. The country is then assigned a rating A to D corresponding to the country’s sovereign credit risk. The investment grade includes ratings from A to Baa3. The speculative grade ranges from Ba1 to D according to the Moody’s rating. As shown in Appendix 1, the Czech Republic is assigned the same investment grade rating – Aa3 according to Moody’s and AA-according to Fitch and S&P – from all the three credit rating agencies. The Czech Republic achieved this rating in 2019 after 17 years when the rating was upgraded from A1. This value warrants the high credit reliability of the Czech Republic and advantageous financing on the domestic and foreign markets even with regard to the current situation affected by the corona virus pandemic [20]. According to Moody’s, this pandemic will have an adverse impact on the Czech economy, causing an increase in public debt to 36.9% of GDP [31].

Table in appendix 1 shows the ratings from the big three agencies. The S&P and Fitch ratings have the same values different from Moody’s. In the determination of a country’s standing in credit ratings, S&P and Fitch will compare the current problems of a country and its public finances [29]. In contrast, Moody’s rather focuses on the expected country’s future development. Thus it will be up to each investor to choose a specific credit rating agency because their ratings of countries can be different. Damodaran applies the Moody’s ratings for his calculations and the same will be used in this paper.

3.2 Risk Premium

The risk premium is the price for risk and is part of the expected return on the investment. This remuneration corresponds in value to the risk premium of the company’s equity costs. Along with the cost of liability, it is possible to set the discount rate using WACC. Expected return is a determinant of the cost of capital. There are several financial risk models that share some views on risk. They all define the risk in terms of
variance from expected return and the investment is not safe if the actual return equals the expected return. Risk should also be measured from the perspective of a marginal investor who is diversified [5]. This premium exists only due to the impossibility of estimating the future values of the selected investment and expresses a certain degree of uncertainty. This risk is already included in the discount rate, so its quantification is secret and no such attention is paid to it. There are a number of calculation methods and some selected ones will be examined in other parts of the methodology.

3.2.1 Relative Standard Deviation Method
The usual measure of risk is deviation, the higher it is, the higher the risk is. If the scale of the deviation of one market from another changes, the relative degree of risk will be obtained. The formula for the relative standard deviation for the selected country to the United States is:

\[
\text{Relative standard deviation} = \frac{\text{standard deviation of country } x}{\text{standard deviation of U.S.}}
\]

The risk premium for the selected country is calculated using historical data and relative standard deviation. The problem for the determination is only if the selected country does not have a sufficiently developed capital market. The U.S. market is most often compared to other countries. Marikova therefore recommends the use of the German risk premium calculation, as there are large differences between the U.S. economy and Europe [22]. The differences are mainly in the stability of the economy, the structure of the capital market and political risk. The formula for calculating country risk premium according to Damodaran is:

\[
\text{Country risk premium} = \frac{\text{U.S. risk premium}}{\text{relative standard deviation of country } x}
\]

3.2.2 Model Tax-CAPM
German practice is based on a modified Tax-CAPM model, which explicitly takes into account taxes from the owners of income on a designated asset [16]. This model is widely used and is anchored as a German standard for determining objective value. Damodaran’s models are criticized by theorists because they are not theoretically grounded, but this model has a theoretical basis that is generally accepted. The formula for the calculation is:

\[
NVK \text{ netto} = rf \times (1 - d) + RPT\text{netto} \times \beta
\]

where: \( NVK \text{ netto} = \) cost of equity reduced by owner tax, \( rf = \) risk-free return, \( d = \) owner’s income tax, \( RPT\text{netto} = \) capital market risk premium reduced by owner income tax, \( \beta = \) beta coefficient.
3.2.3 Default Spread of Government Bonds
The default spread is the difference between the yields of two bonds with different ratings. It is the simplest and most common method of calculating the risk premium. It is based on the fact that investors charge for a spread when buying government bonds. Government bonds must be issued only in Euro, Dollar and Yen. This guarantees a risk-free interest rate. The spread is determined by the current or average value in the market.

3.2.4 CAPM Model
The model is based on future values and represents an equilibrium state of the market, therefore the results from past data lead to not entirely accurate results [21]. This model is based on the initial WACC model. With the CAPM model, it is a problem to define the market portfolio of the company, as it includes all available assets. Many are not even traded and some cannot be accurately measured, such as human capital. Another problem is that the model deals only with expected returns and not the actual return on investment and assesses only systematic risk. Graphically, this model is expressed using the SML securities straight line equation, which determines a combination of stock yields and beta coefficients. The beta coefficient plays an important role here. It expresses the degree of systematic risk to the market and draws data from the past [19]. According to Sharpe, the essence of the model is that the expected return on an asset is related to the degree of risk of the examined asset [28]. This is indicated by the beta coefficient. Fernández [8] claims that the beta coefficient causes difficulties and problems when calculated in this model. The way in which the CAPM model is derived is far from reality and needs to be modified.

There are two ways to calculate the CAPM. One way is with the beta calculation from historical data, the other way is with the beta calculation by the analogy method. The beta coefficient should be 1. If it exceeds 1, there is a higher level of systematic risk and vice versa. Formula for calculating the CAPM model:

\[
E(\tilde{r}_i) = rf + \beta \times (E(r_m) - rf)
\]

where: \(E(\tilde{r}_i)\) = average expected return on the security, \(rf\) = risk-free interest rate, \(\beta\) = beta coefficient, \(E(r_m)\) = the average expected return on the capital market.

3.2.5 Discount Rate Adjustment and Damodaran’s Approach
It is the most accurate and realistic model, which is a combination of spread models and market volatility. It is based on the difference between the yields on government bonds of the designated state and the state that has an AAA rating, i.e. risk-free. The result is general regardless of the situation and conditions in the country. Thanks to this model, a risk premium can be calculated for any country if it is rated by a credit rating agency. For a more accurate result, it is appropriate to include the volatility of individual countries. From these US capital market data, the beta coefficient and the market risk premium are determined in particular. Each investment and its cost of capital reflects the environment in which they are located and it is necessary to adjust this premium obtained in the best markets in the world for its country. However, it is first necessary
to calculate and determine the country risk premium, which is determined according to the following formula:

\[ RP_c = \text{Country default risk} \times \left( \text{stock market volatility} / \text{bond market volatility} \right) \]

The difference between shareholder and creditor risk is incorporated in the model as a correction of creditor risk by the ratio of stock market volatility to government bonds. To simplify, Damodaran recommends replacing the stock and bond volatility coefficient with a coefficient of 1.5, as it is not easy to obtain this data [6]. Damodaran further modified the CAPM model with a country risk premium as follows:

\[ E(r_i) = rf + \beta \times RPCM + RPC \]

where: \( E(r_i) \) = average expected return on the security, \( rf \) = risk-free interest rate, \( \beta \) = beta coefficient, \( RPCM \) = capital market risk premium, \( RPC \) = country risk premium.

4 Results

The most appropriate parameter to assess the level of investment risk is the globally used and recognized rating of agencies. However, it is not mandatory, but is indispensable for investors in bond issues [24]. This rating takes into account the risk that investors would take if they invested in a riskier country than countries rated by Moody’s Aaa. The first rating agency, CRA rating agency, a. s., was established in the Czech Republic in 1988. In 2006, Moody’s agency became the owner [29]. Rating performance is a complex and lengthy process, where a credit rating agency cooperates with state institutions. From the information obtained, the state is awarded an appropriate mark from A to D indicating the riskiness of the country. These analyses are performed mostly once a year, so it is not possible to react so quickly to turbulent changes in the financial market. Agencies also do not have much ability to anticipate developments and rather only react to them. It is necessary for each investor to choose the credit rating agency at his discretion, as each agency uses a different methodology for risk assessment. Moody’s focuses on the country’s anticipated future development. S&P and Fitch compare the current problems of the state and its public finances [30]. The rating divides individual countries of the world into marks that determine investment-grade and speculative grade of investment. Rating of the Czech Republic falls into the rating of the investment grade according to Moody’s on Aa3, it was stated in the rating from April this year [23]. The outlook for long-term liabilities is stable despite the current development of the corona virus pandemic and the expected economic slowdown. Countries such as Taiwan, Saudi Arabia, Chile and Hong Kong are also included in this rating level. In comparison with these advanced capital markets, the market of the Czech Republic has a shorter history and therefore does not reach such qualities as other world markets. However, it is worth considering whether it would be more appropriate to break down these country rating marks into further rating levels so as not to distort the results when calculating the country risk premium and also to take into account the company’s riskiness in relation to its size.
The relative standard deviation method is the usual measure of risk. In the specified formula, the U.S. market is most often compared to other countries. There are large differences between the Czech and U.S. economy, especially in the stability of the economy, political risk and the structure of the capital market, therefore it would be appropriate to use the German calculation of the risk premium. Damodaran uses the ratings of the rating agency Moody's in its calculations. The higher the deviation, the higher the risk is. If the scale of the deviation of one market from another one changes, the relative degree of risk is obtained. The default spread of government bonds is the simplest and most common method of calculating the risk premium. Investors charge a spread when buying government bonds. A risk-free interest rate is guaranteed and spreads represent a risk premium. During the first quarter of this year, a record high value of the issue of government bonds with a nominal value of CZK 179.7 billion was issued compared to previous years [23].

The CAPM model is based on future values, draws on past data and leads to not entirely accurate results. It also represents the equilibrium state of the market. It is based on the initial WACC model. The problem is that the model does not deal with the real return on investment but only deals with the expected returns and systematic risk assessment. The beta coefficient is important here, which expresses the degree of systematic risk to the market and uses data from the past. Critics say that this coefficient causes difficulties and problems in the calculation [8]. It is also necessary to make calculation corrections for this model. In the Czech Republic, this model is used less, as some small and medium-sized enterprises do not have listed shares on the stock exchange and cannot use this model.

Another modification of the CAPM model is a German standard for determining the value called Tax-CAPM. It is widely used in this country and explicitly takes into account the taxes of those who receive income from the asset. However, it has never been possible to prove whether this model clearly works. Damodaran’s discount rate adjustment is the most accurate and realistic model that combines a model of spreads and market volatility. It is based on the difference between the yields on government bonds of the designated state and the state that has an Aaa rating. The situation and conditions in a given country are not taken into account, so the result is general. For a more accurate result, it is necessary to include the volatility of individual countries. To simplify, Damodaran recommends replacing the stock and bond volatility coefficient in the calculation of the country risk premium with a coefficient of 1.5 [6]. It is not easy to obtain this data. Then the CAPM model is modified by the country risk premium. However, the use of the recommended coefficient distorts the results of the risk premium. Damodaran’s procedure is not suitable for use in the Czech Republic, as some calculations and indicators need to be adjusted and this model does not take into account the riskiness of the company in relation to its size. For the relative standard deviation, it would be appropriate to use a higher ratio of standard deviations drawn from the actual statistical data of the Czech Republic.
5 Discussion

Damodaran’s calculations are applied in a number of countries but they are also criticized by theoreticians. Critics consider the approaches pragmatic; it is not clear which of the models is more suitable to use. Damodaran is also criticized for the fact that his approaches and models are not embedded and supported by a relevant theory; therefore he is also considered to be a practitioner. His websites, which are not accessible for the public, include data for various calculations of a company as a whole or for shares. However, it shall be taken into account that the data on Damodaran’s web are intended mainly for USA markets. Therefore, it is necessary to adjust the input data for each specific situation in the calculation. Furthermore, it was also found that there is no direct and clear definition for a country’s risk premium. Only the calculation procedure for the capital market risk premium is defined.

The most common risk assessment method is to take over the rating from a rating agency according to own specific requirements. According to the Moody’s agency, the Czech Republic achieved in 2019 (after 17 years) the investment grade Aa3. This confirms the country’s high creditworthiness and advantageous financing on both the domestic and foreign markets. Damodaran also uses the ratings from the Moody’s agency. Their ratings are based on the assumed future development of the country. Rating summarizes the insolvency risk of a given country.

In Damodaran’s model of calculating the discount rate adjustment related to the market volatility, it is not clearly said how the volatility can be measured. This can have impact on the results, as the standard deviation can be mistaken for variance. Volatility estimate is provided by local capital markets; however, Damodaran does not consider them credible. The obstacle to volatility is the difference in determination over time and between the individual countries. It is therefore difficult to estimate the volatility of bonds, as government bonds are assumed to be issued and traded. For simplification, recommended volatility ratio is 1.5. In his work from 2011, Damodaran uses 4.6 for the Czech Republic. However, in the tables on his blog from 2014, he states the deviation value of 2.0. Based on this information, the ratio for the CR should be definitely higher than 1.5.

The CAPM model, for example, is not evaluated as positively in Germany as in the USA, and experts are still trying to find a more suitable modification. German practice is based on the modified Tax-CAPM model, which explicitly takes into account the taxes from owners of the designated asset income [29]. In terms of the basic CAPM model, critics claim that it is based on several unrealistic assumptions. For example, it does not include tax and transaction costs. It is also impossible to influence the share prices from the side of the investors, to include their individual rational behaviour, risk aversion or the ability to sell and buy at a risk-free rate. This model is based on future values and represents the equilibrium in the market; therefore, the results of the data from the past years are skewed. When carrying out the calculations in this model, there are problems with beta coefficient, even when determining beta. The determination is based on the volatility of the share prices, which, as already mentioned, are not easy to be determined.
6 Conclusion

The aim of this paper was to compare the methodologies for calculating the risk premium for the Czech Republic and the differences between them. Above all, the basis was Damodaran’s models and the evaluation of credit rating agencies to determine the appropriate process of calculating the risk premium for the Czech Republic. It was established from a literature search that credit rating agencies and their ratings improve the efficiency of the financial market by reducing the information failure and transaction costs. They also help countries to attract foreign investors and ratings also provide better access to the capital market. The assigned country’s sovereign rating summarizes the risk of insolvency. Adopting a rating from a pre-selected credit rating agency becomes the simplest and most widespread way how the risk premium is determined. The differences between the ratings of the global agencies are very similar, with a few exceptions. It depends on the investor which credit rating agency they will choose. The current rating of the Czech Republic falls within the investment grade according to Moody’s Aa3 rating. The countries such as Taiwan, Saudi Arabia, Chile and Hong Kong are also included in this investment grade. In comparison to these advanced capital markets, the market of the Czech Republic has a shorter history and the capital market is still under development, so it does not achieve the quality of the other world’s markets. However, it is worth considering whether it should not be more appropriate to break down these country’s sovereign ratings into multiple rating levels not to distort the results when calculating the country’s risk premium.

The method used included descriptions of the selected methods and approaches, mostly from Damodaran. In the discussion of the results, these methods are described and compared in more detail. The basic CAPM model only reviews the systematic risk. The model is criticized for not truly reflecting on reality and is being abandoned because it builds on historical data and it does not seem applicable for the future development of investment. It must be modified for further use of the calculations. For example, Germany has modified this model as Tax-CAPM where the taxes of those who receive income from a given asset are explicitly considered. It would be useful to produce a customized and tailored design that would fit the conditions of the Czech Republic.

The modified concept of CAPM according to Damodaran seems to be the most accurate picture of reality and the most appropriate for the Czech Republic. This model is also the most commonly used. The country’s sovereign risk premium is also included in the calculation. However, note that this model does not consider the level of risk of a company in relation to its size. The result of this model is general without regard to the situation and conditions in given country. The challenge of the calculation is to determine a beta coefficient value which is related to stock price volatility. Another challenge is to determine volatility, therefore a universal coefficient of 1.5 is recommended. The drawback of the model is that it does not consider the individual companies in the country and their characteristics, but only the country as a whole. It would be adequate to use a higher than a coefficient of 1.5. Results will then be distorted and based on the review of historical data, the values for the Czech Republic were higher.
than the specified coefficient of 1.5. In the calculation you also have to make sure the standard deviation is not confused with the variance.

There are no exact rules available that would clearly determine which of the models is most appropriate. However, these are only speculative and approximate estimates in the calculation. It can be concluded that the aim of the paper was fulfilled. The most adequate model for the Czech Republic is a modified version of the CAPM model according to Damodaran which also considers the country risk premium. However, the stock volatility ratio must be increased from 1.5 to a higher value.

**Appendix 1**

(See Table 1).

### Table 1. Summary long-term rating scale from S&P, Moody’s and Fitch

|               | Extremely strong capacity to meet financial obligations | Very strong capacity to meet financial obligations | High capacity to meet financial obligations | Sufficient capacity to meet financial obligations | Slightly threatened short-term capacity to meet financial obligations | More threatened short-term capacity to meet financial obligations | Highly threatened short-term capacity to meet financial obligations | One or multiple obligations not met |
|---------------|--------------------------------------------------------|-------------------------------------------------|---------------------------------------------|--------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------|----------------------------------|
| **S&P**       | AAA                                                    | AA +                                            | AA -                                        | A + A -                                          | BB + BB -                                                    | BB + BB -                                                    | BB + BB -                                                | B + B -                                          |
| **Fitch**     | AAA                                                    | AA +                                            | AA -                                        | A + A -                                          | BB + BB -                                                    | BB + BB -                                                    | BB + BB -                                                | B + B -                                          |
| **Moody’s**   | Aaa                                                    | Aa1 Aa2 Aa3                                     | A1 A2 A3                                   | Ba1 Aa2 Ba3                                      | Ba1 Ba2 Ba3                                                   | B1 B2 B3                                                     | Caa Caa C                                                | C D                                             |

*Source: The own production from: The credit rating of the Czech Republic. Available from: https://www.cnb.cz/en/monetary-policy/inflation-reports/boxes-and-annexes-contained-in-inflation-reports/The-credit-rating-of-the-Czech-Republic.*

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